

# Allied Health Nutrition & Dietetics Skill Set Electives pre-requisite units for Certificate IV in Allied Health Assistance

Combined Learner Guide for HLTAHA 018,  
HLTAHA019, HLTAHA020, HLTAHA021

July, 2016

## Learner Guide

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## Introduction

Welcome to the Nutrition and Dietetics Skill Set Learner Guide. This Learner Guide includes the material required for Allied Health Assistants seeking the Nutrition and Dietetics Skill Set electives for the HLT43015 Certificate IV in Allied Health Assistance.

### Units included in this guide:

HLTAHA018	Assist with planning and evaluating meals and menus to meet recommended dietary guidelines.
HLTAHA019	Assist with monitoring and modification of meals and menus according to individualised plans
HLTAHA020	Support food services in menu and meal order processing
HLTAHA021	Assist with the screening and implementation of therapeutic diets.

This Learner Guide combines the above units to provide a detailed background on each of the performance criteria in the health learning package. Practical examples are utilised where possible.

### Topic 1: Safe Work Practices outlines:

- Work Organisation Methods
- Privacy, confidentiality and disclosure
- OHS Practices
- Infection Control Requirements
- Food Safety Requirements

These topics give you an understanding of the nutrition team, relevant organisational food guidelines, the scope of practice for a Nutrition Assistant, privacy, confidentiality and disclosure issues as well as Infection Control and food safety requirements.

### Topic 2: Nutrition and Dietary Guidelines outlines:

- Principles of Nutrition
- Dietary Guidelines

This topic includes detailed information specific to:

- Basic knowledge of food
- Broad understanding of dietary requirements for good health through the life cycle
- Australian Dietary Guidelines
- Other dietary guidelines specific to client groups, e.g. aged
- Basic principles of nutrition, diet therapy, nutrition supplements and factors that place clients at risk of malnutrition and inadequate hydration
- How to recognise malnutrition
- Basic knowledge of hydration needs

### Topic 3: Nutrition Support outlines:

- Assist with Planning and Evaluating Meals
- Specific Dietary Needs
- Working with Food Services

This topic includes detailed information specific to:

- Planning and evaluating meals and menus
- Range of menus and menu items and different types of menu management systems relevant to the specific workplace
- Requirements of different types of menus
- Relevant organisational food, nutrition and special diet guidelines.
- Standardised recipes
- Costing (portion size, mathematics) procedures
- Common fluids and food restrictions
- Other dietary guidelines specific to client groups, e.g. aged
- Basic knowledge of oral nutrition support products and enteral feeds
- Inter-relationships between food services and nutrition services/dietary departments concerning menu and meal order processing procedures, food production and delivery
- Feedback processes or systems used within the organisation
- Basic knowledge of food preparation and food service systems (end)
- Basic cooking methods and equipment

### Topic 4: Cultural and Religious Dietary Needs outlines:

- Profile of the Community served by the organisation and cultural requirements in relation to food including halal, types of vegetarianism and kosher diet requirements
- Diet and Religion

- Cultural and Religious Meal and Menu Planning and Modification

## Topic 5: Implementing Nutrition Risk Screening and Therapeutic Diets outlines:

- Implement nutrition screening of patients/residents/clients using accepted and validated tools, and use screening results to determine nutritional risk according to organisational protocol
- Follow protocols provided by the Dietitian to implement appropriate nutrition support and document this according to organisational guidelines.
- Clean and store nutrition screening and support materials and equipment

## Using the Guide

This Learner Guide has been developed to ensure that you gain the required knowledge and skills (that is competency) to enable you to perform your job to the accepted industry standard.

The Learner Guide is suitable for a range of learning situations, such as:

- workplace-based learning
- classroom learning
- blended workplace/classroom learning
- self-paced and/or flexible learning

## Learner Guide Structure

This Learner Guide has six [6] sections.

1. Introduction
2. Learning Topics
3. Self-Completion Checklist
4. Appendices
5. References
6. Resources

Each topic includes sub-topics, which cover the essential knowledge from the unit of competency. You will be asked to complete the activities in each topic to support your learning. These activities address the essential skills from the unit of competency and will be part of your assessment.

Activities and assessment tasks may require access to the internet. If you do not have access please talk with your trainer/assessor about your options.

Completing this unit of competency may require access to an Allied Health Service workplace. If you are not currently employed, please speak with your trainer/assessor about your options.

## Self Completion Checklist

The Self Completion Checklist outlines the underpinning knowledge and skills contained in each of the topics for the unit of competency you will be assessed against. You will be asked to review the list and place a tick in the box if you feel you have covered this information in each section and if you feel ready to undertake assessment. If you have any questions about this checklist, ask your trainer/assessor.

## Continuous Improvement Form

You are invited to use the *Continuous Improvement Form* on page 261 to identify changes that you think would improve this resource.

## If You Need Help

Your workplace trainer and assessor will help you to use this Learner Guide and the accompanying resources. You are encouraged to seek support from your trainer/assessor, workplace supervisor or co-workers as you work towards gaining competency for this unit.

## Symbols

The following symbols are used throughout this Learner Guide.



**Important Points** – this will include information that is most relevant to you; statistics, specific information or examples applicable to the workplace.



**Activities** – these will require you to reflect on information and workplace requirements, talk with other learners, and participate in a role play or other simulated workplace task.



**Further Information** – this will include information that may help you refer to other topics, complete activities, locate websites and resources, or direct you to additional information located in the appendices.



**Case Study** - these will include situations or problems for you to work through either on your own or as a group. They may be used as a framework for exploration of a particular topic.



**DVD** – this indicates information that will be presented on a DVD either in the training or for you to find in your own time.



**Research** – this refers to information that will assist you complete activities or assessment tasks, or additional research you may choose to undertake in your own time.

# Vocational Education and Training

Vocational Education and Training (VET) is referred to as “education and training for work”. It moves away from the traditional “classroom approach” to training and instead recognises that there are alternative methods for people to learn and become competent.

Competency can be achieved:

- on the job
- through self-study
- via a structured course
- through the Internet
- on a computer
- at home

What matters most in the VET system is not how you learn but rather you have gained the competence to perform your job.

## Training Packages

Training Packages are sets of nationally endorsed standards and qualification for training, assessing, and recognising people’s skills. A training package describes the skills and knowledge needed to perform effectively in the workplace. Training packages provide the central system of VET architecture by specifying the combination of *competency standards* required to achieve a *qualification*.

## Competency Standards

Competency standards describe key functions of work roles and specific standards of performance. They describe the skills, knowledge and attributes that you are required to demonstrate in the workplace. In addition, they specify the criteria that can be used in workplace settings to determine if you are working to the required level of competence. Competency standards are articulated in a framework known as a Unit of Competency.

## Assessment

You will have the opportunity to complete the assessment tasks outlined in the Assessment Guide. Please read the assessment requirements and competency outline and discuss this with your facilitator or assessor.

Assessment can occur on the job, or off the job as part of a structured training and/or learning program. Due to your current work experience and existing skills and knowledge you may choose to undertake recognition assessment.

## Recognition Assessment

Many people develop skills through their working life which are not always formally recognised. The recognition process is a practical way of having these skills formally recognised against national competency standards.

Recognition assessment is the process of gathering workplace evidence and using this evidence to make a decision about a person's ability to perform to workplace and industry standards. In broad terms, the recognition assessment process involves matching what you already know and do in your work role with the outcomes of a unit of competency or qualification.

If you think you can provide evidence that you already have the knowledge, skills and attitude required for the units of competency or qualification, it is important that you ask your assessor about recognition assessment.

## Qualification

### HLT43015 Certificate IV in Allied Health Assistance

This qualification covers workers who provide clinical and program related support as delegated by Allied Health Professionals. The worker is required to engage in clinical and program related activities under the supervision of an Allied Health Professional. Supervision may be direct, indirect, or remote and must occur within organisation requirements. The worker is required to identify client circumstances that need additional input from the Allied Health Professional.

Occupational titles for these workers may include:

- Therapy Assistant
- Podiatry Assistant
- Physiotherapy Assistant
- Speech Pathology Assistant
- Occupational Therapy Assistant
- Allied Health Assistant
- Nutrition Assistant
- Dietetic Assistant



Information about the full qualification can be found in Appendix A

## Units of Competency

This Learner Guide will assist you in gaining competence for the essential skills and knowledge of the four Nutrition and Dietetic skill set units from the HLT Release 3.0 2015 Health Training Package.

HLTAHA018	Assist with planning and evaluating meals and menus to meet recommended dietary guidelines.
HLTAHA019	Assist with monitoring and modification of meals and menus according to individualised plans
HLTAHA020	Support food services in menu and meal order processing
HLTAHA021	Assist with the screening and implementation of therapeutic diets.

### **These units describe the skills and knowledge required to:**

- Facilitate the provision of appropriate food to clients receiving diet therapy or nutrition care under the direction and supervision of a Dietitian.
- Assist with the planning and evaluation of appropriate meals and menus based on the Australian Dietary Guidelines, and other dietary guidelines, in consultation with a Dietitian to meet the nutritional needs of client groups.
- Develop meals and menus to meet the nutrition requirements of specific client groups.
- Plan and evaluate meals and menus in a manner that meets the cultural and religious needs of client groups.
- Distribute menus/meal order systems, process general and therapeutic menus/meal orders, distribute food, and monitor client satisfaction.
- Assist with basic nutrition screening and use screening results to determine nutritional risk according to organisation protocol
- Document client information

### **In these units, you will learn about:**

- Australian Dietary Guidelines and other relevant guidelines
- Basic cooking methods and equipment
- Basic knowledge of food
- Basic knowledge of food preparation and food service systems
- Basic knowledge of hydration needs
- Broad understanding of dietary requirements for good health through the life cycle

- Aspects of physical and mental conditions, which might affect a client's ability to eat and/or feed oneself
- Common fluids and food restrictions
- Costing (portion size, mathematics) procedures
- Different cultural requirements
- How to recognise malnutrition and screen for nutritional risk
- Infection Control policies and procedures relevant to food service provision
- Privacy, confidentiality and disclosure issues.
- Inter-relationships between food services and nutrition services/dietary departments concerning menu/meal order processing procedures, food production and delivery
- OHS work practices relevant to the specific workplace and in accordance with relevant food service provision
- Other dietary guidelines specific to client groups, e.g. aged
- Basic principles of nutrition, diet therapy, nutrition supplements and factors that place clients at risk of malnutrition and inadequate hydration
- Planning and evaluating meals and menus
- Range of menus and menu items and different types of menu management systems relevant to the specific workplace
- Requirements of different types of menus
- Standardised recipes
- Various cultural requirements in relation to food, relevant to the profile of the community served by the organisation
- Work organisation methods
  - key principles of
    - the impact of diet on health, fluid intake, rehabilitation, an individualised plan
  - significance of nutritional risk indicators, including
    - weight loss or weight gain, appetite, bowel function, allergies/intolerances, biochemical indicators, e.g. albumin, iron level, swallowing issues
  - organisation policies and procedure in relation to
    - screening and assessment
    - other specific organisation policies or procedures, including supervisory and reporting protocols
  - supplements, including supplement equivalents, and their use
    - special diets and their importance to a client's health, including
    - texture modified diets and national standards for texture modified diets
    - high energy and high protein
    - modified salt , protein and potassium
  - diets for food intolerances including gluten free, fructose malabsorption and lactose free

**Activities will enable you to demonstrate the following skills:**

- Plan, develop and evaluate menus for at least three client groups in the workplace, based on organisational food, nutrition and special diet guidelines or the Australian dietary guidelines for provision of appropriate food for client groups
- plan and modify meals and menus for at least 2 clients with specific cultural and/or religious food-related requirements in a simulated environment
- distributed menus or used other systems with clients to collect meal orders, processed therapeutic meal orders and delivered food orders to at least 3 clients, 1 in a simulated environment and 2 in the workplace
- prepared different nutritional supplements for at least 3 clients, 1 in a simulated environment and 2 in the workplace
- assisted with nutrition screening of 3 clients, 1 in a simulated environment and 2 in the workplace
- prepared and/or provided nutrition support services, including preparing dietary supplements, to 3 clients, 1 in a simulated environment and 2 in the workplace
- planned and modified meals and menus according to at least 3 individualised plans, 1 in a simulated environment and 2 in the workplace
- performed the activities outlined in the performance criteria of this unit during a period of at least 120 hours of work

## Learning Topics

The table below outlines the relationship between the topics presented in this Learner Guide and the Essential Knowledge required for completion of the unit of competency.

Topics	Essential Knowledge
<p><b>1. Safe Work Practices</b></p>	<ul style="list-style-type: none"> <li>• Organisation policy and procedures in relation to               <ul style="list-style-type: none"> <li>○ Infection control as it relates to the AHA role assisting with foodservices and menu and meal planning, food, nutrition and special food guidelines</li> <li>○ Other specific organisation policies or procedures, including supervisory and reporting protocols</li> </ul> </li> <li>• Feedback processes or systems used within the organisation</li> <li>• Legal and ethical considerations relevant to allied health               <ul style="list-style-type: none"> <li>○ Privacy, confidentiality and disclosure</li> <li>○ Work health and safety - manual handling including identification and control of manual task risk factors</li> </ul> </li> <li>• Safe food handling</li> </ul>
<p><b>2. Nutrition and Dietary Guidelines</b></p>	<ul style="list-style-type: none"> <li>• Australian Dietary Guidelines and other relevant organisational food, nutrition and special diet guidelines</li> <li>• Relevant organisational food, nutrition and special diet guidelines</li> <li>• Principles of nutrition, diet therapy, nutrition supplements and factors that place clients at risk of malnutrition and inadequate hydration</li> <li>• Aspects of physical and mental conditions, which might affect a client's ability to eat and/or feed oneself, including               <ul style="list-style-type: none"> <li>○ Arthritis</li> <li>○ Broken bones</li> <li>○ Confusion</li> <li>○ Pain</li> <li>○ Poor dentition</li> <li>○ Pressure injuries</li> <li>○ Recovery from stroke</li> <li>○ Swallowing problems</li> </ul> </li> <li>• Principles of the impact of diet on health, fluid intake, rehabilitation and an individualised plan</li> <li>• How to recognise malnutrition</li> </ul>

Topics	Essential Knowledge
<p><b>3. Nutrition Support</b></p>	<ul style="list-style-type: none"> <li>• Workings and protocols of the food service system including:               <ul style="list-style-type: none"> <li>○ range of menus and menu items and different types of menu management systems</li> <li>○ Food preparation and food service systems</li> <li>○ Cooking methods and equipment</li> <li>○ Standardised recipes</li> <li>○ Costing (portion size, mathematics) procedures</li> <li>○ Common fluids and food restrictions</li> <li>○ Oral nutrition support products (supplements), their equivalents and enteral feeds and their use</li> <li>○ Inter-relationships between food services and nutrition services/dietary departments concerning menu/meal order processing procedures, food production and delivery</li> </ul> </li> <li>• Special diets and their importance to a client's health including:               <ul style="list-style-type: none"> <li>○ Texture modified diets (TMDs) and national standards for TMD</li> <li>○ High energy, high protein</li> <li>○ Modified salt, protein or potassium</li> <li>○ Diets for food intolerances including gluten free, fructose malabsorption (FODMAPS), and lactose free</li> </ul> </li> </ul>
<p><b>4. Cultural and Religious Dietary Needs</b></p>	<ul style="list-style-type: none"> <li>• Various cultural and religious requirements in relation to food, relevant to the profile of the community served by the organisation including halal, types of vegetarianism, kosher</li> </ul>
<p><b>5. Nutrition Risk Screening</b></p>	<ul style="list-style-type: none"> <li>• Organisation policies and procedures in relation to screening and assessment</li> <li>• Significance of nutritional risk indicators, including weight loss, weight gain, appetite, bowel function, biochemical indicators, allergies and intolerances, swallowing issues</li> </ul>

# 1. Safe Work Practices

## **This topic covers information about:**

- Organisation policy and procedures in relation to
- OHS Practices
  - Infection Control Requirements
  - Manual handling
  - Food, nutrition and special food guidelines
  - Specific organisation policies or procedures, including supervisory and reporting protocols
- Privacy, confidentiality and disclosure
- Food Safety

## **Activities in this topic address the following performance criteria:**

- Comply with personal hygiene requirements of food safety program
- Wear clothing and footwear appropriate for food handling tasks and according to the food safety plan
- Report health conditions and/or illness according to the food safety program
- Identify and report processes and practices that are not consistent with the food safety program,
- Take corrective action according to the food safety program and within level of responsibility
- Prepare, supply and deliver nutrition supplements according to organisation procedures and dietitian's instructions and provide support services according to the food safety program
- Discard out of date nutrition support items and information
- Report any significant wastage to the appropriate personnel in accordance with role and organisation requirements
- Maintain the workplace in a clean and tidy order to meet workplace standards
- Provide feedback to the dietitian regarding client progress
- Seek assistance when client presents with needs or signs outside limits of own authority or competence
- Use accepted protocols to report information in line with organisation requirements
- Maintain client records according to organisation requirements
- Use organisation's established screening documentation to gather client information

## 1.1 Organisation Policy and Procedures

The stakeholders in provision of food services:

- Chef – Cook
- Kitchen staff
- Ward staff
- Patient
- Health care team (including the Dietitian)
- Volunteers
- Administrator-Finance area
- Catering-Food services Manager/Management
- Waste management

Why is good nutrition in health important?

- Under-nutrition has been shown to increase length of hospital stay, impair immune function, and increase an individual's susceptibility to infection and sepsis (Schenker, 2003).
- It has also been shown to result in fatigue, lethargy and reduced muscle strength as well as increase feelings of anxiety and depression (Schenker, 2003).
- There are many causes of under-nutrition. Malnutrition is thought to affect around 30-40% of patients in hospital (Gout, Barker & Crowe, 2009).

Why is food important?

- Food provides us with energy and nutrients, vitamins and minerals that we need to survive and stay well.
- Many factors need to be considered if we are able to provide appropriate food to clients/patients.



Catering services, along with nutrition and dietetics hold a vital role in this process but so do other providers because the nutritional value of food not eaten is nil.

Many factors influence food choice:

- Availability (i.e. floods, drought, plane, trucking or rail strike) and Accessibility (including costs and ability to store, cook and serve appropriately)
- Familiarity (with the dish/meal and how to store it, cook, serve and eat it)

- Beliefs and Values (e.g. vegetarian, Muslim, kosher)
- Food advertising/Food placement in a supermarket
- Cultural Preference/Cultural-Social Acceptance of a Food (e.g. raw fish as Sushi/Sashimi, eating of Horse meat in France etc.)

The Nutrition Care Team is made up of:

- Doctors
- Dietitians
- Food service staff
- Other allied health
- Nurses
- Nutrition Assistants
- Speech Pathologists



Remember the focus of the Nutrition Care Plan is the patient.

## Dietitians

Dietitians translate scientific information about nutrition into practical advice about what to eat. Accredited Practising Dietitians (APDs) are accountable to the Dietitians Association of Australia (DAA) and are recognised as having the qualification, skill, and clinical training to provide expert nutrition and dietary advice to individuals and groups.

Dietitians conduct the nutrition assessment → develop a Nutrition Care Plan and recommend therapeutic diets → organise appropriate nutrition support e.g. therapeutic diets, supplements or enteral feeds → nutritional counselling and education to clients and/or carers → ongoing monitoring and evaluation of care plans for inpatients and outpatients.

Role of the Dietitian:

- Interpret data
- Assess and provide advice to patients requiring nutritional intervention as part of their medical treatment
- Assess the nutritional needs of the client
- Nutrition Care Planning - Plan appropriate nutritional interventions (Team approach to treatment planning)
- Organise appropriate oral nutrition support e.g. Therapeutic diets, supplements
- Organise enteral feeds or TPN

- Counsel and educate clients
- Follow up clients and make adjustments to the Nutrition Care Plan



If administered incorrectly, food has potential to be life-threatening; for example, giving a patient peanuts when they have an alert indicating they have a peanut allergy.

The Nutrition and Dietetics Service works closely with the Foodservice Department to:

- Establish nutritional specifications of meals/snacks
- Help monitor meal standards
- Ensure the dietary needs of patients/clients are met

Dietitians may delegate other tasks to Nutrition Assistants to support the delivery of services but these must NOT include:

- Making clinical decisions at policy, system and individual level
- Communicating about nutrition diagnosis and nutrition treatment plans with the patient or carers
- Conducting assessments (including needs assessment, clinical assessment, nutritional assessment etc.)
- Interpreting data and referrals
- Formulating or modifying goals and plans for the client
- Explaining rationale, risks and options of nutrition and dietetic care or services
- Follow-up, discharge planning and /or evaluation of nutrition and dietetic services  
(Dietitian's Association of Australia, 2016)

As a Nutrition/Dietetic Assistant, you will likely need to communicate with

- Dietitians
- Nurses
- Speech Pathologists
- Foodservices
- Ward Receptionists

## **Roles and Responsibilities of Nutrition/Dietetic Assistant/Support Worker:**

As per the Dietitians Association of Australia definition, “dietetic support workers are health care workers with the knowledge and skills to support professionally qualified dietitians in delivering nutritional care programs to clients”. Although nutrition support workers may undertake a range of roles in their workplace they spend more than 75% of their work time performing nutrition and dietetic support tasks. (Dietitian’s Association of Australia, 2016).

The role of the nutrition support worker will vary depending on their training, knowledge and competence, workplace policies, work setting, model of care, supervision model and patient acuity.

The Dietitian’s Association of Australia outlines the following roles that nutrition support workers can undertake:

- Apply clinical nutrition/therapeutic diet protocols as delegated;
- Assist in nutrition and dietetic service operations (e.g. printing resources, assisting with simple anthropometry such as weight and height and booking outpatient appointments);
- Assist the clinical dietitian with implementation and monitoring of prescribed nutrition care plans, including discharge planning; Assist nutrition and dietetic services in quality improvement activities and research;
- Assist with nutrition support for patients with, or at risk of malnutrition;
- Assist with patient safety (e.g. allergens, texture, food safety);
- Carry out daily statistics; Carry out other nutrition related roles appropriate to the setting (e.g. assist with special food preparation and assist with group programs);
- Communicate with relevant health service personnel regarding patient therapeutic diet requirements;
- Facilitate access to food and fluids;
- Facilitate and monitor orders to patient food services, as required by the local system and protocols;
- Manage the logistics of and coordinate the provision of enteral feeds, commercial oral nutrition supplements and infant feeding formulas;
- Participate in continuing knowledge development;
- Participate in risk screening (malnutrition screening, identify and report factors that place patients at nutritional and hydration risk during their admission, other relevant screening programs);
- Support the function of an electronic diet and menu management information system;
- Support the provision of nutrition advice/education;

- Training and supervision of lower level and/or less experienced nutrition support workers and student allied health assistants or support workers.

The Allied Health Profession's Office of Queensland (AHPOQ) in Queensland Health has published an Allied Health Assistant Framework that identifies the scope of practice issues for all Allied Health Assistants (AHA). Specifically, that all AHA should work within a defined scope of practice that should be outlined in their role description and/or duty statement and that the tasks performed are ones the AHA has been training in and is competent to perform and that the scope of practice may change according to the needs of the service. (See full document at [www.health.qld.gov.au/ahwas/default.asp](http://www.health.qld.gov.au/ahwas/default.asp) )

Communication is a large part of your role working in a health care environment. Not only do you need to have the skills and knowledge in Allied Health Assistance and Nutrition and Dietetic Assistance, you also need to have a firm grasp on the roles and responsibilities as an employee of your organisation. This includes knowledge of policies and procedures and practices or systems of operation at your facility such as how interpreters are organised or who orders resources for groups.

Reporting methods might include:

- Verbal (face-to-face) or telephone conversations
- Written (including email and pager)
- Progress reports
- Case notes
- Incident reports

When providing nutrition education, it is important not to work outside of your job description or scope of practice. There may be legal or professional implications if you do; such as not being insured for the advice you provide or various disciplinary processes of your facility. This is not exclusive to the role of the Nutrition Assistant; it equally applies to work of other health professionals and volunteers.

For example, a Dietitian does not provide advice on how much blood pressure medication a patient should take, even if they know the dose needs increasing. The appropriate and responsible action is for the Dietitian to communicate his/her concerns to the Medical Professional for action. If you are in doubt of an answer to a question a patient or staff member may ask then always defer to the Dietitian for advice and discussion.

## The Roles and Responsibilities of Members of the Care Team

### Nursing Staff:

- Communicate the dietary needs of newly admitted patients to foodservices and/or Nutrition Assistants
- Refer clients to the Dietitian when:
  - They have special or complex nutritional needs due to their medical condition
  - They are eating poorly or at risk of malnutrition
  - They are experiencing symptoms that impact on their nutritional intake
  - Clients have requested to see a Dietitian
- Monitor the food and fluid intake of patients
- Feed patients who are unable to self-feed
- Position patients to allow them to feed safely
- Administer enteral feeds and TPN

### Speech Pathologist:

- To assess and monitor the clients ability to feed and swallow safely
- To advise the team on the safest dietary prescription e.g. nil by mouth (NBM), texture modified diet, thickened fluids
- To advise the team on the correct positioning of patients for feeding
- To provide swallow and communication rehabilitation

### Medical Staff:

- Ultimately responsible for the patient's treatment
- Refers patients to the Dietitian when the medical condition or treatment impacts on nutrition
- Assesses the recommendations from all team members when deciding on the which treatment is in the best interests of the patient

### Foodservice Staff:

- They have an important role in ensuring that the patients actually received safe and appropriate food and fluids – as requested by the Nutrition Care Team
- They are responsible for producing the foods that have been planned on the menu or those specially requested by the Nutrition Care Team
- They are responsible for ensuring that meals are delivered to the correct patients
- They are responsible for ensuring that mid-meals foods and fluids provided are appropriate for patient e.g. being aware of patients that are NBM, on thickened fluids or fluid restrictions

### The various members of the care team communicate via:

- Patient's medical chart
- Meetings e.g. Clinical team meetings

- Face-to-face discussion
- Phone discussions
- Use of paging systems or mobile phones to contact team members
- Faxing of lists and other information
- Written lists e.g. Ward diet list
- Computer systems and email
- Colour coding e.g. For menus or alert signs
- Signage and bedside whiteboards

### **Models of Support for Nutrition and Dietetic Assistants**

Although there are several models for the supervision of delegated tasks, it is recommended by the DAA that supervision of Nutrition Assistants should be performed by health professionals with dietetic qualifications (Dietitians Association of Australia, 2016). Dietitians are accountable for the nutritional care of patients and so regular communication with Nutrition/Dietetic Assistants is vital to ensure high quality patient care.

DAA also recommends that nutrition support works who take patients meal orders should have supervision by a dietitian. This is to ensure optimal communication regarding food intake, issues with meal consumption and other clinically important information. Even though many sites now have computerised menu systems there is still patient interaction and therefore the potential for clinical decision making.

In facilities that do not employ a clinical Dietitian, the DAA supports the use of a shared supervision model. Shared supervision could occur in multifunctional health centres, day respite-centres, and home-based services and in rural and remote facilities where Dietetic access may be only available part-time or via *consultancy* (Vivanti, Suter, Aliakbari & Banks, 2007). In a shared supervision model the Nutrition Assistant will usually report to a non-Dietitian manager but will have regular supervision of their clinical support duties by a Dietitian.

The AHPOQ Allied Health Assistant Framework states that all AHA positions are to be clinically supervised by an allied health professional and that clinical supervision may be direct, indirect and/or remote.



Reflect on the following points by yourself or with other Dietetic Assistants:

- Which style of system do you work in?
- What are the benefits and disadvantages of the system in which you work?

Privacy, confidentiality and consent in healthcare.

Patient/client information is confidential and the precautions below should be followed to ensure that all information remains confidential.

- Keep all patient records in a safe and secure place
- Do not tell anyone about what is in a health record unless they are taking care of the person
- Do not allow anyone to touch or look at a health record unless they are a healthcare provider involved in the care of that patient
- Do not verbally disclose confidential information to anyone who is not taking care of the person or within hearing of other people not taking care of the person

Information that is related to the patient's/client's care can be disclosed to the health professionals caring for that patient/client to facilitate the most appropriate treatment plan.



The Hospital and Health Boards Act 2011 sets out the duty of confidentiality

Confidential information includes any information collected by the Hospital or Health Services during the course of providing a health service to an individual, for example

- name, address, date of birth, admission and discharge dates, billing information and Medicare number
- health and medical information
- information generated by health professionals such as notes and opinions about an individual and their health
- information about physical or biological samples that can be linked to an individual (i.e. where they have a name or identifier attached), for example, x-rays, CT scans, video imaging
- genetic information when collected or used in connection with delivering a health service; or genetic information when this is predictive of an individual's health.

For a refresher on the Code of Conduct go to <http://qheps.health.qld.gov.au/safety/elearning.htm>



## Activity 1 – Scope of Practice

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Detailed task instructions

1. List three reasons why a Nutrition and Dietetics service works closely with Foodservice departments

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2. List five staff members that as a Nutrition Assistant you will likely communicate with on a regular basis.

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3. List five examples of when to provide nutrition education feedback to the Dietitian

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Activity continues on the next page.



## Activity 1 – Scope of Practice Continued

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4. There are many reasons patients may require assistance with meal selections. List three reasons below:

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5. Dietitians may delegate other tasks to Nutrition Assistants to support the delivery of services. List five tasks that these must NOT include:

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Activity continues on the next page.



## Activity 1 – Scope of Practice Continued

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Read the Case Study below and answer the questions that follow



### Case Study: Diabetes

Whilst completing delivery of nutritional supplements to patients in the hospital ward a patient tells you they cannot drink the supplement the Dietitian ordered as they have diabetes and it makes their blood sugar level too high.

6. Would you tell the patient to continue drinking the supplement as it must be correct because the Dietitian has ordered it and they would know best?

Please circle your answer      Yes                      No

Please explain your reasoning:

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7. Once the Dietitian has confirmed and advised the patient to continue on supplements despite having diabetes, would your response to Question 1 be different should the patient ask this on a second occasion? Please explain.

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## 1.2 Infection Control Requirements

In a hospital setting, it is important that patients are able to be treated in an environment that does not increase their risk of infection or affect their recovery through exposure to other infections. In a hospital setting, where many people are already immune compromised and/or malnourished, it is easy to see how different infections can be transmitted between patients if appropriate hygiene or Infection Control measures are not in place.

In Food Services, workers reduce the risk of contamination and infection by following appropriate food safety measures, such as storing and preparing food appropriately, wearing protective clothing and cleaning equipment/utensils. In an infant feeding/formula room, the environment and procedures followed go one step further, to be produced under aseptic conditions.

To reduce the risk of infection, it is important that Nutrition and Dietetic Assistants check what Infection Control measures are in place at their hospital and how these apply to their practice.

This might include:

- Apply an apron and hair net if going into the kitchen area to report/change diet requests or onto wards where there immune-compromised patients – e.g. haematology or infectious diseases ward, burns unit, etc.
- Using disposable gloves/bandages as necessary – i.e. covering open wounds when handling mid-meal snacks
- Wash hands according to the recommended methods of the Infection Control policy in their facility (in the absence of this policy, follow the '5 Moments for Hand Hygiene Guidelines').
- Comply with Infection Control signage when entering single patient rooms which may require gloves, gown, and mask.
- Workers who are ill or have infectious conditions should discuss with their supervisor their suitability to work and utilise sick leave where possible to prevent further spread of their illness.
- Washing hands upon entry and exit to a ward/unit.



### **Guidelines on Hand-washing**

Queensland Health has adopted Hand Hygiene Australia's 5 Moments for Hand Hygiene' (Five Moments for Hand Hygiene, 2011) as their predominant method of reducing infection and contamination.

Wash your hands regularly with soap and water, or use an alcohol-based product (gels, rinses, foams) - even when your hands aren't visibly dirty.

If using soap, hands should be washed in running water and dried using a disposable towel. If using alcohol-gel, rub for 1 minute following the instructions in Figure 1 on the following page.

Always wash your hands:

- Before entering the clean area and again once inside the clean area.
- Immediately before commencing formula preparation
- After handling garbage
- After cleaning surfaces or equipment
- After touching clothing or body parts (either your own or another person's).
- After you've been to the toilet
- After coughing, sneezing or blowing your nose or using a disposable tissue or wipe
- On removal of disposal gloves
- After being in contact with someone who has a cold or flu
- Before touching your eyes, nose or mouth
- Before/after preparing food and eating

## How to handrub? WITH ALCOHOL-BASED FORMULATION



Apply a palmful of the product in a cupped hand and cover all surfaces.



Rub hands palm to palm



backs of fingers to opposing palms with fingers interlocked



right palm over left dorsum with interlaced fingers and vice versa



rotational rubbing of left thumb clasped in right palm and vice versa



palms to palm with fingers interlaced



rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa



rinse hands with water



dry thoroughly with a single use towel



use towel to turn off faucet



...once dry, your hands are safe.



...and your hands are safe.

## How to handwash? WITH SOAP AND WATER



Wet hands with water



apply enough soap to cover all hand surfaces.

Figure1: Five Moments for Hand Hygiene (Five Moments for Hand Hygiene, 2011)

## **Gloves**

The wearing of gloves does not negate the need for good personal hygiene when handling formula. Gloves can be a source of contamination and should be changed as often as it is necessary when a staff member is required to wash their hands.

## **Cleaning and Sanitising**

Keeping the preparation and work environment aseptic not only includes keeping the worker clean, but also benches and equipment clean and sanitised.

Cleaning and sanitising are separate procedures. Cleaning removes visible contamination such as food waste, dirt, and grease from a surface. Sanitising is the process that destroys bacteria (germs) that may remain after cleaning.

Areas to be cleaned may include:

- Bench Tops
- Formula shelves
- Sinks
- Fridge
- Scales
- Cupboards

It is important you check the relevant process, the policy, procedures, or work unit guidelines for cleaning and sanitising at your facility.



## Activity 2 – Infection Control

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Demonstrate the following technique.

1. Practice the five moments for hand hygiene outlined to ensure proper cleansing and hand dry technique. Preferably complete this task with a colleague so that you can both ensure proper technique is displayed.

Answer the following questions.

2. Research the Infection Control Policy that operates at your facility then answer the questions below. Attach a link to your hospital policy if it is on QHEPS.

- a) What is the name of the policy?

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*Activity continues on the next page.*

- b) Is it current?

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- c) When is it due for review?

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Activity continues on the next page.





## Activity 2 – Infection Control continued

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f) On your nutritional supplement delivery round you notice a sign upon entering a ward which tells all staff, visitors, and relatives to wash their hands on entry and exit – do you think that is relevant to you? Explain your answer below

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## 1.3 OHS Practices

### Food Safety

Food safety in hospital is important. Consumers trust that the food they are provided with in hospital will be safe and of high quality. Microbial contamination or the wrong composition or texture of food can be life-threatening or worsen a condition.



Under Food Safety Standard 3.2.2 Food Safety Practices and General Requirements (2015), food handlers have an overall responsibility for doing whatever is reasonable to make sure that they do not make food unsafe or unsuitable for people to eat. Food handlers also have specific responsibilities related to their health and hygiene.

A food business (including food that is provided in-house or on the ward) must ensure that staff and their supervisors must be able to do their work in ways that ensure that your business produces safe food:

Skills and knowledge to handle food safety as they carry out the work that they are responsible for safe production of food includes everything from the purchase, storage, and production of suitable food, to its delivery and maintenance at correct temperatures. Staff hygiene and the cleaning and sanitising of equipment also reduce contamination and exposure to bacteria which may compromise health.



DVD: Watch the DVD Food Safety as available through your food services department – Australian and New Zealand Food Standards Authority. (See Appendix C for a copy of the script if you do not have access to the DVD)



For more detailed information on food safety review the Learner Guide for HLTFS001 – Follow basic food safety practices

## Manual Handling

Manual tasks are tasks that include moving, lifting, lowering, pushing, pulling, throwing, carrying holding, restraining, grasping manipulating, striking a load or object. Ensuring you do any manual tasks safely will help to reduce injuries and reduce fatigue at work.



Workplace Health and Safety legislation states that –

*While at work, a worker must take reasonable care for his or her own health and safety and take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons and comply, so far as the worker is reasonably able, with any reasonable instruction that is given ....and any reasonable policy or procedure of the person conducting the business or relating to health or safety at the workplace.*

Queensland Health has a Workplace Health and Safety Policy that requires all staff to complete training on commencement of work that includes manual handling training.



For further information on safe manual handling go to  
[http://qheps.health.qld.gov.au/safety/safety\\_topics/resources/MHG\\_Kitchen.pdf](http://qheps.health.qld.gov.au/safety/safety_topics/resources/MHG_Kitchen.pdf)

### Detailed task instructions

Please answer the following questions.

1. Outline why it is important to be aware of relevant policies and procedures within your work area and within Queensland Health.

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2. Describe how you would access relevant policies and procedures such as Infection Control, Work Health and Safety and Incident Management policies. Consider access in terms of resources within the department, people and relevant technology.

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3. Activity that you do daily in your job that involves manual handling. Outline what steps you might take to reduce the risk of an injury while completing this task.

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### Activity 3 – Food Safety

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The DVD training package is divided into four modules: safe food handling, personal hygiene, cleaning and sanitation, and temperature monitoring. Answer the following multiple choice questions as listed below. Circle one or more correct answers. Check the video/script for the answers.

2. Which of the following are potentially hazardous foods?
  - a. Dry spaghetti
  - b. Fried rice
  - c. Quiche
  - d. Roast potatoes
  - e. Raw chicken
  - f. Cooked chicken
  - g. Oranges
  - h. Cornflakes
  - i. Bread
  
2. In the cool room:
  - a. The temperature should be 5°C or colder
  - b. Thawing meats should be covered, on a plate and on the bottom shelf
  - c. The floor should be mopped daily
  
3. When preparing food, you don't need to wash your hands if you put on gloves:
  - a. True
  - b. False
  
4. When holding ready-to-eat foods:
  - a. Keep hot foods hot, at 60°C or hotter
  - b. Keep cold foods cold, at 5°C or colder
  - c. Keep sandwiches at room temperature
  
5. Potentially hazardous food shouldn't be cooled and re-heated more than once.
  - a. True
  - b. False



### Activity 3 – Food Safety Continued

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6. *Gloves should be worn:*
  - a. Gloves should be worn:
  - b. When making sandwiches
  - c. Over brightly coloured dressings to protect minor cuts or wounds
  - d. Taking out the garbage
  
7. If you have diarrhoea, you should:
  - a. Use disposable gloves when you work with food
  - b. Inform your supervisor and don't work with food
  - c. Keep it to yourself, it is personal, and no one will notice
  
8. The law states that as a food handler you must report all illnesses to your employer, even when you become unwell during your shift.
  - a. True
  - b. False
  
9. When you sanitise plates and utensils, you are:
  - a. Cleaning them
  - b. Reducing the number of bacteria on the surface to a safe level
  - c. Making them look clean and smell clean
  
10. You only need to check the temperature of food in one area of a bain-marie.
  - a. True
  - b. False
  
11. One day at work, you are late back from your break and you find that your section is very busy. Starting work immediately is more important than washing your hands.
  - a. True
  - b. False



### Activity 3 – Food Safety Continued

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12. Non-conformance of critical limits in the Food Safety Program can lead to a breach of food safety legislation.
- True
  - False
13. Why would a workplace introduce a Food Safety Program?
- to identify and control food safety hazards
  - to comply with national food safety standards
  - to improve and maintain food product quality and safety
  - all of the above
14. A Food Safety Program:
- identifies food safety hazards
  - identifies where and how each hazard can be controlled
  - describes how these controls are to be monitored
  - all of the above
15. What should you do about cockroaches in the waste and dock area?
- nothing - it is a garbage storage area
  - clean the area thoroughly
  - clean the area, record the sighting and inform your supervisor
  - spray them
16. You can see signs of mice. The food packets are gnawed. What are you going to do about this?
- empty the packets into containers with lids
  - throw out the gnawed packets
  - throw out the gnawed packets and advise the store supervisor
  - only use the packets that are not gnawed



### Activity 3 – Food Safety Continued

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17. List the 3 food safety hazards and an example of each:

1. \_\_\_\_\_ e.g. \_\_\_\_\_

2. \_\_\_\_\_ e.g. \_\_\_\_\_

3. \_\_\_\_\_ e.g. \_\_\_\_\_

18 List 5 potentially hazardous (high risk) foods you prepare in your workplace kitchen.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

## Key Points

- The Nutrition Care Team is made up of Doctors, Dietitians, Food Service staff, other Allied Health Professionals, Nurses, Nutrition/Dietetic Assistants; and their focus is the patient.
- Scope of practice (support staff in Nutrition and Dietetic Services) highlights the importance of the Dietetic/Nutrition Assistant and their role in the delivery of nutrition and dietetic services as specified by the supervising Dietitian.
- It protects workers working within the scope provided the roles do not require:
  - Interpretation of data (e.g. patient data, research data)
  - Assessment (patient or nutrition service)
  - Dietetic knowledge and skills outside the scope of the AHA
  - Formulation or modification of a plan e.g. Nutrition Care Plan for a patient
  - Explanation of rationale, risks and options of Nutrition and Dietetic Care Services
  - Follow up and/or evaluation of Nutrition and Dietetic Services
- Work within your scope of practice as a Nutrition Support staff member and if in doubt liaise with your team leader or Dietitian for any queries.
- Patient/client information is confidential and only information related to the patient/clients care can be disclosed to health professionals caring for that patient/client
- As part of your role as a Nutrition/Dietetic Assistant you will still be required to help every patient to select suitable choices from the menus and the mid-meal/snack trolley that fit in with their relevant dietary needs and food preferences.
- Follow the '5 Moments for Hand Hygiene' Guidelines to wash hands accordingly to reduce contamination.
- No one is exempt from hand washing. Following the Infection Control guidelines in your work area is a requirement of your daily work practice.
- Cleaning removes visible contamination such as food waste, dirt, and grease from a surface.
- Sanitising is the process that destroys bacteria (germs) that may remain after cleaning.
- Food handlers must have skills and knowledge to handle food safety as they carry out the work that they are responsible for.
- The Work Health and Safety Act 2011 requires you to comply with all policies and requirements for safe manual handling in the workplace.

## 2. Nutrition and Dietary Guidelines

This topic covers information about:

- Principles of Nutrition
- Dietary Guidelines

Activities in this topic cover the following performance criteria:

- Categorise foods according to food groups, identifying key nutrients by each food group and individual foods within that group
- Identify recommended serves of various food groups for client groups, in consultation with a dietitian
- Identify the conditions commonly encountered by the client group requiring an individualised plan or dietary modification
- Identify dietary factors associated with common lifestyle diseases and/or diet related chronic diseases and other nutrition-related conditions, food intolerances, allergies
- Identify special nutritional and dietary needs encountered by the client group
- Report dietary and nutrition issues and needs to the dietitian
- Consult with dietitian to address the identified risks and needs of client groups
- Report the acceptability, tolerance and consumption of meals by the client to the dietitian or relevant health professional
- Identify problems which may affect the client's ability to eat or drink to the dietitian and/or other relevant health professional, according to organisation policies and procedures
- Provide feedback on consistently poor client meal choices to the dietitian
- Follow systems designed by a dietitian to monitor and document on client nutritional status

## 2.1 Principles of Nutrition

Most people require nutrients from a range of food groups. There is not one perfect food that will sustain us through our lifecycle.

### Nutrients

Nutrients are chemical substances found in food. They are necessary for sustaining life and for healthy body function. Foods that contain large amounts of one particular nutrient are often labelled as one type of food such as bread and cereals being a 'carbohydrate' food or meat being a 'protein' food. In reality, food usually contains more than one nutrient, and a combination of vitamins and minerals.

There are seven (7) essential nutrients necessary for normal metabolism and body function:

- Protein
- Carbohydrate
- Fat
- Vitamins
- Minerals
- Water
- Fibre

### Macronutrients

Macronutrients are the big nutrients often known as protein, fat, carbohydrate, and alcohol. Macronutrients provide energy to the body.

### Protein

Protein foods/fluids are used for growth and development for our body and its tissues (including muscles, organs, skin, and the parts of the immune system). The body uses protein for energy or can convert excess amounts to fat.

We may have higher requirements for protein when we are:

- Sick or Ill
- Have an infection
- Have wounds that need to be healed (i.e. burns, cuts, often post-surgery etc.)

Main sources of protein include:

- Lean meat
- Fish
- Poultry
- Eggs

- Dairy foods
- Nuts
- Legumes

## Carbohydrates

Anything ending in –ose is a type of carbohydrate (i.e. glucose, maltose)

- Monosaccharide (one sugar molecule) e.g. glucose
- Disaccharide (two sugar molecules) e.g. combinations such as:
  - sucrose = glucose + fructose
  - maltose = glucose + glucose
  - lactose = glucose + galactose
- Polysaccharide (Many sugar molecules) e.g. glycogen, starch

Carbohydrates are a major source of energy for the body; 1 gram of carbohydrate gives 16 kilojoules of energy. Carbohydrates are:

- Sole source of energy for the brain. The body tries to use carbohydrates first when needing energy so it can “spare” protein, letting it be used for other purposes.
- Needed to make compounds like genetic materials (DNA) and to maintain the function of nerve tissue.

Carbohydrates include sugar, starch, and fibre. Sugars and starches are needed for the energy that the body needs to function. Extra carbohydrates are stored in the body as glycogen (in the liver and muscles) with excess amounts converted to fat.

Main sources of carbohydrate

- **Wholegrain cereals and grains:** including unrefined/wholegrain varieties of bread, breakfast cereal and foods made from grains such as brown rice
- **Refined cereals and grains:** including white pasta, instant noodles, white rice, white breads and muffins
- **Fruit:** including juice
- **Legumes:** including lentils and beans
- **Starchy vegetables:** Potato, sweet potato, sweet-corn and foods made from them – *e.g. crisps/chips*
- **Dairy foods** – such as milk, yoghurt, custard
- **Sugar** and sugary foods/drinks *e.g. lollies, soft drinks*

(National Health and Medical Research Council, 2003)

## Fats

Fats are needed for the membranes that surround all the cells in the body, for normal brain and nerve function, and for signalling hormones. Extra fat can be used as fuel for the body or can be stored as fat (Jetvig, 2011).

Fat is a concentrated source of heat and energy: 1 gram of fat gives 37 kilojoules of energy.

Fat:

- Acts as a carrier of fat soluble vitamins in food
- Increases the “mouth feel” and palatability of food
- Contributes to cell membrane structure
- Helps transport cholesterol

Fats may be classified as saturated or unsaturated depending on the detailed structure of the fatty acids involved. Certain fats can also be essential or non-essential. Certain polyunsaturated fatty acids are essential for good health:

- Linoleic or omega-6 come mainly from vegetable sources
- Linolenic or omega-3 come mainly from marine sources (or flaxseed)

## Types of Fat

Saturated Fat:

- Mainly found in animal food e.g. fat around and in meat (such as salami) and in dairy foods such as fat in milk, cheese and butter.
- Also found in coconut oil and palm oil - these fats are often listed as “vegetable fats/oils” on a label and are used in commercially produced foods such as biscuits, pastries, potato crisps, and often deep-fried takeaways.
- Saturated fats are usually solid at room temperature e.g. lard, cophera, butter/ghee, etc.

Polyunsaturated fat:

- Mostly found in plant foods, e.g. sunflower oil, safflower oil, soybean oil, nuts and seeds.
- Also found in “marine” sources – such as oily fish e.g. salmon, tuna, sardines, etc.
- They are usually liquid at room temperature

Monounsaturated fats:

- Mostly found in canola oil, olive oil, avocado, other nuts and seeds. Also found in some lean meats.
- Generally liquid at room temperature but may solidify at colder temperatures

## Alcohol

Drinking large amounts of alcohol has been shown to increase risks of illness and death from disease or accident (NHMRC, 2009). Small amounts, on the other hand, have been reported to be of benefit to health. According to the National Health and Medical Research Council (NHMRC), any benefits are mainly related to middle aged or older people and only occur with low-levels of alcohol intake of approximately half a standard drink per day. The guidelines do not encourage people to take up drinking just to get health benefits. *Alcohol may affect appetite, blood lipids, and glucose levels.*

Not all nutrients are equal. Fat contains the most energy per gram – at 37 kilojoules kJ/g, followed closely by alcohol (29 kJ/g), then protein (17 kJ/g) and carbohydrates (16 kJ/g).

## Micronutrients

‘Micro’ means small, so the micronutrients are the nutrients that we need in small amounts. These include the 12 vitamins and 13 minerals that we need every day. Vitamins are grouped as water-soluble or fat-soluble depending on whether they can dissolve in fat or water. Minerals are divided into two groups; the major minerals, and the trace minerals.

Water-soluble vitamins include vitamin C and the seven B-complex vitamins. They have a variety of functions and you need all of them to be healthy. Chronic deficiencies of these vitamins can result in poor health.

The fat-soluble vitamins are vitamins A, D, E and K. Vitamins A and E can only be obtained from food, but the body can make Vitamin D and Vitamin K. Overdoses of these vitamins can occur through taking mega-doses of vitamin supplements, but it would be very unlikely to get too much of these vitamins from the foods you eat. Fat-soluble vitamins are more likely to build up to toxic levels since they are not excreted in urine like the water soluble vitamins. Recent research has shown that many people have low blood vitamin D levels and some people take calcium supplements with added vitamin D to meet their requirements.

Major minerals are particularly important for healthy bones, teeth, muscles, and fluid balance. These minerals include:

- Calcium
- Phosphorus
- Chloride
- Magnesium
- Potassium
- Sodium

Trace minerals are need by the body for a variety of processes essential to life. These minerals include:

- Chromium

- Copper
- Fluoride
- Iodine
- Iron
- Selenium
- Zinc

When some vitamins and minerals are taken together, absorption is enhanced in the body; however at other times, other nutrients and food components can interfere with absorption.

An example of combining nutrients to assist absorption is eating a Vitamin C-rich food together with an iron-rich food to assist iron absorption. An example of food components interfering with absorption is phytates in bran which hinder the absorption of zinc.

### **A Wide Variety of Foods**

A variety of foods from each of the food groups is important for good health in a 'well' person. Since about 30% of hospital patients are at risk of malnutrition or are malnourished (Banks, Ash, Bauer, & Gaskil, D, 2007) it is even more important that they are provided with a nourishing diet.

Additionally, when ill, a patient's tolerance to certain foods may change due to side effects or symptoms of their condition or medication regimen (such as needing a soft diet for a sore throat or cold foods if feeling nauseous with the aroma of hot menu items).

The level of nutrients, vitamins, minerals, fibre, and fluid required for an individual during admission is determined by a Dietitian. This is based on a variety of factors including physical and emotional health status, anthropometrics and biochemistry, disease state, medications, and length of stay.

The food chosen to fulfil these requirements for the admission or advice offered for discharge also takes into account the patient's:

- Age
- Living situation – i.e. do they live alone or care for others who have special dietary requirements?
- Ability to shop, prepare and consume foods, including other factors such as living environment, food storage/ equipment (e.g. fridge, cooker), economics etc.
- Dentition
- Religion and culture or social reasons for eating – e.g. vegetarian, Jewish etc.
- Increased or decreased nutritional requirements due to medication, the illness/medical condition, etc.

## **Water**

Water is needed for the functioning of every cell and organ in the body, involved in processes such as:

- Maintaining body temperature
- Preventing dehydration including a major role in kidney function, preventing constipation and urinary tract infections
- Processing medications, and carrying water-soluble vitamins to cells
- Maintaining general body function

Sources of water:

- Water and water containing drinks e.g. tea, coffee, etc.
- Fluids such as milk and soups
- Vegetables
- Fruit

## **Fibre**

Fibre in food is necessary for the digestive system to function correctly

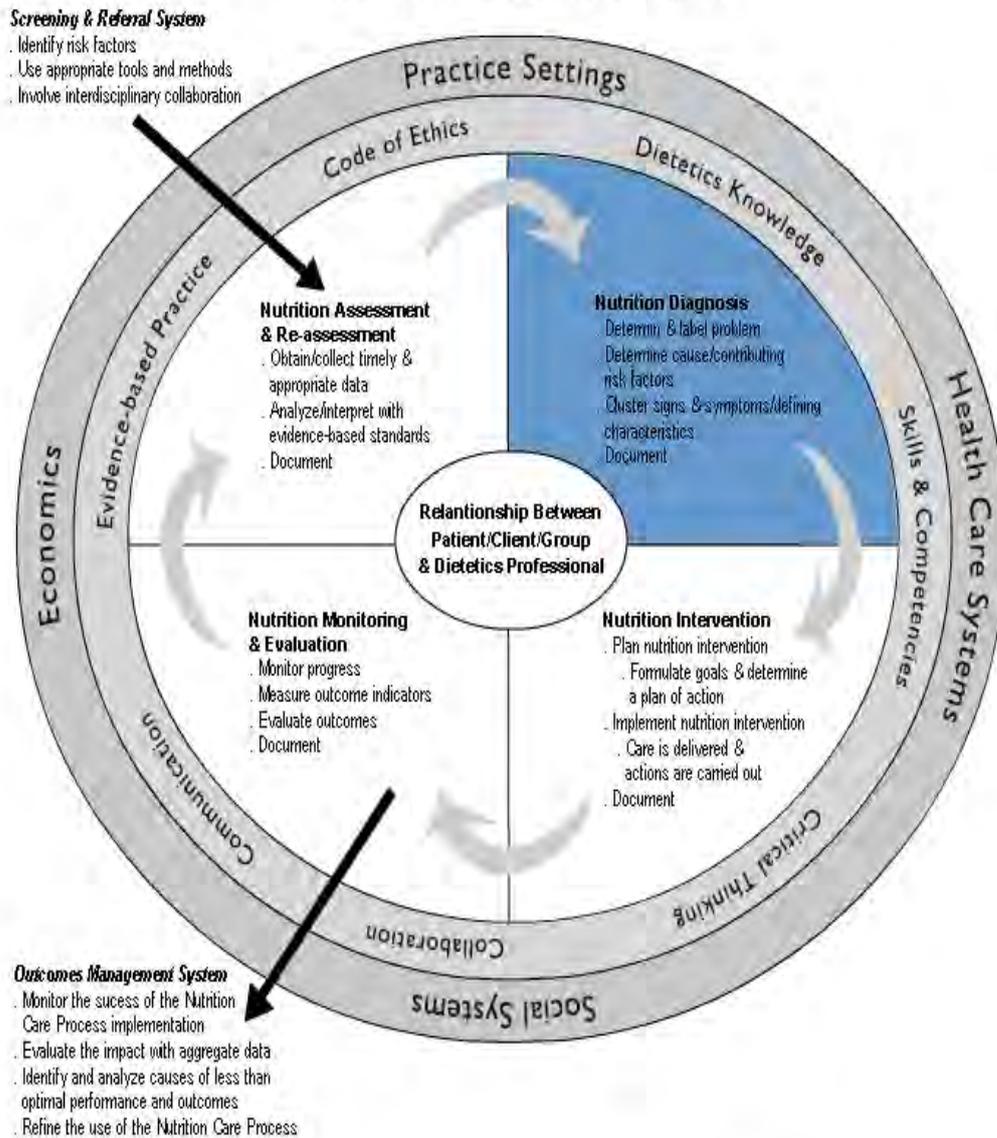
Sources include:

- Fruit and vegetables
- Bread and cereals
- Nuts and seeds
- Lentils and legumes

## **Nutritional Care Plan**

A Nutrition Care Plan provides information on how much and what type of foods and nutrients to give the patient and the rationale for the choices (nutrient formulation). Giving suggestions on the Nutrient Care Process and method of monitoring of key variables allows the Nutrition Care Team to determine the success or outcome of the management process.

## The Nutrition Care Process and Model



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Figure 2: Nutrition Care Process (Queensland Health, 2011)

Nutrition Assessment and Re-assessment	Nutrition Intervention
<ul style="list-style-type: none"> <li>▪ Food/nutrition related history</li> <li>▪ Anthropometric measurements</li> <li>▪ Biochemical data, medical tests and procedures</li> <li>▪ Nutrition-focused physical findings</li> <li>▪ Client history</li> </ul>	<ul style="list-style-type: none"> <li>▪ Food and/or nutrient delivery</li> <li>▪ Nutrition education</li> <li>▪ Nutrition counselling</li> <li>▪ Coordination of nutrition care</li> <li>▪ Aimed at addressing the aetiology</li> <li>▪ Reduces/eliminates signs and symptoms</li> </ul>
Nutrition Diagnosis	Nutrition Monitoring and Evaluation
<ul style="list-style-type: none"> <li>▪ Intake (excessive or inadequate intake of a food or nutrient compared to requirements)</li> <li>▪ Clinical (Nutrition problems related to medical or physical condition)</li> <li>▪ Behavioural-Environmental (knowledge, attitudes, beliefs, physical environment, access to food, food safety)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Food/nutrition related</li> <li>▪ Biochemical data, medical tests and procedures</li> <li>▪ Anthropometric</li> <li>▪ Nutrition-focused physical findings</li> </ul>

The Nutrition Care Plan is recorded in the following places:

- Medical records
- Hospital discharge/transfer notes
- On department-specific record sheets documents
  - diet cards
  - forms
  - schedules
  - meal plans which record all patients meal and midmeal information are easily accessible by Nutrition Assistants Cards in the Nutrition Assistant office
- Dietary requirements specified in the Nutrition Care Plan will be recorded on the ward diet list (paper, board, computer (e.g. Trendcare or equivalent)).
- The Dietitian may also verbally discuss the plan with team members e.g. Nutrition Assistants.



## Activity 4 – Review a Nutritional Care Plan

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*This exercise can be completed with the assistance of your Dietitian.*

Choose a patient from your facility who has a Nutrition Care Plan developed by a Dietitian.

Initials: \_\_\_\_\_ Ward/Location: \_\_\_\_\_

1. What are the special nutritional needs of your patient?

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2. Check the patient's menu selection against their Nutrition Plan or special diet. Are the patient's selections consistent with their needs? Give your reasons.

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3. What are the patient's food/fluid preferences?

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4. How are the patient's food/fluid preferences recorded in your facility?

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## Fluid Requirements

We all know that nutrition, either as solid food or via liquid (as in supplements, tube feeding, or Parenteral nutrition) is vital for long-term health, growth and repair of our tissues; however, fluid is even more important. Our body would not survive any longer than a few days without it. All biochemical reactions occur in water including the transport of energy, protein, vitamins, and minerals around the body to organs and other structures like bones.

According to Australia's National Health and Medical Research Council (NHMRC), water accounts for 50-80% of body weight, varying according to lean body mass (i.e. muscle) and will change according to a number of other factors including health and environment.

In general, healthy Australian adults are recommended to consume approximately 8-10 cups of fluid each day in addition to the fluid that is contained in food. Breastfeeding mothers have even higher requirements of up to 12 cups per day. In children, requirements change to 4-5 cups a day by age 4 up to 6-8 cups by the time they reach adolescence.

For the healthy individual, the benefits to drinking water include:

- Preventing dehydration
- Regulating body temperature
- Reducing fluid retention
- Giving the feeling of fullness when consumed with a meal
- Carrying nutrients and oxygen to the cells
- Providing moisture to skin and other tissues
- Helping prevent constipation
- Cushioning joints
- Helping to strengthen muscles



## Food and Fluid Record Chart

Knowing how a person eats and drinks during their admission can provide useful information for the Nutrition Care Team particularly when at risk of malnutrition. A team member may request a Food and Fluid Record Chart to:

- Allow Dietitians to assess whether patients are receiving adequate nutrition
- Assist Dietitians to determine whether patients require supplements or tube feeds in addition to meals – and how much is required
- Monitor whether patients are consuming supplemental food and drinks
- Monitor the intake and preferences of patients who cannot communicate

Local procedures for completing Food and Fluid Record Charts may differ; however, the basic principles are the same. Ask your Dietitian about what forms are used at your facility and how these should be completed. Your tasks as a Nutrition and Dietetic Assistant may require you to complete food records for patients however often these forms are completed by Nursing Staff or Trained Volunteer Feeders.



**Remember:** Food and Fluid Record Charts are evidence of monitoring intake during admission. They are a legal document and are usually filed in the patient's notes following discharge. They should still be completed in black pen.



### Nutrition Care Process

The Nutrition Care Process (Nutrition Care Process and Model, 2003) is a systematic problem solving-method used by Dietitians to think critically, and decide how they will address nutrition-related problems. The Dietitians Association of Australia (DAA) has adopted the ADA nutrition care process (ADIME). The model and the use of standard dietetic language have been rolled out across all Queensland Health Dietetic Departments.

The model contains four interrelated and connected steps:

- Nutrition assessment
- Nutrition diagnosis
- Nutrition intervention, and
- Monitoring and evaluation

Reasons a Dietitian may request a Food and Fluid Record Chart:

- To allow Dietitians to assess whether patients are receiving adequate nutrition
- To assist Dietitians to determine whether patients require supplements or tube feeds in addition to meals – and how much is required
- To monitor whether patients are consuming supplemental food and drinks
- To monitor the intake and preferences of patients who cannot communicate

Completing the Food and Fluid Record Chart:

- Record the patients name, date and diet type
- If Nil by Mouth at the meal write NBM
- For each meal item on the tray, record/mark the amount of food eaten: None,  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , all
- For salad meals record the protein and vegetable parts separately
- Don't forget to record the extra food and drink items e.g. Supplements
- Try to write the actual food item where possible
  - Chicken casserole instead of meat
  - Egg and mayo sandwich instead of just sandwich

	Type or Other Items		Consumed (please circle)				Pro kJ	Comments
Juice		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Fruit		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Cereal		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Yoghurt		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Bread		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Drink		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Hot item		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Supplement		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
<u>Morning Tea</u>								
Food		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Drink		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		
Supplement		None	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	All		

Depending on your work schedule; mid-meal food and fluid consumption data may need to be recorded at meal-times. It is helpful know which mid-meals the patient should have received before questioning them e.g. from the delivery list.

- Ask the patient to confirm which food and or drink they received at the mid-meal
- Ask the patient how much of each item they consumed
- Take note of left-over items at their bedside or things that don't add up e.g. An unopened supplement when the patient said they consumed it all
- Where possible look at the menu card to confirm which items the patient received

You will need to question the patient about their intake if there is no evidence of consumption left on the tray

Start by marking the items the patient received on their tray.

<u>Lunch</u>						kJ Pro	Comments
Soup		None	1/4	1/2	3/4	All	
Meat	<i>Lamb rissole</i>	None	1/4	1/2	3/4	All	
Veges	<i>Mashed potato Other veg</i>	None	1/4	1/2	3/4	All	
Sandwich		None	1/4	1/2	3/4	All	
Bread	<i>Roll</i>	None	1/4	1/2	3/4	All	
Fruit		None	1/4	1/2	3/4	All	
Dessert	<i>Fruit in Jelly</i>	None	1/4	1/2	3/4	All	
Drink	<i>Tea</i>	None	1/4	1/2	3/4	All	

An example of this meal is presented over the page.



## Feedback to the Dietitian

The following information should be communicated to the Dietitian

- Patients who have been eating poorly over the last few meals e.g. eating less than  $\frac{1}{2}$  the main meal and dessert
- Patients who are not eating supplemental items/'extras'
- Patients who are eating food items that are not in line with their Nutrition Care Plan e.g. a patient on a minced diet eating potato chips bought in by visitors
- Patients who are eating poorly because they are not being assisted to feed



If you have concerns about the need to continue a Food and Fluid Record Chart don't be afraid to discuss this with the Dietitian.



## Activity 6 – Food and Fluid Record Charts

Use your workplace food chart to complete a Food Record Chart for the following meal. Attach your completed chart here.



(Royal Brisbane Women's Hospital, 2009)

Start by marking the items which the patient received on their tray

<u>Lunch</u>		kJ Pro Comments				
Soup		None	¼	½	¾	All
Meat	Lamb rissole	None	¼	½	¾	All
Vegetables	Mashed potato Other veg	None	¼	½	¾	All
Sandwich		None	¼	½	¾	All
Bread	Roll	None	¼	½	¾	All
Fruit		None	¼	½	¾	All
Dessert	Fruit in Jelly	None	¼	½	¾	All
Drink	Tea	None	¼	½	¾	All
Supplement		None	¼	½	¾	All

Circle the amount consumed for each item

<u>Lunch</u>		kJ Pro Comments				
Soup		None	¼	½	¾	All
Meat	Lamb rissole	None	¼	½	¾	All
Vegetables	Mashed potato Other veg	None	¼	½	¾	All
Sandwich		None	¼	½	¾	All
Bread	Roll	None	¼	½	¾	All
Fruit		None	¼	½	¾	All
Dessert	Fruit in Jelly	None	¼	½	¾	All
Drink	Tea	None	¼	½	¾	All
Supplement		None	¼	½	¾	All

## 2.2 Dietary Guidelines

In Australia recommendations about a healthy diet come from:

- Carefully evaluated scientific evidence and research
- Recommended Daily Intakes of Nutrients/Nutrient Reference Values
- Dietary Guidelines for Australian Adults, Children and Adolescents (incorporating the Infant Feeding Guidelines for Health Workers), and Dietary Guidelines for Older Australians
- The Australian Guide to Healthy Eating (AGHE)

All recommendations are used together to develop a food plan which prevents disease and help with growth and development across the age spectrum. The aim of the Australian Guide to Healthy Eating (AGHE) (2013) is to encourage the consumption of a variety of foods from each of the five food group's every day. This reduces the risk of nutrient imbalance.

The Healthy Eating Chart resembles a pie graph/plate that describes the overall *proportions* in which the different food groups should be eaten. It does not illustrate how much food needs to be eaten in one day. There are a variety of foods shown in each group to hint at the importance of eating a variety of foods both *from* each group and *within* each group. It encourages a diet which is low in saturated fat, high in fibre, low in sugar, and low in salt.

*The Healthy Eating Chart is presented on the following page.*

# AUSTRALIAN GUIDE TO HEALTHY EATING



Figure 3: Healthy Eating Chart (Department of Health and Ageing, 2013)

The AGHE five food groups are:

- a) Bread, cereal, rice, potato, noodles
- b) Vegetables and legumes
- c) Fruit
- d) Milk, yoghurt, cheese
- e) Meat, fish, poultry, eggs, nuts, legumes

### **1. Bread, cereal, rice, potato, noodles**

1. Provide carbohydrate, iron, thiamin, energy, protein, fat, fibre, magnesium, zinc, riboflavin, niacin equivalents, folate and sodium
2. For adults, intake should range from 4-12 serves a day

One serve equals:

- a. 1 slice (40g) of bread
- b.  $\frac{1}{2}$  medium bread roll
- c.  $\frac{1}{2}$  cup cooked rice, pasta or noodles
- d.  $\frac{1}{2}$  cup porridge,  $\frac{2}{3}$  cup breakfast cereal flakes or  $\frac{1}{4}$  cup muesli

### **2. Vegetables and legumes**

- Provide vitamin A (beta-carotene), carbohydrate, fibre, magnesium, iron, vitamin C, folate and potassium
- For adults, intake should include at least five serves a day.

One serve equals:

- $\frac{1}{2}$  cup cooked vegetables
- $\frac{1}{2}$  cup cooked dried beans, peas or lentils
- 1 cup salad vegetables
- $\frac{1}{2}$  medium potato

### **3. Fruit**

- Provides vitamins – especially vitamin C, carbohydrate, fibre and folate
- For adults, at least two serves per day

One sample serve equals:

- 1 medium piece e.g. apple, banana, orange, pear
- 2 small pieces e.g. apricots, kiwi fruit, plum
- 1 cup diced pieces or canned fruit

Or only occasionally

- ½ cup juice
- 30 g dried fruit e.g. 4 dried apricot halves, 1½ tablespoons of sultanas

#### **4. Milk, yoghurt, cheese**

- Provide calcium, protein, energy, fat, cholesterol, carbohydrate, magnesium, zinc, riboflavin, vitamin B12, sodium and potassium
- For adults, aim for two to four serves per day

One serve equals:

- 250mL(1cup) fresh, longlife or reconstituted dried milk
- ½ cup evaporated milk
- 40g (2 slices) cheese
- 200g (1 small carton) yoghurt
- 250mL (1 cup) custard

*The following alternatives contain about the same amount of calcium as a serve of milk, yoghurt or cheese:*

- 100g almonds with skin
- 60g sardines, canned in water
- ½ cup (100g) canned pink salmon with bones
- 100g firm tofu (check the label as calcium levels vary)

#### **5. Meat, fish, poultry, eggs, nuts, legumes**

- Provide protein, iron, zinc, fat, cholesterol, niacin equivalents and vitamin B12
- For adults aim for one or two serves per day

One serve equals:

- 65g cooked lean red meat e.g. ½ cup lean mince, 2 small chops, 2 slices of roast meat (eg. beef, lamb, pork, goat, kangaroo)
- 80g cooked lean poultry
- ½ cup dried beans, lentils, chickpeas and canned beans
- 100g cooked fish fillet
- 2 large (120g) eggs
- 170g tofu
- 30g cup peanuts, almonds sunflower seeds, sesame seeds

#### **Extra foods**

- Some foods do not fit into the five food groups as they are not essential to provide the nutrients the body needs
- For adults – zero to three serves per day

One serve equals:

- 2-3 plain sweet biscuits
- 1 slice plain cake
- 25g/ ½ small bar chocolate
- 2 Tablespoons cream or mayonnaise
- 1 Tablespoon butter
- 200mL wine/400 ml regular beer
- 60mL spirits

### **Water**

- Adults require up to eight glasses (approx. 2 litres) of water every day - more is required during physical activity and hot weather.
- Fluid is found in all drinks (including tea and coffee, as well as soups, and smaller amounts in food).
- All fluids, other than alcohol, contribute to fluid requirements. Water is the best drink to quench thirst.

Dietary Guidelines provide information on what and how much to eat to reduce the risk of developing diet-related illnesses such as:

- heart disease
- diabetes
- certain cancers
- obesity
- gall bladder disease
- dental caries

The Dietary Guidelines are based on scientific evidence and research in nutrition and health. They were originally published in 1979, and are reviewed and updated by an expert panel reporting to the National Health and Medical Research Council.

## The Dietary Guidelines for All Australians:

### Guideline 1

To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs

- Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly.
- Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.

### Guideline 2

Enjoy a wide variety of nutritious foods from these five groups every day:

- Plenty of vegetables, including different types and colours, and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years)

And drink plenty of water.

### Guideline 3

Limit intake of foods containing saturated fat, added salt, added sugars and alcohol

- Limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks.
  - a. Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods which contain predominantly polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado.
  - b. Low fat diets are not suitable for children under the age of 2 years.
- Limit intake of foods and drinks containing added salt.
  - Read labels to choose lower sodium options among similar foods.
  - Do not add salt to foods in cooking or at the table.

- Limit intake of foods and drinks containing added sugars such as confectionary, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks.
- If you choose to drink alcohol, limit intake. For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.

#### **Guideline 4**

Encourage, support and promote breastfeeding

#### **Guideline 5**

Care for your food; prepare and store it safely

These efforts are designed to improve the health of Australians and reduce the burden of preventable diet-related diseases.

#### **Infant Feeding Guidelines for Health Workers (NHMRC, 2012)**

The document has four main sections.

##### 1. Encouraging, Supporting and Promoting Breastfeeding in the Australian Community

This section contains information on:

- Initiating, establishing and maintaining breastfeeding
- common problems and their management
- expressing and storing breast milk
- breastfeeding in specific situations

##### 2. Guidelines for safe bottle feeding:

Health workers must be confident in their ability to advise women on the safe preparation and use of infant formula. This section highlights issues such as:

- Informed use of supplementary feeds in hospital
- Infant formula –how to choose and prepare safely

##### 3. Introducing solid foods

- When and what to introduce
- Foods and beverages unsuitable for infants

#### 4. The WHO (World Health Organisation) Code:

This section outlines the code and explains health workers' responsibilities in relation to how the Code has been implemented in Australia.

### **Nutrition and diet requirements for infants and toddlers**

#### **Babies 0 - 6 months of age**

- Encourage, support, and promote exclusive breastfeeding for the first six months. Breast milk provides all the food and drink a baby needs. Mother's milk also contains special substances which protect against infection and disease and helps the baby to grow.
- If an infant is not breastfed or is partially breastfed the commercial infant formulas are the most acceptable alternative until 12 months of age
- Pasteurized whole cow's milk may be introduced at around 12 months of age. Reduced fat milks are not recommended in the first two years of life.

#### Transition to solid foods:

- At six months of age infants are physiologically and developmentally ready for new foods and textures. Breast milk can no longer provide all the nutrients they require.
- Start with iron rich foods such as fortified baby cereals (eg. rice), puree meat, chicken, fish, liver, cooked plain tofu
- Follow this by introducing foods with high nutrient density until the infant is eating a variety of foods from each of the five good groups

If there is a strong family history of allergy the current NHMRC recommendation is:

- Solid foods should be introduced at about 6 months of age
- Introduce a variety of foods in any order although iron-rich foods should be offered first (this can include potentially allergenic foods, even if a family member has this food allergy).
- Continue breastfeeding while introducing solids

#### Food and beverages not suitable for infants

- Avoid giving whole nuts and similar hard foods to young children aged less than 3 years to reduce the risk of choking
- To prevent botulism, do not feed honey to infants aged under 12 months
- Cow's milk (or milk from any animal source unmodified) should not be given as the main drink to infants under 12 months but may be introduced as a drink at

around 12 months of age and be continued throughout the second year of life, and beyond.

- Unpasteurised milk should not be used.

### **Babies 6 – 9 months**

- At 6-9 months a baby has more teeth, can pick things up, and starts to hold a spoon.
- Babies still needs breast milk/formula (breast is best) however it needs more solid foods (usually 3-4 times a day before breastfeeds).
- Babies can start to try meat, fish, and egg yolk as well as soft cooked vegetables and fruits.

### **Babies 9-12 months**

- Babies start to learn to drink from a cup and learn to feed themselves using finger foods.
- Their weight is three times their birth weight.
- Breast milk should still be offered, but baby can start having cow's milk after 12 months.

The range of solid foods continues to increase, i.e. baby can have the same foods that the family eats, but avoid foods that can cause choking.

### **Infants 1-3 years**

- Baby begins to walk, and has all of teeth
- Needs about 3 serves of dairy foods a day
- Needs 3 meals and 3 snacks per day from a variety of foods
- Junk foods/drinks are not healthy for babies/infants

## Healthy Eating Throughout the Lifespan

- Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly.
- Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.

Enjoy a wide variety of nutritious foods from these five food groups every day:

Plenty of vegetables of different types and colours, and legumes/beans and fruit:

- Plant foods such as apples and tomatoes are protective foods (along with nuts and seeds).
- Studies have shown that they can protect against heart disease, high blood pressure, diabetes, cataracts, and some cancers.
- The “goodness” of vegetables may be reduced by cooking. Do not boil vegetables for too long to avoid nutrient and flavour loss.
- Stir-frying, microwaving, or steaming are ideal ways to cook vegetables.

Eat plenty of cereals, mostly wholegrain and/or high cereal fibre varieties

- Cereals should provide the foundation of our daily meals.
- They are excellent sources of B-group vitamins, vitamin E, essential fatty acids, minerals, and fibre.
- The most nutritious cereals are ‘wholegrain’ meaning they contain the starchy core, the germ, and the bran.
- One third of our daily fibre intake comes from cereals, especially wholegrains.
- Fibre prevents constipation and protects against diverticular disease and bowel cancer.

Include lean meats, fish, poultry, eggs, tofu, nuts and seeds, and legumes/beans:

- These foods are all excellent sources of protein and they are a main source of iron in the Australian diet.
- Red meats are also an excellent source of zinc – a nutrient often lacking in the Australian diet. Meats, poultry, fish, shellfish and eggs are also an excellent source of Vitamin B12 (not found in plant foods).
- Fish and seafood are one of the richest sources of omega 3 fats.
- Alternative protein sources include legumes, cereals, nuts, and seeds but these sources are low in iron and zinc.

Include milk, yoghurt, cheese, and/or alternatives mostly reduced fat:

- Dairy foods are a good source of protein, vitamin A, some B vitamins, and most importantly calcium.
- The calcium in dairy foods is better absorbed than the calcium found in plant foods.
- Dairy fat is high in saturated fat and can increase the risk of heart disease – low and reduced fat dairy foods are best.
- Alternative calcium sources include: fortified soy milk, sardines and some nuts
- Calcium is vital for the health of our bones and is required in constant supply.
- Physical activity is important for the development and maintenance of strong bones.
- From middle age our bones weaken. Women experience a higher level of bone loss in the 5 years after menopause.
- Vitamin D from sunlight, or from a healthy diet, helps to absorb calcium and is also important for bone health.

Drink Plenty of Water:

- Water is essential for life and makes up two thirds of our body weight
- Regular drinks replace water lost during the day e.g. through perspiration and breathing.
- Drinking too little fluid can lead to dehydration which, in addition to causing tiredness, can lead to kidney stones.
- Water is the best, cheapest, and safest drink. Tap water also gives us fluoride which helps develop strong bones and teeth.

Limit intake of foods containing saturated fat, added salt, added sugars and alcohol:

- Limit intake of foods and drinks containing added salt
- Salt has traditionally been used to preserve meats and flavour our everyday foods.
- Three quarters of the salt we eat is present in the food when we buy it e.g. bread, cheese, breakfast cereals, soups, and margarine.
- Too much salt can cause high blood pressure, which can lead to heart disease and stroke.
- Avoid adding salt at the table and read labels to choose lower sodium options among similar foods.

Limit intake of foods and drinks containing added sugars:

- Sugar had been unfairly blamed for causing diabetes, heart disease, cancer, and hyperactivity in the past.

- Sugar does provide extra kilojoules without any other nutrition – empty calories
- A moderate amount of sugar is not a problem – it makes nutritious foods enjoyable to eat.
- Sugar sweetend soft drinks and cordials, fruit drinks, vitamin waters, every and sports drinks and confectionary contribute to obesity and should be limited.

Limit your alcohol intake:

- Heavy alcohol intakes increase the risk of accidents and liver damage.
- Serious long-term health problems may occur if men consume on average more than four (4) standard drinks and women consume two (2) drinks per day
- Women who are pregnant, planning a pregnancy or breastfeeding should not drink alcohol

Full Strength Beer 285ml 4.8% Alcohol	Low Strength Beer 425ml 2.7% Alcohol	Pre-mix Spirits 330ml 5% Alcohol	Wine 100ml 11.5% Alcohol	Spirits 30ml 40% Alcohol
				

Figure 4: Standard drink values for alcohol (Department of Veteran Affairs, 2009)

Dental Caries (tooth decay/cavities):

- Dental caries are an important health problem in Australia.
- Having sticky, sugary foods and drinks regularly increase the risk – minimize the number of meals and snacks.
- Sugars should be eliminated as fast as possible from the mouth.
- Foods needing active chewing lead to an increased salivation, which is desirable.

Prevent excess weight gain:

Being overweight puts a strain on the body and increases the risk of health problems such as:

- Heart disease, stroke and high blood pressure
- Diabetes
- Lower back pain and arthritis
- Cancer

There has been a dramatic increase in the number of Australians who are overweight or obese. Contributors to excess body fat in Australians include:

- sedentary lifestyle
- availability of a wide variety of foods
- promotion of easy to eat high fat /high energy foods
- social pressures to eat whether we are hungry or not
- food habits developed from childhood
- poor food knowledge
- stress and emotional disturbances

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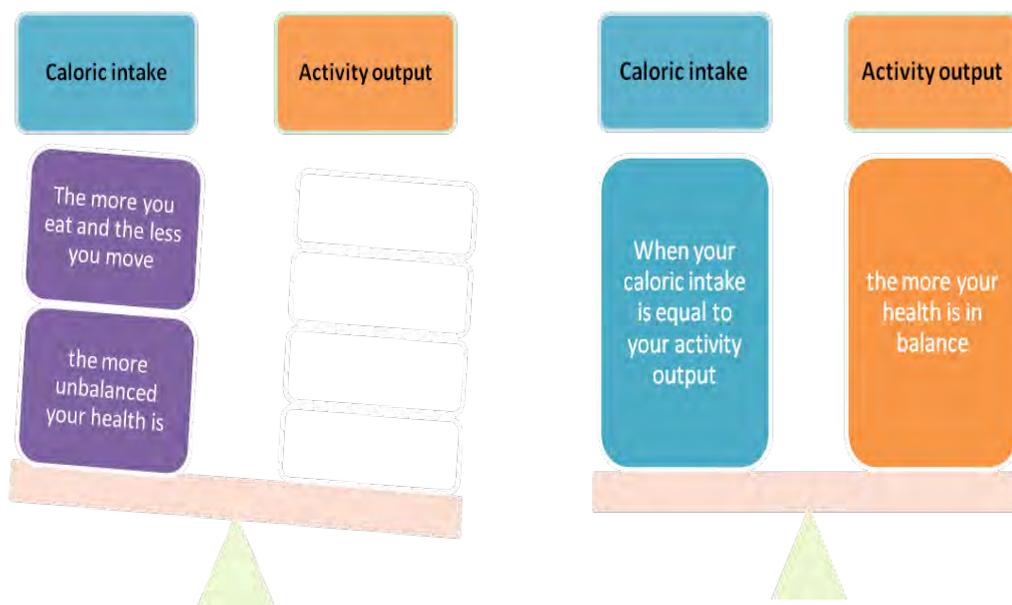


Figure 5: Relationships between Caloric Intake and Activity Output

There is a very simple way to prevent excess weight gain; excess food intake and limited exercise cause weight gain. The key is to maintain balance between your caloric intake (the food you eat) and your activity output (how much you exercise). See *the Figure 5*.

### Tips for a healthy weight

- Enjoy a healthy breakfast.
- Eat slowly and savour every mouthful.
- Listen to your body. Stop when, or even before, you feel full.
- Don't shop when you're hungry – and use a list.
- Plan healthy, quick and easy meals for busy days.
- Make meal times special occasions for the whole family. And turn off the TV!
- When eating out, make healthy choices. For example, choose grilled or steamed foods and avoid creamy sauces.
- Choose water instead of soft drink, cordial, fruit drinks, vitamin waters, energy drinks, sports drinks or alcoholic drinks.
- When hungry, fill up with fruit and vegetables.
- Don't spend a long time sitting down. Turn off the computer!
- Be physically active every day in as many ways as you can. Go for a walk, play active games, go for a ride, start a vegetable garden.
- Get the kids involved too.
- Find a friend or family member to help support you to eat healthily

### Australia's Physical Activity and Sedentary Behaviour Guidelines for Adults

(Australian Government Department of Ageing 2014)

- Make your move – Sit less. Be active for life!
- Move more, sit less, every day!
- Each week 150 minutes (2 ½ hours) of moderate intensity or 75 minutes (1 ¼ hours) of vigorous intensity physical activity will help improve blood pressure, cholesterol, heart health, as well as muscle and bone strength.
- Each week, increasing to: 300 minutes (5 hours) of moderate intensity physical activity, **or** 150 minutes (2 ½ hours) of vigorous intensity physical activity, will provide greater benefits and help to prevent cancer and unhealthy weight gain.
- **And sit less!** Break up long periods of sitting as often as possible – sedentary behaviour is associated with poorer health outcomes including an increased risk of type 2 diabetes.

## Australia's Physical Activity and Sedentary Behaviour Guidelines for Children and Young People

- Toddlers and children 2 – 5 years old should be physically active for at least 3 hours a day spread throughout the day
- Children 5 to 12 years old and young people 13 – 17 years old should accumulate 60 minutes of moderate to vigorous intensity physical activity every day
- All age groups should limit time sitting and using electronic media (television, DVDs and electronic and computer games).

### Classifying Weight

Health professionals, including Nutritionists and Dietitians classify weight using the following:

- Body Mass Index (BMI)
- Growth (Height/Weight/BMI) charts
- Waist Measurement

Body Mass Index (BMI) =  $\frac{\text{weight in kilograms}}{(\text{height in metres})^2}$

### Classifying Weight

Classification	BMI	Chronic Health Risk
Severe underweight	< 16	
Moderate underweight	16.0 – 16.9	
Mild underweight	17.0 – 18.49	
Underweight	<18.49	Low (but possibly increased risk of other clinical problems)
Normal range	18.5 – 24.9	Average
Overweight	>25	
Pre-obese	25.0 – 29.9	Increased
Obese I	30.0 – 34.9	Moderate
Obese II	35.0 – 39.9	Severe
Obese III	>40	Very Severe

## Growth Charts (used for children and young people up to 18 years)



Remember all children have a pattern of growth that is individual for them. Regular weight and length/height measurements over time will show a baby/child's individual growth pattern. Growth charts are used to track a baby's/child's growth over time – if weight and/or BMI start to rise significantly across the percentile lines while height stays on the same percentile line – there is a risk the baby/child is overweight.

To see growth charts go to -

<http://www.education.vic.gov.au/childhood/parents/mch/Pages/charts.aspx>

## Waist Measurement

Your waist measurement	Your weight-related health risk
Men less than 94cm Women less than 80cm	Your weight-related health risk is low.
Men between 94–102cm Women between 80–88cm	Your weight-related health risk is increased, especially if your BMI is more than 25 too.
Men more than 102cm Women more than 88cm	Your weight-related health risk is high.

## Nutrition and the Elderly

- The Elderly are at a higher risk of poor nutrition due to ill health, social isolation, reliance on transport/assistance with shopping, limited mobility, poor dentition, appetite loss, poor/limited finances, and poor vision.
- Other issues may include depression from loss of a spouse or susceptibility to multiple chronic diseases and medication interactions.
- Although energy needs decline with age, nutrient needs do not, so eating nutrient dense foods becomes more important.

## **Iron deficiency**

Iron deficiency is a significant health problem. Iron is essential in the structure of haemoglobin (which is the molecule within the red blood cell which carries oxygen around the body).

So, if you don't have enough iron to produce red blood cells you will become anaemic.

Symptoms include: tiredness, poor stamina, and concentration, lethargy, reduced exercise performance, and frequent infections

### **Who is at risk of Iron Deficiency?**

- Women (due to a higher iron requirement due to monthly blood loss (menstruation) and during pregnancy)
- People who donate blood
- People who exercise regularly at an intense level
- People who do not eat an iron-rich diet

### **Sources of Iron and its absorption**

There are 2 types of iron:

1. Haem Iron: found in red meat, liver, seafood and poultry
2. Non-Haem Iron: found in breads, fruits, vegetables, cereals, lentils, nuts and eggs

Haem iron is ten times easier for our bodies to absorb than Non-Haem iron. Vitamin C rich foods increase iron absorption.



## **Activity 7– Dietary Guidelines, core food groups, nutrient imbalances**

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Read the case study below and answer the questions that follow



### **Case Study**

A mother with her 9 month old baby attends an outpatient appointment at the hospital with the report of the infant losing weight. Upon investigation it is discovered that the infant is being exclusively breastfed without any solid foods. The mother is under the impression that she was advised to exclusively breastfeed until the infant is one; however the infant is not gaining weight and waking frequently in the night time for feeds.

1. Is feeding an infant exclusively breast milk up until the age of 1 a recommendation of the Infant Feeding Guidelines? Explain your reasoning.

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2. At what age would introduction to solids be recommended as per the Infant Feeding Guidelines?

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3. What solid food suggestions could be given to the mother to commence on the infant?

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*Activity continues on the next page*



### Case Study

A 30 year old female visits a Dietetic Clinic seeking advice on improving her diet and worried she may be missing certain vitamins and minerals. The patient reports feeling tired and thirsty recently, but is unsure why. Upon review it is discovered that the patient is managing 500 mls of water to drink in total per day and she is meeting the Australian Guide to healthy eating in 3 of the 5 foods groups. These food groups she is meeting, from the AGHE, are:

- Bread, cereal, rice, potato, noodles
- Vegetables and legumes
- Fruit

4. Which of the two AGHE food groups is missing from this patient's diet?

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5. Based on the two food groups not being eaten by this patient what vitamin and minerals do you think are at risk of deficiency in her diet?

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6. Can you suggest some foods from these two food groups for the patient to trial?

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7. How much water do you think the patient should be aiming to drink per day?

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*Activity continues on the next page*



### Case Study

Mr Brown, a 69 year-old male, is admitted to hospital for leg ulcer treatment. He weighs 60kg and is 170cm tall. He reports consuming a bottle of wine most days but otherwise enjoys a wide range of food groups and enjoys growing fruit and vegetables in his backyard.

8. Can you calculate Mr Brown's BMI? Body Mass Index (BMI) =  $\frac{\text{weight in kilograms}}{(\text{height in metres})^2}$

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9. What weight classification is Mr Brown now that you have calculated his BMI?

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10. How many standard drinks are equivalent to one litre of wine per day?

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*Activity continues on the next page*

11. List two foods that are good sources of each of the following nutrients.

Nutrient	Example one	Example two
Carbohydrate		
Protein		
Fat		
Mineral- Iron		
Mineral- Calcium		
Vitamin B12		
Vitamin C		
Folate		
Dietary Fibre		

*Activity continues on the next page*

12. For your healthcare setting, list two (2) foods for each of the food groups which would be suitable for inclusion in the following texture modified diet:

Food Group	Soft Diet	Minced and Moist	Pureed
Breads, Cereals, rice, pasta, noodles			
Fruit			
Vegetables, legumes			
Meat ,fish, poultry, eggs, nuts, legumes			
Milk, yoghurt, cheese			

13. List three foods which are known to cause food allergies or food intolerances.

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14. List three foods to avoid in a low lactose diet.

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*Activity continues on the next page*

15. List three foods to avoid in Coeliac Disease (gluten intolerance).

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16. Give two examples where high protein/energy diets may be required.

One:

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Two:

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17. What are two dietary imbalances that may contribute to an increased risk of heart disease?

One:

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Two:

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Activity continues on the next page

18. List three foods that contain dietary fibre

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19. State two occasions where a high fibre diet may be beneficial

One:

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Two:

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20. State two occasions where low fibre diets may be appropriate

One:

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Two:

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Activity continues on the next page

21. List two goals in the dietary management of type II diabetes

One:

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Two:

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22. For each of the following conditions, list one nutritional imbalance which may be involved in the development of the condition

<b>Condition</b>	<b>Nutritional imbalance which may be a contributing factor</b>
Dental Caries	e.g. excessive sugar intake
Constipation	
High cholesterol	
Hypertension (High Blood Pressure)	
Obesity	



## Key Points

The Australian Guide to Healthy Eating (AGHE) has five food groups:

- Bread, cereal, rice, potato, noodles
- Vegetables and legumes
- Fruit
- Milk, yoghurt, cheese
- Meat, fish, poultry, eggs, nuts, legumes

The Dietary Guidelines for All Australians (2013) make the following points

- To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs
- Enjoy a wide variety of nutritious foods from these five groups every day
- Limit intake of foods containing saturated fat, added salt, added sugars and alcohol
- Encourage, support and promote breastfeeding
- Care for your food; prepare and store it safely

Tools that Health Professionals (and Dietitians) use to classify weight include:

- Body Mass Index (BMI)
- Growth (Height/Weight/BMI) charts
- Waist Measurements

There is a higher risk of poor nutrition in the elderly due to ill health, social isolation, reliance on transport/assistance with shopping, limited mobility, poor dentition, appetite loss, poor/limited finances and poor vision.

## 3. Nutrition Support

This topic covers information about:

- Planning and Evaluating Meals and Menus
- Specific Dietary Needs
- Working with and supporting Food Services with implementing meal and menu orders and monitoring client satisfaction with foodservices

Activities in this topic cover the following performance criteria:

- Distribute menus to clients, or use meal order systems, according to established routines and procedures
- Provide guidance to client, to ensure that meal choices are consistent with the individualised plan
- Provide all assistance according to the instruction of dietitian and the individualised plan
- Collect menus and/or meal orders and assist clients with placing orders and marking menus as appropriate in line with role
- Distribute and collect menus for clients receiving diet or nutrition care according to established routines and procedures
- Record and provide feedback regarding food preferences and consistently poor menu and/or meal choices to the appropriate person
- Report client difficulties and concerns to the dietitian
- Implement variations to the individualised plan under the direction of the dietitian
- Collate menus and meal orders, including orders for clients receiving diet therapy or nutrition support
- Provide information to support the delivery of menu items chosen by the client, according to established routines and procedures
- Check meal orders for accuracy against the individualised plan developed by a dietitian, or other health professional
- Tally, collate and report menu items
- Maintain knowledge of client admissions, transfers and discharges
- Process meal orders for food services
- Provide information to support the delivery of chosen menu items to the food service within the required time frame

- Provide feedback about changes to, needs, food preferences and individualised plan to food services and to dietitians
- Plan menus according to menu planning principles
- Select food preparation and cooking methods in consultation with food production personnel to maintain maximum nutritional value of foods
- Plan meals and menus to minimise nutrient imbalance, incorporating relevant dietary guidelines
- Plan meals and food group serves to meet the nutritional needs of individuals within client groups
- Discuss and confirm menu plans with the dietitian
- Follow processes defined by dietitian to evaluate meals and menus to ensure they meet nutritional requirements of client groups
- Follow processes defined by dietitian to evaluate meals and menus to ensure client satisfaction
- Evaluate meals and menus to ensure feasibility of production in relation to equipment, time and skills as well as budgetary constraints
- Make adjustments to menu according to findings and the dietitian's directions
- Modify meals and menus to meet the nutritional and dietary needs of the client group using relevant guidelines
- Assess meals and menus for their suitability for texture modification to meet special nutritional and dietary needs, using relevant guidelines
- Incorporate sufficient choices of dishes and drinks in to menus for special needs, using relevant guidelines
- Provide information regarding individualised plan to client when appropriate and as directed by dietitian or relevant health professional
- Monitor the nutrition status of clients using standard and validated tools and nutritional indicators
- Report the progress of client nutritional status to the dietitian, and/or other health professional according to organisational protocols and timeframes
- Collect client satisfaction, using standard and validated tools
- Regularly monitor overall levels and changes in client satisfaction
- Provide feedback regarding overall levels and changes in levels of satisfaction to the appropriate person
- Use relevant feedback from clients to revise menus

## 3.1 Menu/Food preferences

As part of your role as a Nutrition Assistant you may be required to help patients to select suitable choices from the menus and the mid-meal/snack trolley that fit in with their relevant dietary needs and food preferences.

At your facility:

- Who records this information about therapeutic diets and preferences?
- Where is it recorded?
- How is the information used?

If you are not used to asking about food, and what a patient likes, you may find the following tips useful:

- Step 1:** Introduce yourself and where you are from e.g. Nutrition Services.
- Step 2:** Inform the patient that you are going to ask them about their food preferences (likes and dislikes) and ask if they are happy for you to continue.
- Step 3:** Ask if they have any food allergies or intolerances.

It is useful to collect the information systematically. For example, ask about specific meal occasions or food groups – such as:

- 'At breakfast what do you usually have? How do you have that?' or
- 'Here at the hospital we have a cooked breakfast available most mornings in addition to cereal and toast - would that something you may be interested in?'

There are many reasons patients may require assistance with meal selections. These may include:

- They are unable to mark the menu card due to injury or illness e.g. due to fractures, paralysis, stroke, placement of medical devices making movement difficult.
- They are unable to read the card e.g. due to loss of vision, eye surgery, poor English, misplacement of reading glasses, unable to read.
- They are suffering a condition called aphasia, which affects a patient's ability with communicating, writing, and comprehension.
- They may be suffering from dementia or other conditions altering their ability to fill in a menu card.

- They may be unable to make appropriate choices that are in line with the Nutrition Care Plan/therapeutic diet.

If you have an electronic menu system, you may need to collect menu choices onto a mobile device, which requires you to input the choices that the patient tells you that they would like.

When assisting any patients to make appropriate selections, you need to be aware of the following:

- The type of diet that they require e.g. general or therapeutic diet – including texture modification (e.g. if they are on a smooth puree diet, they won't be able to select a sandwich from the menu).
- Special instructions in the Nutrition Care Plan. For example, the Dietitian may have requested that a patient with diabetes that is treated with insulin to order an extra sandwich at dinner to have before bedtime as a snack.
- The menu items that are appropriate for the different diets (e.g. those on a low lactose/lactose-free diet should not receive standard yoghurt or milk).
- Patients who do not select enough food (e.g. a patient on a high protein diet who only orders only a bread roll and jam for dinner) or a patient who appears to select too much food (e.g. selects everything on the menu and is on a weight reducing or lower energy meal plan).
- If a patient refuses to follow the Nutrition Care Plan, inform the Dietitian so they can review the patient's progress and provide intervention where appropriate.

### High Energy/High Protein Diet

A high protein/high energy diet is frequently used to treat malnutrition. The goal of this diet is to:

- Have frequent meals and mid-meals and if volume is an issue, this may be overcome by having foods and fluids that are highly concentrated sources of energy and protein.
- Provide assistance and encouragement to eat.
- Treat nausea and poor appetite.
- Provide supplemental nutrition if requirements cannot be met orally.



High protein intakes may not be suitable for every patient – including renal patients. Check with the Dietitian if you are unsure of a patient's Medical Nutrition Therapy Requirements or look at their Nutrition Care Plan.

High Protein/High Energy Foods include:

- Milk
- Eggs
- Ice-cream and desserts
- Custard
- Milk powder
- Yoghurt
- Commercial supplements (e.g. 'Sustagen', 'Ensure')
- Cheese
- Margarine/oils (high energy only)
- Meats (red and white)
- Fish
- Cream (high energy only)

Oral Supplements:

- May be requested by Nursing, Medical or Dietary staff
- Used if patient is not eating well to supplement intake
- Examples include fortified milk\*(milk with milk powder added), 'Sustagen', 'Ensure'

*\* Not nutritionally complete - used when patient still managing some of meals*

Some clients who are unable to take sufficient food or fluid orally may be given their nutrition via special feeding methods such as:

- Tube Feeding/ Enterally (Nasogastric – via nose to stomach or small intestine)  
or
- Parenterally (directly into the blood using special liquids).

'Feeds' are usually recommended by a Dietitian and prescribed by the Doctor and are considered speciality dietary requirements. *Information regarding this is covered in Unit 5 Implementing screening and therapeutic diets*

## Food and Fluid Record Chart

Knowing how a person eats and drinks during their admission can provide useful information for the Nutrition Care Team particularly when the patient is at risk of malnutrition. A team member may request a Food and Fluid Record Chart to:

- Allow Dietitians to assess whether patients are receiving adequate nutrition
- Assist Dietitians to determine whether patients require supplements or tube feeds in addition to meals – and how much is required
- Monitor whether patients are consuming supplemental food and drinks
- Monitor the intake and preferences of patients who cannot communicate

Local procedures for completing Food and Fluid Record Charts may differ; however, the basic principles are the same. Ask your Dietitian about what forms are used at your facility and how these should be completed. Your tasks as a Nutrition and Dietetic Assistant may require you to complete food records for patients however often these forms are completed by Nursing Staff or Trained Volunteer Feeders.



**Remember:** Food and Fluid Record Charts are evidence of monitoring intake during admission. They are a legal document and are usually filed in the patient's notes following discharge. They should be completed in black pen.

### Steps to completing a Food and Fluid Record Chart

- Step 1:** Record the patient's name, date and diet type
- Step 2:** If Nil by Mouth at the meal, write NBM
- Step 3:** For each meal item on the tray, record/mark the amount of food eaten:  
None,  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , all

*(See Appendix B for a copy of the Food Fluid Record Chart)*



If you have concerns about the need to continue a Food and Fluid Record Chart don't be afraid to discuss this with the Dietitian.

Tips for getting useful information from the Food and Fluid Record Chart:

- For salad meals, record the protein and vegetable parts separately.
- Record the extra food and drink items including amounts consumed e.g. Supplements.

- Write the actual food item where possible e.g. “Chicken casserole” instead of “meat”, “egg and mayonnaise sandwich” instead of just “sandwich”.
- Ask the patient if they have consumed extra foods not on the menus – e.g. food that family has brought in such as chocolates, sweets, soft-drinks, coffees, fruit baskets etc.

### **Mid-meal Intakes**

Depending on your work schedule, mid-meal food and fluid consumption data may need to be recorded at mealtimes. Understandably, it is unlikely that you can observe every meal and mid-meal of every patient on a Food and Fluid Record Chart yourself.

Tips for recording mid-meal items:

- It is helpful to know which mid-meals the patient should have received before questioning them – look at the delivery list if possible.
- Ask the patient to confirm which food and/or drink they received at the mid-meal.
- Ask the patient how much of each item they consumed.
- Take note of leftover items at their bedside or things that do not add up e.g. an unopened supplement or half-eaten yoghurt when the patient said they consumed it all.
- Where possible, look at the menu card to confirm which items the patient received.
- You will need to question the patient about their intake if there is no evidence of consumption left on the tray.

When information should be fed back to the Dietitian:

- Patients who have been eating poorly over the last few meals e.g. eating less than ½ the main meal and dessert.
- Patients who are not eating supplemental items/‘extras’
- Patients who are eating food items that are not in line with their Nutrition Care Plan such as a patient on a minced diet eating potato chips bought in by visitors or patient on a fluid restriction consuming lots of fluids.
- Patients who are eating poorly because they are not being assisted to feed.
- If you notice a number of unopened and uneaten supplements despite patient assurance of tolerating and consuming.

## 3.2 Planning and Evaluating Meals

Nutrition Care Plans need to be developed when diseases of the digestive system or surgery to any part of the digestive system affect a person's ability to digest food and/or certain nutrients. This can mean a special diet is required to maintain or improve health. When the need for a special diet is indicated, a Dietitian will need to be consulted.

A special diet should be considered when a person has a medical condition or takes medication that affects the way their body digests or absorbs certain nutrients (e.g. diabetes and carbohydrates or fat-malabsorption drugs). A person may also need an extra nutrition because they had poor oral intake before admission to hospital.

A Nutrition Care Plan is also needed for people who cannot eat enough food to meet their nutritional requirements. This generally occurs in the following circumstances:

- broken jaw
- poor fitting dentures or dental problems
- cancer
- stroke
- Neurological conditions such as Motor Neurone Disease, Parkinson's disease, multiple sclerosis etc.
- fractures or burns to arms or face

A Nutrition Care Plan might also be required when the person is at risk of poor intake or has higher nutrient requirements than normal. For example:

- Malnutrition and underweight
- Food allergies and intolerances
- Chewing or swallowing difficulties such as following stroke or brain injury



**Remember:** In hospital or nursing homes a diet may need to be further modified. General diets are structured around the Australian Guide to Healthy Eating; however the menus in these locations may need to be modified to suit your patients. For example, a greater variety of softer foods, or foods that contain more protein or less fibre.

## Planning and Developing Menus

The Nutrition Standards for Meals and Menus (NSMM):

- Are designed to provide a framework to assist menu planning in hospitals, residential care, mental health facilities, and acquired brain injury units managed by Queensland Health (QH).
- Aims to meet the nutritional requirements of the majority of patients, residents, consumers, and clients taking into account length of stay, age, nutritional status, and type of facility.
- Are designed to be used in conjunction with the State-wide Food Service Standards which inform aspects of foodservice provision, menu delivery, type, and quality of meal service.

According to (Queensland Health, 2015, p. 6), “the NSMM are intended to be used by Dietitians and Foodservice Managers in the design and assessment of menus and recipes. These standards provide baseline requirements for general patient and resident menus. However, they do not replace the need for individual assessment of patients’ nutritional status or needs as outlined in the QH State-wide Food services Policy and Implementation Standards. These standards are based on the premise that patients in QH hospitals and residential aged-care facilities are predominantly unwell and have different nutritional requirements to the general public.”

## Menu Planning

Menu planning is focused on meeting the nutritional requirements of clients (nutritional adequacy). Some basic guidelines:

- Menus should be planned to meet the nutrient needs of the target clients.
- The menu should provide the minimum serves of the core food groups outlined in the AGHE according to age.
- Entering the menu into a nutrient analysis computer program can evaluate whether it provides the recommended Nutrient Reference Values (NRVs).
- Dietitians should be involved in the menu planning to ensure that menus are nutritionally balanced.

Planning a menu involves many factors but all menus should be well-planned to meet the needs of clients whether the diet is unrestricted, special, or therapeutic; and include all relevant stakeholders in the planning phase.

Other considerations include:

- Whether the menu meets the nutritional and psychosocial needs of the clients
- Constraints such as budget, food availability, equipment and facilities, staffing etc.
- Other factors such as variety, efficiency, seasons
- Transport, wastage, environmental costs
- Where and how the food is consumed

Menu planning principles:

- Nutritional adequacy
- Client preferences
- Menu type
- Quality
- Variety
- Presentation
- Staff
- Budget
- Food safety
- Equipment

### **Meal Patterns/Times**

- Patients/residents/clients are able to access at a minimum, 3 main meals and 3 mid-meals each day
- Meal delivery times are set and maintained within a +/- 5 minute variation and exceptions and corrective action are documented 100% of the time
- No longer than 13 hours will lapse between the last meal service and the first meal service. (i.e. 6pm – 7 am)
- Main meals over the day will be no less than 5 hours and no more than 6 hours apart
- Tray clearing occurs:
- to maximise the amount of time the patient is given to eat (not less than 30 mins)
- to comply with food safety (not more than 90 mins from delivery)

(Queensland Health, 2010)

## Workplace Profile

The information collected during an (audit) can be used for planning and improving:

- meals, menus and future services
- resources required e.g. all aspects of food production including staffing, stores, food preparation, food delivery, cleaning and waste disposal

**Types of information collected in a workplace profile include:**

Types of information	Examples specific to workplaces
Type of facility	<input type="checkbox"/> Hospital <input type="checkbox"/> Nursing home <input type="checkbox"/> Day Care Facility /Hostel
Location of facility	<input type="checkbox"/> Metropolitan <input type="checkbox"/> Provincial <input type="checkbox"/> Rural <input type="checkbox"/> Remote
Length of stay in facility:	<input type="checkbox"/> 1 – 7 days <input type="checkbox"/> 8 – 14 days <input type="checkbox"/> 2 – 4 weeks <input type="checkbox"/> Long term (>1 month)
Types of patient services provided: <b>NB</b> - Other Services that you provide food to: <ul style="list-style-type: none"> <li><input type="checkbox"/> Meals on Wheels</li> <li><input type="checkbox"/> Functions</li> <li><input type="checkbox"/> Staff Cafeteria</li> </ul>	<input type="checkbox"/> Medical <input type="checkbox"/> Surgical <input type="checkbox"/> Maternity <input type="checkbox"/> Day Surgery <input type="checkbox"/> Mental Health <input type="checkbox"/> Palliative Care <input type="checkbox"/> Rehabilitation <input type="checkbox"/> Paediatrics (infants/children) <input type="checkbox"/> Nursing home
Age of Clients: <b>NB</b> - It can be useful to breakdown elderly further into 'young' old (65 – 75 years) and 'old' old (>75 years)	<input type="checkbox"/> Infants <input type="checkbox"/> Toddlers <input type="checkbox"/> Children 2 – 12 years <input type="checkbox"/> Teenagers 12 – 18 years <input type="checkbox"/> Adults <input type="checkbox"/> Elderly >65 years*
Gender	
Cultural/Ethnic beliefs that affect food intake or food selection and preference	
Religious background	
Types of menu: <b>NB</b> - Consider where each of these menu types would be appropriate?	<input type="checkbox"/> Set <input type="checkbox"/> Cyclic <input type="checkbox"/> Ala Carte <input type="checkbox"/> Canteen/cafeteria (staff or public) <input type="checkbox"/> Function
Menu systems <b>NB</b> - How do we collect and collate the orders?	<input type="checkbox"/> Paper menu (self complete) <input type="checkbox"/> Bedside ordering <input type="checkbox"/> Electronic barcode reader <input type="checkbox"/> Room service/Buffer

Other information you will need to take the time to collect includes:

- What type of foodservice system you use?
- What is the process for ordering food and special/therapeutic diets?
- Who is the menu for and what are their food preferences/nutritional and psychological requirements?
- What food is available to meet those requirements?
- Can people eat the food that is provided (e.g. Are they able to open packaging?)
- Can they feed themselves?
- Are they happy with what is provided? (e.g. Cultural and religious significance of food provided)
- Who can cook the food – and with what equipment?
- Are standard recipes used?
- What type of menu cycle will you have? Does it take into account seasonality/changes to availability (e.g. food limiting variety of options via changes to food supply)
- What are the costs of the service i.e. Food, staff (including ordering, preparation/cooking, food delivery, cleaning, equipment), environment (waste of food, containers, water for washing etc.)?
- What food standards and safety issues apply? (e.g. suitable refrigeration, use of locally grown/sourced/traditional foods)



Completing a workplace profile will allow you to find out about the needs of your clients.



## Activity 8 – Assess your Workplace Profile

Complete the table below as it relates to your workplace.

Types of information	Examples specific to workplaces
Type of facility	<input type="checkbox"/> Hospital <input type="checkbox"/> Nursing home <input type="checkbox"/> Day Care Facility /Hostel
Location of facility	<input type="checkbox"/> Metropolitan <input type="checkbox"/> Provincial <input type="checkbox"/> Rural <input type="checkbox"/> Remote
Length of stay in facility:	<input type="checkbox"/> 1 – 7 days <input type="checkbox"/> 8 – 14 days <input type="checkbox"/> 2 – 4 weeks <input type="checkbox"/> Long term (>1 month)
Types of patient services provided: <b>NB</b> - Other Services that you provide food to: <input type="checkbox"/> Meals on Wheels <input type="checkbox"/> Functions <input type="checkbox"/> Staff Cafeteria	<input type="checkbox"/> Medical <input type="checkbox"/> Surgical <input type="checkbox"/> Maternity <input type="checkbox"/> Day Surgery <input type="checkbox"/> Mental Health <input type="checkbox"/> Palliative Care <input type="checkbox"/> Rehabilitation <input type="checkbox"/> Paediatrics (infants/children) <input type="checkbox"/> Nursing home
Age of Clients: <b>NB</b> - It can be useful to breakdown elderly further into 'young' old (65 – 75 years) and 'old' old (>75 years)	<input type="checkbox"/> Infants <input type="checkbox"/> Toddlers <input type="checkbox"/> Children 2 – 12 years <input type="checkbox"/> Teenagers 12 – 18 years <input type="checkbox"/> Adults <input type="checkbox"/> Elderly >65 years*
Gender	
Cultural/Ethnic beliefs that affect food intake or food selection and preference	
Religious background	
Types of menu: <b>NB</b> - Consider where each of these menu types would be appropriate?	<input type="checkbox"/> Set <input type="checkbox"/> Cyclic <input type="checkbox"/> Ala Carte <input type="checkbox"/> Canteen/cafeteria (staff or public) <input type="checkbox"/> Function
Menu systems <b>NB</b> - How do we collect and collate the orders?	<input type="checkbox"/> Paper menu (self complete) <input type="checkbox"/> Bedside ordering <input type="checkbox"/> Electronic barcode reader <input type="checkbox"/> Room service/Buffer

## Nutritional Menus

Special menus must meet the nutritional requirements of the clients:

- Nutritional value of food not eaten is nil (food must still be appetising).
- Menus should be planned to meet the nutrient needs of the facility's clients; i.e. long-term patients may need a longer menu cycle for improved variety than a short-stay facility.
- Dietitians should be involved to ensure diets are nutritionally balanced. Computer analysis can work out if a menu meets recommended NRVs.
- The menu should be designed to provide the minimum serves of the core food groups as outlined in the AGHE.

## Variety in Menu Planning

Menus should be visually appealing and taste good. It should provide foods with a variety of colours, textures, aromas, and appearance.

- The menu should be planned to avoid repetition of foods, textures, and colours; e.g. both hot choices offered are beef, or all meal components are 'white'.
- Menus should offer a variety of beverages to clients.
- Illness or surgery can affect the food preferences of clients.



Variety on a menu is more visually appealing and also provides opportunity for a greater range of nutrients to be consumed and this provides greater potential to meet the nutritional requirements. When the range of food available to clients is minimised, the vitamins and minerals they receive is also limited.

## Menu Cycles

Menu cycles are influenced by the average length of stay (LOS) and range of LOS. Recent research shows:

- 15-20% of patients in a hospital bed stay in hospital > 14 days but they have an average LOS of 4 weeks.
- 35-50% of patients admitted to hospital stay < 7 days.

(Cruickshank, 2009)

These statistics are the reason why Queensland Health recommends:

- A standard menu of 14 days cycle (↑protein/energy) for longer stay patients.
- An alternative 7-day menu which can be used for shorter stay patients.



Menu Nutrition Standards also recommend a minimum cycle of at least 21 days for facilities with longer average LOS e.g. Nursing homes.

### **Integrating Nutrients onto the Menu**

Menus should be developed to incorporate as many therapeutic menus as possible. Additional menu items may be required to achieve integration.

The following therapeutic diets should be integrated into your menu as a minimum:

- Soft
- Carbohydrate modified (No added sugar – “Diabetic”)
- Fat modified
- Protein increased
- Fibre increased and reduced
- “No Added Salt” or Salt-reduced

Therapeutic diet menus (non-integrated):

- Must have their purpose clearly identified
- Nutritional criteria must be specified
- The variety of menu items should be maximised
- Establish a balance between clinical needs and client preferences
- The number of non-integrated therapeutic diets should be kept to a minimum

Therapeutic diets might include:

- Allergy diet (e.g. Nut allergy, Seafood Allergy)
- Gluten-free diet
- Low protein diet
- Clear fluids diet
- Low energy diet

Menu review/evaluation:

- Qld Health Standards stipulate that the menu is reviewed at least annually (requires Dietitian assessment to ensure the menu is meeting the Nutrition Standards for Meals and Menus

(Queensland Health, 2010)

Menu reviews are undertaken in order to:

- Maximise patient/resident enjoyment of the food provided.
- Ensure you are meeting the nutritional needs of your 'clientele'.
- Meet hospital/nursing home accreditation requirements and part of the continuous quality improvement cycle.



## Activity 9 – Menu Adequacy

Consider the adequacy of the menu below and answer the questions that follow.

	Mon	Tue	Wed	Thur
<b>Lunch</b>	Lamb stew	Chicken chasseur	Fish mornay	Beef Korma
	Mashed potato	Mashed potato	Mashed potato	Mashed potato
	Steamed carrot	Steamed sweet potato	Steamed pumpkin	Steamed carrot
	Steamed broccoli	Steamed beans	Steamed cauliflower	Steamed beans
<b>Dinner</b>	Sweet Chicken curry	Beef lasagne	Pork Chow Mein	Meatballs
	Mashed potato	Mashed potato	Mashed potato	Mashed potato
	Steamed carrot	Steamed sweet potato	Steamed pumpkin	Steamed carrot
	Steamed broccoli	Steamed sweet potato	Steamed cauliflower	Steamed beans

1. What are the potential effects of the vegetable options over the week? Could the vegetable options be improved?

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2. Would you recommend offering the same type of meat for both lunch and dinner?

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### Activity 10 – Assessing Menu Variety

1. Access your workplace menu
2. Look at the variety of different foods on your menu and complete the table below by placing a tick [✓] on the days that meat appears.
3. Attach the menu you used to complete this activity

Variety of Meat in Main Meals							
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
<b>Beef</b>							
<b>Lamb</b>							
<b>Chicken</b>							
<b>Fish/seafood</b>							
<b>Pork</b>							
<b>Vegetable Based</b>							
<b>Egg/cheese dish</b>							
<b>Other (please specify):</b>							
<b>Answer the questions below</b>						<b>Yes</b>	<b>No</b>
A. Does the same kind of meat appear on the same day in the menu?							
B. Does the same kind of meat appear on consecutive days?							
C. Do you think the variety of meat dishes on your menu is adequate?							

4. Please explain your answer to C: 'Do you think the variety of meat dishes on your menu is adequate?'

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5. If you ticked 'No' to 'C' who should this be discussed with?

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*Activity continues on the next page.*

6. List two factors would you need to consider if you were looking to alter the main meal/meat dish preparation methods? (*Hint: you may need to discuss this with your cooks/Food Services Manager/Dietitian*)
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7. Please tick (✓) the days the following food preparation methods are used for the lunch and evening meals.

Variety in Food Preparation Method of Lunch and Main Meals							
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Roasted							
Casserole							
Patties/rissoles							
Grilled							
Pickled/corned							
Cold Meat							
Other ( <i>please specify</i> ):							
<b>Answer the questions below</b>						<b>Yes</b>	<b>No</b>
A. Does the same kind of food preparation methods for the lunch and evening meals appear on the same day in the menu?							
B. Does the same kind of food preparation methods for lunch and evening meals appear on consecutive days?							
C. Do you think the variety of food preparation methods for lunch and evening meals on your menu is adequate?							

8. Please explain your answer to C, 'Do you think the variety of food preparation methods for lunch and evening meals on your menu is adequate?'
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*Activity continues on the next page.*

9. If you ticked 'no' to C, who should this be discussed with?

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10. Please tick (✓) the days the following cooking methods are used for the lunch and evening meal vegetables.

Variety in Cooking Method of Lunch and Main Mail Vegetable							
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Roasted							
Boiled							
Steamed							
Mashed							
Jacket (potatoes)							
Scalloped (potatoes)							
Other (please specify):							
<b>Answer the questions below</b>						<b>Yes</b>	<b>No</b>
A. Does the same kind of food preparation methods for the lunch and evening meals vegetables appear on the same day in the menu?							
B. Does the same kind of food preparation methods for lunch and evening meal vegetables appear on consecutive days?							
C. Do you think the variety of food preparation methods for lunch and evening meal vegetables on your menu is adequate?							

11. Please explain your answer to C 'Do you think the variety of food preparation methods for lunch and evening meal vegetables on your menu is adequate?'

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*Activity continues on the next page.*



## Activity 10 – Assessing Menu Variety continued

12. If you ticked 'No' to C, who should this be discussed with?

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Variety in colour of lunch vegetables

Please tick (✓) the colour of the vegetables available for lunch on the following days

Variety in Colour of Lunch Vegetables							
	Mon lunch	Tues lunch	Wed lunch	Thurs lunch	Fri lunch	Sat lunch	Sun lunch
White							
Green							
Orange							
Red							
Yellow							
Other (please specify):							
Answer the questions below						Yes	No
A. Do you think there is sufficient variety in the colour of vegetables in the lunch meals?							

13. Please explain your answer to A 'Do you think there is sufficient variety in the colour of vegetables in the lunch meals?'

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14. If you ticked 'No' to A, who should this be discussed with?

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## Standardised Recipes

Standardised recipes should be used for all food items requiring any form of preparation. Queensland Health standard 2.4.a, specifies that standard recipes must exist for 100% of items on the menu.

To be standardised:

- Ingredients should be measured
- Extra ingredients (for taste) should not be added – e.g. herbs, spices or changes to vegetables from the standard mixture
- Systems should be put in place to ensure they use the correct and appropriate standardised recipes (for Quality and stock control)

Standardised recipes include:

- The name of the recipe
- Quantities of each ingredient in measured units and quantities of ingredients in common serves e.g. Tbsp, Tins
- Preparation method
- Preparation and Cooking time (including equipment required – e.g. Combi oven)
- Serve size
- Yield - Number of serves produced



It is also useful to include the diets that the recipe is suitable for e.g. low fat, gluten free, low fibre.

## Portion Control

Queensland Health (2010) Food Service Standards 2.4.3a and 2.4.3b specify portion size should be specified for 100% menu items and standard utensils should be available and used as per specified portion size. This ensures the correct volume of food is served to clients and enables the actual nutritional intake of patients to be calculated. The portion size of each menu item should be predetermined when recording a standard recipe and portions should be monitored regularly to ensure accuracy of portions within the predetermined limits.

Example of how portion control is recorded for a plating line.

	Hot Protein	Large Serve	Utensils For Large Serve	Small Serve	Utensils For Small Serve
<b>Mon Lunch</b>	Meat Pie	1 Pie	Tongs/Lifter	1 Pie	Tongs/Lifter
	Lamb Korma	160g		150g	
<b>Mon Dinner</b>	Chicken Cacciatore	150g		120g	
	Vegetable Quiche	170g slice	Tongs/Lifter	170g slice	Tongs/Lifter
<b>Tue Lunch</b>	Vegetable Pattie with Cheese	1 pattie	Tongs/Lifter	1 pattie	Tongs/Lifter
	Vienna Steaks	1 ½ steaks	Tongs/Lifter	1 steak	Tongs/Lifter
<b>Tue Dinner</b>	Roast Chicken Breast	1 breast (100g)	Tongs/Lifter	1 breast (100g)	Tongs/Lifter
	Salmon and Rice Bake	150g		110g	
<b>Wed Lunch</b>	Chicken Kiev	1 piece (120g)	Serving Spoon	1 piece (120g)	Serving Spoon
	Cheese omelette	1 Omelette	Tongs/Lifter	1 Omelette	Tongs/Lifter
<b>Wed Dinner</b>	Sausages	2 Sausages	Tongs/Lifter	1 Sausage	Tongs/Lifter
	Lamb and Tomato Hot Pot	120g		90g	
<b>Thur Lunch</b>	Roast Pork	100g	Tongs/Lifter	75g	Tongs/Lifter
	Spaghetti Bolognese	240g		160g	
<b>Thur Dinner</b>	Chicken Curry	160g		120g	
	Macaroni Cheese	150g		90g	
<b>Fri Lunch</b>	Meatballs	5 meatballs		4 meatballs	
	Grilled Fish	1 piece		1 piece	
<b>Fri Dinner</b>	Roast Beef	100g	Tongs/Lifter	100g	Tongs/Lifter
	Chicken and Mushroom Pasta	160g		120g	

(Caboolture Hospital, 2010)

Plating line example - Grilled Fish – example Friday lunch

Item Description	Quantity	Utensil
Grilled Fish	1 Piece (100g) <i>1 Piece (100g)</i>	Tongs <i>Tongs</i>
Mashed Sweet Potato	60-70g <i>30-35g</i>	#16 Scoop <i>½ #16 Scoop</i>
Mashed Potato	90-100g <i>90-100g</i>	#8 Scoop <i>#8 Scoop</i>
Braised Cabbage	60-70g <i>30-35g</i>	1 x Serving Spoon <i>½ Serving Spoon</i>



Plating line example – Spaghetti Bolognese – e.g. lunch

Item Description	Quantity	Utensil
Spaghetti Bolognese	240g <i>160g</i>	8oz Ladle <i>6 oz Ladle</i>
Beans	60-70g <i>30-35g</i>	1x Serving Spoon <i>½ Serving Spoon</i>
Carrots	60-70g <i>30-35g</i>	1x Serving Spoon <i>½ Serving Spoon</i>



*\* Small sizes in red*

(Caboolture Hospital, 2010)



## Activity 11 – Calculating Total Cost and Serve of a Recipe

1. Calculate the total cost and serve of the following recipe items.

Ingredient	Quantity Required	Ingredient Cost	Cost
Red Kidney beans	1.8kg (4 x 440g tins)	\$1.20 per 440g tin	i.e. $\$1.20 \times 4 = \$4.80$
Beef Mince	3 kg	\$12.00 per kg	i.e.: $\$12 \times 3 = \$36$
Carrot	700g (5 large)	\$2.50 per kg	
Zucchini	500g	\$3.00 per kg	
Tomato crush	2.9 kg (1 x A10 tin)	\$8.00 per A10 tin	
Onion	500g	\$1.50 per kg	
Chilli powder	3 tsp (15g)	\$5.00 per 100g	
Beef stock	1 tbsp (20g)	\$5.00 per kg	
Flour	5 tbsp (100g)	\$1.50 per kg	
Oil	100ml	\$2.00 per litre	
Water	500ml	Free	

2. What is the total cost of producing this recipe?

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3. What is the cost per serve?

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*Activity continues on the next page.*



### **Activity 11 – Calculating Total Cost and Serve of a Recipe continued**

4. List two benefits to food services of using standardised recipes.

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5. List two benefits for two different clients for whom it is essential to have a standardised recipe and why?

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## Relevant Food Service Policy and Standards



It is advisable that you are aware of the following food service policies and standards. Check if they are available in your workplace. It is important to understand how these documents impact on menu design and quality client services

- Queensland Health Food services Best Practice Guidelines, 2015.
- Queensland Health State-wide Food Service KPIs (Standards), 2016.
- Queensland Health Nutrition Standards for meals and menus, 2015.



Given the current processes involved with endorsement for these documents it is suggested you review the website for new policies or documents and the latest version.

<http://qheps.health.Queensland.gov.au/statewidefoodservice>

In addition food services and products should comply with:

- Legislative requirements
- Food Act 2006 (Queensland)
- Food Standards Codes 3.1.1, 3.2.1, 3.2.2, 3.2.3 and 3.3.1 (FSANZ 2011)
- A Better Choice Food and Drink Strategy for Queensland Health Facilities
- Queensland Health Infection Control Guidelines

As of August 2016 there are no national nutrition and menu planning standards in Australia or New Zealand in the aged-care setting. The need for standards to ensure adequate nutritional care of elderly residents has been identified by Dietitians and is supported by members of the Institute of Hospitality and HealthCare (IHHC).



The Dietitians Association of Australia have completed a project to identify the top line literature and documentation pertaining to nutrition and menu planning standards specific to residential aged care facilities (RACFs) in Australia and New Zealand and provide key recommendations for possible menu planning standards development.

[http://daa.asn.au/wp-content/uploads/2011/03/Scoping\\_Menu\\_Planning\\_Standards\\_Feb\\_2012.pdf](http://daa.asn.au/wp-content/uploads/2011/03/Scoping_Menu_Planning_Standards_Feb_2012.pdf)

## Menu Planning for Therapeutic Diets

Therapeutic diets should be integrated into the general menu where possible. The following therapeutic diets should be implemented at a minimum:

- Soft diet
- Carbohydrate modified
- Fat modified
- Protein increased
- Fibre increased and reduced
- No added salt or salt reduced
- Vegetarian
- Low lactose
- Gluten free
- Renal
- Texture modified

### Soft Diet

What types of food would need to be available on your hospital menu to ensure that soft diet could be integrated?

Provide:

- Soft breakfast cereals that do not remain coarse once milk is added e.g. 'Weetbix'
- Moist hot meals with bite sized pieces at lunch and tea e.g. chicken casserole
- Well-cooked vegetables that are not fibrous e.g. avoid broccoli stalks, peas, corn
- Stewed diced fruit and soft fresh fruit e.g. bananas
- Desserts that are soft and moist, avoid dry desserts and hard bases. Additional custard, cream or ice-cream may be required to moisten.

### Carbohydrate-Modified Diet

What types of foods would need to be available on your hospital menu to suit a carbohydrate modified diet?

Provide:

- A low GI breakfast cereal option e.g. porridge.
- Multigrain bread and sandwiches

- No added sugar canned fruit
- Low fat dessert options that include fruit & dairy for low GI.
- Healthy mid-meal snacks eg. low fat no added sugar yoghurt, low fat crackers & vegemite, low fat crackers & low fat cheese
- Carbohydrate with all main meals e.g. pasta salad as part of a salad meal, additional carbohydrate may be required between meals particularly the evening snack.

### **Fat Modified Diet**

What types of food would need to be available on your hospital menu to suit a fat-modified diet?

Provide:

- Low fat dairy options e.g. milk, yoghurt.
- Some meals with <10g fat and ideally <50% saturated fat.
- Some low fat dessert options <10g fat per serve as alternatives to fresh fruit.
- Oil free salad dressings.
- Limit margarine on the tray.

### **High Protein/High Energy Diet**

What types of food would need to be available on your hospital menu to suit a high protein/high energy diet?

Provide:

- A hot breakfast (including egg, lean/fatty meat or fish, baked beans or cheese).
- Elevated protein/energy items at breakfast such as full fat yoghurt, full cream milk.
- Hot dishes and salad meals that contain a minimum of 15g protein per serve.
- Option of selecting margarine/cream with meals and choice of cream, custard, ice-cream with desserts.
- Fortified desserts.
- Extra protein and energy items in addition to the general menu e.g. between meal snacks, hot chips, nutritional supplements.

### **Fibre Increased Diet**

What types of food would need to be available on your hospital menu to suit a fibre-increased diet?

Provide:

- High fibre breakfast cereal options e.g. muesli, all bran
- Wholemeal/grain bread options at all meals
- Fruit and vegetable/salad option at all meals
- Some higher fibre options at mid-meals e.g. wheatmeal biscuits/crackers, fruit

### **Fibre Reduced Diet**

What types of food would need to be available on your hospital menu to suit a fibre-reduced diet?

Provide:

- Low fibre breakfast cereal options e.g. rice bubbles, cornflakes.
- Low fibre, white bread options at all meals – total bread serves may need to be limited depending on level of fibre restriction.
- A hot dish each day without stringy or fibrous particles e.g. tender roast meals, pasta dishes.
- Fruit juice as an alternative to fresh fruit.
- Low fibre options at mid-meals e.g. plain biscuits, fruit-less yoghurt.

### **No Added Salt/Salt Reduced Diet**

What types of food would need to be available on your hospital menu to suit a no added salt/salt-reduced diet?

- Do not provide salty items such as soups, some salad dressings, Vegemite, Cup-of soup/Bovril-style drinks and gravies.
- Limit high sodium breakfast cereals (i.e. sodium content >200 mg per serve) like Cornflakes.
- Ensure that lower sodium dishes and sauces are available (i.e. <400 mg per serve).
- Do not provide salt sachets on the tray.

## Vegetarian Diet

There are four broad groups of vegetarians:

1. Vegans
2. Lacto-ovo vegetarians – add milk and egg only
3. Lacto-vegetarians – add milk only
4. Semi-vegetarians – meat consumption is rare

## Vegetarian

Vegetarian diets can be healthy but there are some nutrients that are found mainly or only in animal foods. These include: B12, iron, zinc, calcium, and some omega 3 fats. Care must be taken to ensure that these diets are nutritionally adequate especially when animal protein is restricted (ie. No dairy or eggs)

## Vegans

- Vegans – no animal products at all (no eggs, meat, milk, cheese, fish, poultry, etc.).
- Properly planned vegan diets can satisfy nutritional requirements.
- May offer protection against heart disease, cancer, and other diseases.
- Poorly planned vegan diets can be low in levels of calcium, vitamin D, vitamin B and iron.

What types of food would need to be available on your hospital menu to suit a vegetarian diet?

Provide:

- Some non-meat hot breakfast items *e.g. egg dishes, baked beans.*
- A vegetarian sandwich option at each meal (don't forget to vary the menu).
- Some vegetarian hot dishes (at least one per day) *e.g. Vegetable Lasagne, Bean Burritos.*
- Some vegetarian salad options.
- Fortified soy milk and soy-yoghurts as an option.

## Useful protein sources for vegetarians (*Protein Sources for Vegans*):

- Tempeh, Seitan, Soybeans, Lentils, Black beans, Kidney beans, Chickpeas, Pinto beans, Black-eyed peas, Lima beans, Peas, Soy bean curd/Tofu
- Nuts/Nut butters: any, Peanut butter etc.
- Textured Vegetable proteins (TVP) also used in Veggie burger/sausage
- Mycoprotein food product (Quorn)
- Milk/Soy milk, yoghurt, Cheese
- Grains and Seeds: Quinoa, Bread and Cereal, pasta, Bulgur, Rice

### Low Lactose

- Quite easy to integrate as small amounts of lactose is usually tolerated (e.g. in casseroles).
- Need to provide fortified soy milk as a milk alternative.

### Gluten Free

- Very difficult to integrate this into the general diet.
- Additional products will be required to maintain variety e.g. plain meats, gluten free breakfast cereals/breads.

### FODMAP

- Very difficult to integrate this into the general diet.
- Need to be specific about types of foods allowed in regard to fruits, vegetables, breads and cereals, milk and milk products and processed foods containing galacto-oligosaccharides, fructose, fructans and polyols (mannitol and sorbitol).

### Renal

- Possible to integrate using the 'No Added Salt' diet as the template however fruit, vegetables, breakfast cereal, and bread choices are restricted. Cooking methods may also need adapting.

### Texture Modified Diets

- These diets can often be integrated with the general menu e.g. soft casseroles can be blended to a minced or pureed texture.
- Some dishes can be modified to be more suitable e.g. hard bases removed from cheesecakes and quiches.
- Additional dairy dessert options may be required as the cake based desserts will be unsuitable for the pureed texture. Some general desserts may be suitable if additional moisture is added *e.g. custard cream*.



It is important to involve a Speech Pathologist *and* a Dietitian when designing texture modified menus.



## Activity 12 – Therapeutic Diets

2. Place a tick (✓) next to the therapeutic diets your menu caters for. You may need to discuss this with your Dietitian.

- Diabetic
- Cardiac/Heart
- Low Fat
- Low/reduced Sodium (Salt)
- Low Potassium
- Low Fibre
- High Fibre
- Gluten Free
- Lactose Free/ reduced
- Low Protein
- High Protein/Energy
- Other (Please Specify)\_\_\_\_\_

2. Pick two of the therapeutic diets that you ticked in the list above. Using your facility's menu, complete a day's menu for a client on each of these diets. Fill out the information below, or attach the menu card to the back of this page.

Menu One	
Type of Diet	
Breakfast	
Morning Tea	
Lunch	
Afternoon Tea	
Evening Meal	
Supper	

*Activity continues on the next page.*



### 3.3 Specific Dietary Needs

The Nutrition Care Team revolves around the patient. Members include:

- Dietitian
- Nurses
- Doctors
- Family
- Carers
- Foodservice Staff
- Nutrition Assistants
- Other Allied Health Staff including Speech Pathologists, Cleaners, and Ward Persons

#### **Lifestyle-Related Diseases, Disorders, and Dietary Links**

These include:

- Diabetes
- Heart disease
- Food allergies and intolerances
- Lactose intolerance
- Coeliac disease
- Diverticular disease

#### **Diabetes**

Diabetes occurs when the body cannot regulate a hormone (called insulin) properly.

- Insulin helps transfer glucose (a type of sugar) into the cells of the body so it can be used for energy.
- Glucoses levels can drop too low or go too high.
- Lifestyle – including getting a balance right of what is eaten and what activity is done, is essential for managing diabetes.
- Regular check-ups by a GP or specialist and Diabetes Health Team help the patient manage their diabetes.

(Diabetes Queensland, 2010)

Types of diabetes:

- **Type 1:** the body cannot produce insulin and so is reliant on insulin injections. (Formerly called Insulin Dependent Diabetes Mellitus - IDDM)
- **Type 2:** the body does not produce enough insulin and/or the insulin it produces is not working properly (insulin resistance). The patient may require medication or insulin injections. (Formerly called Non Insulin Dependent Diabetes Mellitus - NIDDM)
- **Gestational Diabetes:** Body is resistant to insulin mostly due to pregnancy hormones. Patients may require medication or insulin. The diabetes usually goes away after the baby is born, but there is increased risk of developing diabetes later in life or in future pregnancies.

(Diabetes Queensland, 2010)

Diabetes is managed through:

- Medications and/or insulin to help control blood glucose (sugar) levels and reduce risks of complications of diabetes.
- Including regular meals (with or without snacks), keeping saturated fat intake low, and carbohydrate balanced.
- Regular monitoring and assessments by the diabetes team.
- Keeping physically active to improve sensitivity to insulin and help achieve a healthy body weight; *a healthy body weight is important both in the prevention and management of diabetes.*

Getting to and maintaining a healthy body weight can:

- Help normalise blood glucose levels
- Increase insulin sensitivity
- Reduce risk of heart disease and stroke
- Reduce blood pressure
- Help people feel better

Dietary recommendations for diabetes:

- Eat a healthy, balanced diet
- Eat regular meals (and snacks if required)
- Include moderate amounts of carbohydrate at each meal
- Eat slow acting (low GI) foods but consider the glycaemic load
- Eat less saturated fat
- Include more fibre

- Consume sugar and alcohol in small amounts only

A healthy diet helps:

- Control blood glucose levels
- Achieve and maintain healthy body weight
- Prevent complications of diabetes

The total amount and type of carbohydrate selected is important rather than just avoiding sugars.

What are carbohydrates?

- Breads, cereals, rice, pasta, noodles
- Fruit – fresh, tinned, frozen, dried, juice
- Starchy vegetables – potato,
- sweet potato, sweet corn
- Legumes – baked beans, kidney beans, soy beans
- Dairy – milk, yoghurt, ice-cream, custard
- Sweet food – sugar, lollies, ordinary soft drink, honey, chocolate, syrup, jam
- Baked goods – biscuits, cakes, pastries

How are carbohydrates and blood glucose connected?

- When we eat carbohydrate food, the starches and sugars break down to glucose
- Some glucose is absorbed from the mouth (sugary carbohydrates) and some from the small intestine and into the bloodstream.

### **Types of carbohydrates**

We used to consider carbohydrates as simple and complex carbohydrates. Now we know that many factors affect the digestion of carbohydrates (such as how much fat is in it, where it was grown, how it is cooked etc.)

- Foods that absorb slowly are called Low GI carbohydrates
- Those that absorb more quickly are called High GI carbohydrates.

## Glycaemic Index (GI)

- Ranks carbohydrate foods according to how they affect blood glucose levels.
- Foods can then be given a GI rating which allows you to compare the effect of one carbohydrate food with another.
- GI rating is determined by measuring the glycaemic response of a 'test' food compared to the effect caused by a glucose-rich equivalent.
- Some Low GI foods have been tested by the GI Foundation and use the symbol to the right on their packaging.

(Diabetes Queensland, 2010)

The GI rates foods as:

- Fast (High GI) 70 – 100
- Moderate (Intermediate GI) 55-70
- Slow (Low GI) 0-55
- The GI shows that the effect of a food on a person's blood glucose level is not only determined by its sugar content.
- Eating meals with a lower GI can help to reduce average blood glucose levels



The amount of carbohydrate you eat in one meal is still important (known as the Glycaemic Load). Large amounts of slow acting (low GI) foods can still contribute to a high blood glucose level and weight gain. When choosing carbohydrate foods it is important to consider not only the GI but how healthy the food is and how much that is going to be eaten.

## Low GI foods

- Breakfast cereals based on oats, barley and bran
- Bread with whole grains, stone-ground flour, sour dough
- Basmati or Doongara rice
- Pasta, noodles, quinoa
- Some potatoes (look for Low GI varieties – including of sweet potato)
- Enjoy all other types of fruit (especially stone-fruit and those from temperate-based climates) and vegetables
- Milk and yoghurt
- Salad vegetables

(Diabetes Queensland, 2010 and Queensland Health, 2009)



For patients with diabetes large serves of these low GI foods can contribute to high blood glucose levels and weight gain

### **Sugar and Diabetes**

- Sugar (in small amounts) can be included in a healthy eating plan for diabetes e.g. a scrape of ordinary jam on toast
- Avoid drinks that are high in sugar such as soft drink and cordial as these put too much sugar into the body at once for it to handle appropriately
- Eating a lot of sugar does not cause diabetes but can contribute to high blood glucose levels and weight gain. If preferred, products with alternative sweeteners may be used in small amounts to add variety to the diet

(Diabetes Queensland, 2009)



Three (3) teaspoons of sugar provides about the same amount of carbohydrate as one (1) slice of bread.

### **Hyperglycaemia (high glucose levels)**

Many people do not experience the symptoms of hyperglycaemia until their blood sugar levels are extremely high. Although their blood contains too much sugar, they cannot tell unless they do a finger-prick test (Diabetes Australia, 2010)

Short term, if the glucose level rises too high, the person can develop symptoms of hyperglycaemia:

- Feeling excessively thirsty
- Frequently passing large volumes of urine
- Feeling tired
- Blurred vision
- Infections (e.g. thrush, cystitis, wound infections)
- Weight loss

## Common Causes of Hyperglycaemia

- Sickness
- Infection
- Stress
- Too much carbohydrate food at once
- Not enough insulin or diabetes tablets
- Other tablets or medicines.

## Hypoglycaemia – “Hypo” (low blood glucose levels)

- Occurs when the blood glucose levels drop too low or too quickly for the brain and body to function well (usually less than 4mmol/L).
- Hypoglycaemia symptoms include: shakiness, weakness, headaches, sweating, dizziness, and blurred vision
- Hypoglycaemia is serious; If untreated it can cause coma or even death.

(Diabetes Queensland, 2009)



People with Type 1 diabetes are at risk and some people with Type 2 diabetes and gestational diabetes (e.g. if they are taking certain tablets or insulin).

## Treating Hypoglycaemia

### STEP 1 – Most important!

Have some easily absorbed carbohydrate, for example:

- Glucose tablets equivalent to 15 grams carbohydrate OR
- 6–7 jellybeans OR
- 1/2 can regular soft drink (not ‘diet ’) OR
- 3 teaspoons sugar or honey OR
- 1/2 glass fruit juice

## STEP 2

If your next meal is more than 20 minutes away, you will need to eat some longer acting carbohydrate. This could be one of the following:

- A slice of bread OR
- 1 glass of milk or soy milk OR
- 1 piece of fruit OR
- 1 tub natural low fat yoghurt OR
- 6 small dry biscuits and cheese.

(Diabetes Queensland, 2009)



For all unconscious hypoglycaemic episodes, call urgently for medical attention, (or 000) DO NOT give food by mouth due to risk of choking.

## Heart Disease

Heart disease, or cardiovascular disease, is the class of diseases that involve the heart or blood vessels (arteries and veins). By the time that heart problems are detected, the underlying cause (atherosclerosis) is usually quite advanced, having progressed for decades. Coronary heart disease is the most common cause of death in Australia and is preventable (Heart Foundation, n.d).

Modifiable risk factors	Non-modifiable risk factors
<ul style="list-style-type: none"> <li>• Smoking (active and passive)</li> <li>• High blood pressure</li> <li>• High blood cholesterol</li> <li>• Physical Inactivity</li> <li>• Diabetes</li> <li>• Poor diet</li> <li>• Being overweight</li> <li>• Depression, social isolation and lack of quality support</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing age</li> <li>• Family history of heart disease</li> </ul>

(Heart Foundation, n.d)

## Fats and Cholesterol

Not all fat is bad. Fats are an essential part of healthy eating so it's good to eat a certain amount of the healthier fats.

Healthier fats	Unhealthy fats
<ul style="list-style-type: none"> <li>• Monounsaturated fats and polyunsaturated fats - omega-3 and omega-6.</li> <li>• These fats reduce the 'bad' LDL cholesterol in your blood and increase the 'good' HDL cholesterol.</li> <li>• This helps to lower your risk of getting heart disease.</li> </ul>	<ul style="list-style-type: none"> <li>• Saturated fats and trans fats.</li> <li>• Too much saturated and trans fat contributes to the build-up of fatty material, (plaque), on the inside of blood vessels and is a major cause of heart disease.</li> <li>• These fats can increase LDL cholesterol in our blood that leads to the plaque.</li> <li>• Lowering saturated fat in the diet will help to lower LDL cholesterol.</li> </ul>

Foods high in saturated fat include:

- Hard and full-fat soft cheeses
- Full fat dairy products
- Cream
- Crème fraiche
- Chicken skin
- Fat on meats
- Processed meat such as sausages, burgers and salami
- Pastry
- Coconut oil
- Coconut milk
- Palm oil
- Fatty or fried take-away foods
- Packaged cakes and biscuits

(Heart Foundation, n.d)

Cholesterol in foods has only a small effect on your LDL cholesterol, especially when compared with the much greater increase caused by saturated and trans fat in food.

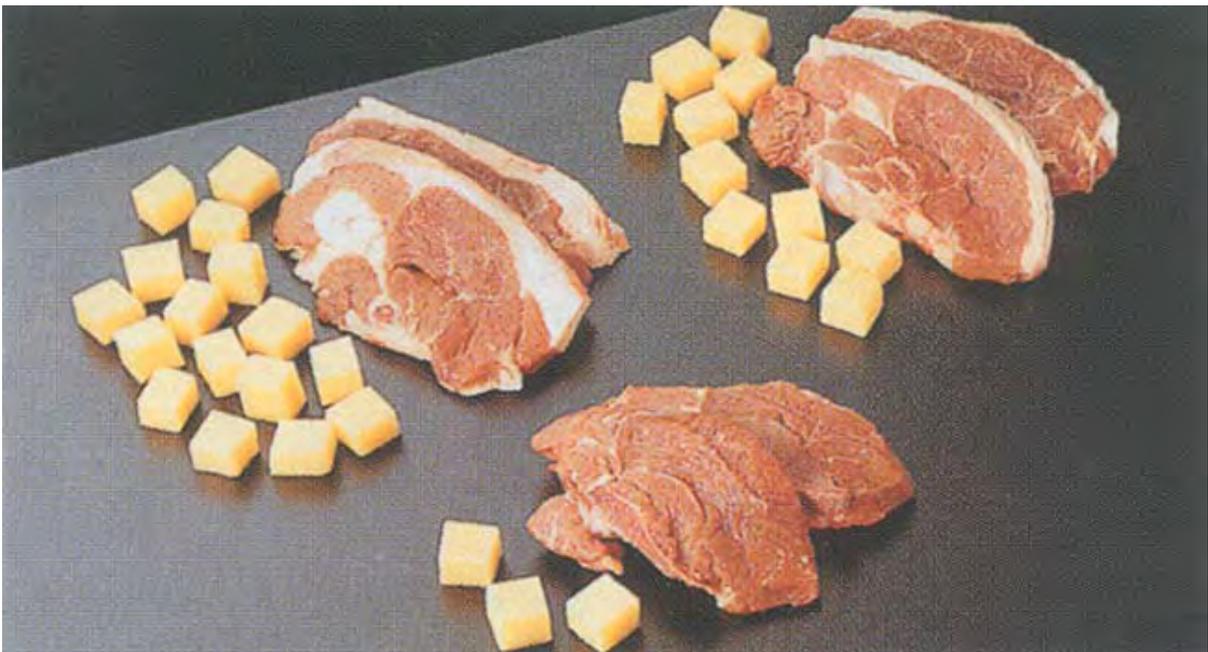


Instead of cutting out all of the fat - choose the healthier polyunsaturated and monounsaturated fats and limit the amount of the less healthy saturated and trans fats that you eat

Ways to include heart healthy fats in the diet:

- Margarine, hummus or avocado instead of butter
- Canola, Olive, Polyunsaturated oils for cooking
- Vinaigrette style salad dressings and low (saturated) fat mayonnaise
- Nuts as snacks or on breakfast cereal
- Fish at least 2-3 times per week – e.g. fresh/frozen/tinned

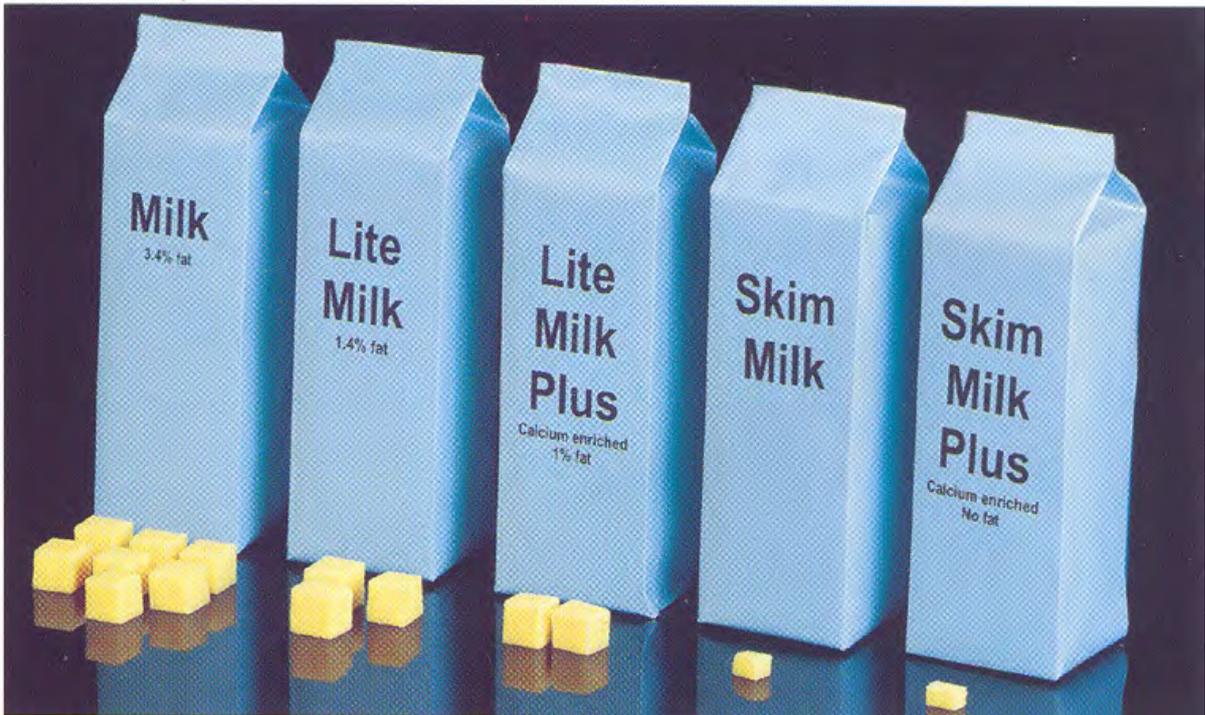
**Figure 6a** Varying fat amounts Keep it lean/trim



**Figure 6b** Limit fatty meats like sausages and delicatessen meats such as salami



**Figure 6c** Choose low or reduced fat milk and yoghurt or 'added calcium' soy drinks



(Queensland Health, 2003)

**Varying fat amounts:** cooking styles

Choose foods that are grilled, baked, or steamed, not fried.

**Go easy on the salt**

- in cooking and at the table/tray
- include more fresh and unprocessed foods
- limit processed products that use salt in the preparation or serving such as hot chips, salty crackers, smoked ham – check the label for lower salt versions

**Increase Fibre**

Soluble fibre can help to reduce cholesterol. Sources include:

- vegetables
- fruits
- legumes
- cereals e.g. barley, oats, rice

Other medical conditions requiring low fat/low saturated fat diets may include:

- Diabetes Mellitus
- Weight Reduction
- Pancreatitis (NB - requires high protein)
- Gall bladder disease

## Renal disease (Kidney)

What do the kidneys do?

- Remove waste products from the body
- Help control the amount of fluid in the body
- Help produce red blood cells which carry oxygen
- Help maintain strong, healthy bones

Most of the waste comes from foods that you eat. These waste products are:

- Urea
- Potassium
- Sodium
- Fluid

When the kidneys do not work properly they can no longer remove the waste products from the body. When wastes build up in the blood, it can make the person feel:

- Generally feel very unwell
- Tired
- Weak
- Nauseous and sick in the stomach
- Short of breath
- Experience taste changes

Dietary treatment of renal failure aims to:

- Take the pressure off the kidneys by reducing levels of mineral and other nutrients that have built up in the blood and have come from foods we eat. In particular, potassium, sodium, phosphate, fluid, and energy.
- Keep the patient well-nourished and reduce symptoms of the poorly functioning kidney (such as tiredness, muscle wastage etc.)

**Dialysis** is used in renal failure to remove the waste products from the body that are otherwise removed by the kidneys.



In addition to the removal of waste products, other nutrients such as protein are also removed and may need to be replaced

## Types of dialysis

### Haemodialysis (*blood filtering machine*)

- Dialyse about three times per week
- Waste products build up in the blood between sessions
- More food restrictions than on CAPD

### CAPD (**Continuous Ambulatory Peritoneal Dialysis**)

- Dialysing all the time
- Waste products are being constantly cleared from the blood via fluid “exchanges”
- Diet for CAPD involves less food restriction

## Diet and Renal Failure – Salt

- Salt can cause the retention of fluid which causes a rise in blood pressure and puts extra stress on the heart.
- Dietary Salt/Sodium needs to be restricted pre dialysis and with both types of dialysis.



### **Dietary tips for a low salt diet:**

- AVOID eating salty foods such as nuts, potato crisps and salty meats (e.g. bacon)
- DO NOT add salt at the table
- DO NOT use salt in cooking
- ALWAYS use reduced salt or no added salt products
- AVOID salt replacements, rock salt, garlic salt, vegetable salt, herbed salt

### **Diet and Renal Failure – Potassium:**

- A build-up of potassium in the blood can affect the heart and cause an irregular heart beat
- Pre-dialysis requires potassium restriction
- Continuous Ambulatory Peritoneal Dialysis (CAPD) potassium is filtered from the blood very well into the dialysis fluid so most people on CAPD do not need to restrict the amount of potassium they eat
- Haemodialysis requires potassium restriction



#### **Dietary tips for a low potassium diet:**

- LIMIT the portion size of all fruits and vegetables and LIMIT the high potassium versions (lists are available)
- PEEL all fruit and vegetables
- DRAIN the juice from canned/stewed fruit
- CHOP vegetables in small pieces before boiling
- BOIL all vegetables in lots of water and for an extended time period (do not use the water in sauces or gravy)
- AVOID dried fruits and vegetable juices
- LIMIT the amount of dairy foods for a low potassium diet

Other foods high in potassium that should be limited include

- Chocolate
- Seeds, nuts
- Potato crisps
- Coffee, red wine
- Breakfast cereal/fruit cake/cereal, fruit and nut bars
- Vegetable soups
- Treacle, molasses, golden syrup
- Tomato sauces, tomato paste

## Diet and renal failure – Phosphate

Phosphate, together with calcium, is involved with keeping bones strong; however levels require controlling.

- A build-up of phosphate can cause severe itchiness, lumps of calcium and phosphate in the bones, joints, and blood vessels, causing brittle bones and painful joints.
- High levels can also cause heart disease.

Treatment for controlling blood phosphate levels includes:

- Medication (phosphate binders)
- Medication is also timed with meals that are high in phosphate.
- Many foods high in phosphate are also important sources of protein and for this reason should not be avoided.
- Patients are encouraged to avoid eating large amounts/serves of high phosphate foods and fluids especially between meals

Foods high in phosphate are:

- Milk (all types), yoghurt, custard, cheese, ice cream
- Fish, seafood
- Meat and poultry
- Eggs
- Legumes
- Chocolate
- Nuts, peanut paste, seeds
- Bran and wholegrain products such as Weetbix, All Bran
- Cola drinks



The amount of phosphate that can be eaten in cases of renal failure will need to be determined by a Dietitian

## Renal failure and Fluid Requirements

- Fluid requirements vary depending on what treatment plan the patient has for their renal failure
- Fluid will build up when the kidneys are not working properly and contribute to high blood pressure.
- Pre-dialysis and haemodialysis patients will require fluid restriction. This will be difficult to stick to over the day and quantities consumed along with daily weights will need to be recorded.
- Patients having CAPD usually do not need to limit fluid intake

Fluids are anything that is liquid at room temperature including:

- water, soft drink, cordial, fruit juice
- tea, coffee
- milk, milkshakes, thick shakes
- ice, iceblocks
- Soup, gravy, sauces
- custard, ice-cream, yoghurt, cream, jelly
- alcohol

Some solid foods, such as porridge, rice, pasta, and fruit, contain large amounts of fluid. If large serves of these foods are eaten, they will need to be counted towards the fluid intake.

Assist patients to maintain fluid restriction by:

- Using jugs and measuring cups
- Spreading fluid allowance over the day
- Using equipment to slow your intake – ice cubes (from allowance), a sip-cup or a straw with a small width.
- Limiting salty foods
- Trying mints or peppermints
- Brushing teeth to freshen your mouth
- Sucking on lollies or a slice of lemon
- Freezing some of the food allowance



People with renal disease often have diabetes too. Having too many sweet foods can dehydrate and affect diabetes control. A Dietitian can provide more suggestions

### **Renal Failure and Protein Intake**

Protein builds and repairs tissue; getting the balance right in renal disease can be difficult. Too much protein can increase urea levels (a waste product of protein) and excess urea can cause nausea.

- Pre-dialysis and haemodialysis patients will need to limit their protein intake.
- When on CAPD, protein is lost in the dialysis fluid so this protein must be replaced. This may mean these patients need to eat more protein than previously.

### **Renal Disease and Energy**

#### **Haemodialysis and Pre dialysis**

- Patients may lose weight so diet needs to be adjusted to increase energy intake
- This is usually done using sugars and fats (not saturated versions).

#### **CAPD Patients**

- Often find they gain weight because they absorb the sugar from their dialysis fluid.
- Will need assistance with weight loss/weight stabilisation



A Dietitian will provide education to patients on energy requirements.



## Food Allergies

Allergies are an overreaction of the body's immune system to a specific part of a food, usually a protein. These proteins may be from foods, pollens, house dust, animal hair, or moulds. It can be severe or fatal; food contact with the mouth can cause itching or swelling within minutes, other symptoms include wheezing, vomiting, cramps, and diarrhoea and skin reactions/rashes. Some people will experience Anaphylactic shock, which is an extreme allergic reaction and can be life threatening.

Allergies in general are on the increase worldwide and food allergies have also become more common, particularly peanut allergy in preschool children. About 60 per cent of allergies appear during the first year of life.

(Victorian Government, 2010)

### Common causes of food allergies

- Nuts, eggs, milk, or soy cause about 90 per cent of food allergies.
- Peanut allergy is one of the most common allergies in older children.
- These foods commonly cause allergies:
  - Eggs
  - Peanuts
  - Milk
  - Other nuts
  - Sesame
  - Gluten
  - Fish
  - Grains such as rye, wheat, oats
  - Soy
  - Molluscs such as oysters, mussels, clam, squid and octopus
  - Crustaceans such as lobster, prawn, crab, shrimp
  - Fruit, berries, tomato, cucumber, white potato or mustard
  - Food additives like benzoates, salicylates, MSG and sulphite derivatives

People with food allergies are likely to be sensitive to other substances (e.g. pollen, mould, wool, dust).



Complete abstinence from the allergen is the key treatment; however use of adrenalin is required in life threatening cases.

### **Food Intolerance**

Food intolerance is a 'chemical' reaction that some people have after eating or drinking some foods; it is not an immune response. Food intolerance has been associated with asthma, chronic fatigue syndrome, and irritable bowel syndrome (IBS). Food intolerance is much more common than food allergy.

Most common symptoms are:

- Recurrent hives
- Headache
- Mouth ulcers
- Stomach pains, wind and bloating
- Altered bowel habits at times
- Generally unwell or run down

(Victorian Government, 2010)

Food intolerance reactions are usually related to the amount of the food consumed. A reaction may not occur until a certain amount (threshold level) of the food is eaten, but this amount varies for each person.

Some people can have both a food allergy and intolerance. These 'intolerable' substances occur naturally in foods – they do not have to be added to cause a reaction:

- Salicylates/Amines/Glutamates
- Lactose
- Gluten
- Fructose

## Salicylates

- Family of plant chemicals
- Found naturally in many in many fruits, vegetables, nuts, herbs and spices, jams, honey, yeast extracts, tea and coffee, juices, beer and wines
- Also present in flavourings (e.g. peppermint), perfumes, scented toiletries, eucalyptus oils, and some medications (Aspirin is a member of the salicylate family).

(New South Wales Government, 2009)

## Amines

- Formed as a result of protein breakdown or fermentation.
- Large amounts present in cheese, chocolate, wines, beer, yeast extract, and fish products.
- Also present in certain fruit and vegetables such as bananas, avocados, tomatoes, broad beans.

(New South Wales Government, 2009)

## Glutamate

- Found naturally in most foods e.g. tomatoes, cheese, mushrooms stock cubes, meat, and yeast extracts.
- Enhances the flavour of food.
- This is why foods rich in natural glutamate are used in many meals, for example tomatoes, cheeses, mushrooms, stock cubes, sauces, meat extracts, and yeast extracts.
- Pure monosodium glutamate (MSG) can also be used as an additive to increase the flavour of soups, sauces, Asian cooking, and snack foods.
- The foods most likely to cause problems are the tastiest ones, since they have the highest levels of natural chemicals.

(New South Wales Government, 2009)

## Food Additives

- Food additives are used to enhance the flavour, appearance, freshness or shelf-life of foods (Reid, 2009).
- People who are sensitive to natural food chemicals are usually also sensitive to one or more of the common food additives. The ones most likely to cause unpleasant reactions are listed below (along with their code numbers).
- Food Codes that are more likely to be problematic include:
- Colours: 102,104,107,110,120,122-129,131-133,142,143,151,154,155,160b

- Preservatives: Sorbates 200-203, Benzoates 210-218, Nitrates, nitrites 249-252, Sulphites, Sulphates 220-228, Propionates 280-283, Antioxidants 310-312, 319-321
- Flavour enhancer: 620-625, 327, 631, 635

(Reid, 2009)



Dietitian input is required for elimination diets.

- Elimination diets are not nutritionally balanced and should not be followed long-term.
- Elimination of entire food groups or large portions of a food group can result in nutritional deficiencies.

## Lactose Intolerance

- Lactose is a sugar found in milk.
- Lactase is the enzyme used by the bowel to breakdown the sugar found in milk.
- Medications, medical conditions (such as poorly controlled coeliac disease) and even a bout of gastro-enteritis can lead to inability to digest sugars.
- Symptoms include bloating, gas, abdominal pain and diarrhoea.

Foods to be limited or avoided:

- Animal milk and milk-based products such as custard, ice-cream and milk puddings or products containing these ingredients.
- Yoghurt and hard cheese are usually tolerated (the process for producing these breaks the lactose into its monosaccharide units).
- Need to check food labels for milk-containing ingredients.



The severity of lactose intolerance varies; some people with lactose intolerance can consume small amounts of milk without symptoms others cannot tolerate any lactose.

- Eliminating dairy foods can result in a lack of dietary calcium.
- Substitutes such as calcium fortified soy milks are suitable.

## Coeliac Disease

In patients with coeliac disease the immune system reacts abnormally to gluten (a protein found in wheat, rye, barley and oats), causing small bowel damage. The surface area of the bowel available for nutrient absorption is markedly reduced, which can lead to various gastrointestinal and malabsorptive symptoms.

- A life-long, gluten free diet is the only treatment.
- Gluten can be “hidden” in many products so it isn’t just a matter of avoiding obvious sources like bread and pasta and biscuits.

(Coeliac Australia, 2011)

Most packaged foods have an ingredient list on the label. If the ingredients list contains any of these words, avoid the foods:

- wheat
- barley
- oats
- rye
- triticale
- gluten
- semolina
- burghul
- couscous
- spelt
- kamut

## Gluten-Free Food Labelling

If the thickener in a food is made from wheat, the ingredient list must state this, as in the example below. You then know to **avoid this food**.

### INGREDIENTS

Water, chicken (6%), low fat milk, carrots, onions, peas, celery, capsicum, thickener (1422) **(from wheat)**, sugar, flavour enhancer (627), vegetable gum (xanthan), canola oil, spices.

- If an ingredient comes from a gluten-free grain, the label does not have to state the grain source.
- You can assume the thickener in the food ingredients below is gluten free as the words wheat, oats, rye or barley are not written near it.

### INGREDIENTS

Water, chicken (6%), low fat milk, carrots, onions, peas, celery, capsicum, thickener (1422), sugar, flavour enhancer (627), vegetable gum (xanthan), canola oil, spices, salt, antioxidant (vitamin E).

Also **avoid** these ingredients from wheat as they contain gluten:

- wheat flour
- wheat starch
- wheaten cornflour
- wheat maltodextrin
- wheat dextrin
- hydrolysed wheat protein
- textured wheat protein

**Not all ingredients made from wheat contain gluten.** Certain wheat-derived ingredients have been highly processed; these are gluten-free and are safe to eat:

- ✓ glucose (from wheat)
- ✓ glucose syrup (from wheat)
- ✓ caramel colour (150) (from wheat)
- ✓ dextrose (from wheat)



Vitamin and Mineral supplementation will be needed if deficiencies are detected.

- People with Coeliac Disease require a gluten free diet for life
- Strict avoidance of all foods containing gluten or foods made from gluten products
- Food labelling laws in Australia and New Zealand state that if any part of a food comes from wheat, oats, rye or barley, the label must state this

### **Low FODMAP Diet**

- FODMAPs are sugars that are poorly absorbed in the small intestine and reach the large intestine where they produce gas and attract water causing bloating and discomfort.
- Usually used to treat those people with Irritable Bowel Disease
- Used for a short duration (usually 6 – 8 weeks) when symptoms are significant.

## Dietary Fibre

Fibre is the part of plants that cannot be digested. Fibre should come from a variety of sources but **ONLY PLANTS** contain fibre.

Fibre-rich foods include:

- legumes
- oats
- barley
- rice bran
- fruit and vegetables
- wheat bran
- wheat-based cereals and pasta
- bread and wheat germ

In general it is recommended that adults should aim for 30-40g fibre per day.

## Menu Planning

**How to Increase Fibre** - Add more plant food to the menu:

- Choose higher fibre/grain versions of bread and cereal – aim for 6 serves per day.
- Include more fruit - 2-3 serves per day.
- Add more vegetables - 4-5 serves per day in dishes and as side orders.
- Include legumes in menu rotation – in soups, salads, or meat dishes.
- Nuts and seeds can be added but keep in mind these are also high in fat and an allergy risk. *Check with the Dietitian.*



Suddenly increasing the diet from a low fibre to a high fibre plan could cause bloating, pain (likely due to increased wind) and diarrhoea. Adequate fluid intake must be taken to minimise symptoms – aim for 6-8-glasses per day.

## **Low-Fibre Diets**

At times a patient may need to follow a low-fibre diet (<10g fibre/day). This medical nutrition therapy may be required to:

- Prevent irritation when the gut is inflamed e.g. with ulcerative colitis, diverticulitis, Crohn's disease.
- Prevent formation of obstructions in patients due to medical conditions or surgery.

To achieve this, you may need to exclude wholegrain or high fibre breads and cereals, certain fruits and vegetables (and legumes), nuts and seeds.



## Activity 14 – Planning Menus

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1. Review the following breakfast meal.
  - 2 small grilled sausages
  - 1 rasher bacon
  - 2 slices white toast - with thick spread margarine and jam
  - 1 glass orange juice
  
2. List suggestions for increasing the fibre and reducing the fat of the meal whilst maintaining the variety in the breakfast meal.

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3. Which foods did you target for fibre modification?

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4. Which foods did you target for lowering the fat content?

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*Activity continues on the next page.*



## Activity 14 – Planning Menus continued

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5. Review the following lunch meal

- 2 slices white bread
- 60g Devon
- Margarine
- Tomato sauce
- 200g tub of full cream vanilla yoghurt

6. List suggestions for increasing the fibre and reducing the fat of the meal whilst maintaining variety in the breakfast meal.

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7. Which foods did you target for fibre modification?

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8. Which foods did you target for lowering the fat content?

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## High Energy/High Protein Diets [HEHP]

HEHP is a diet designed to increase the overall calories and protein available for patients to choose off the menu to assist with maximising nutritional intake whilst in an inpatient setting.

Include more of these items on the menu:

- Milk (HEHP)
- Eggs (HP)
- Ice-cream (HE)
- Custard (HPHE)
- Milk Powder (HP)
- Yoghurt (HE/HP)
- Commercial supplements such as Sustagen, Ensure (HE/HP)
- Cheese (HE/HP)
- Margarine/oils (HE only)
- Meats, red and white (HP)
- Fish (HP)
- Cream (HE only)
- Desserts (HPHE)
- Nutritional supplements
  - May be requested by nursing, medical or dietary staff
  - Used if patient is not eating well to supplement intake
  - Examples: fortified milk\* (high protein drink), Sustagen, Ensure
  - Oral supplements are rarely nutritionally complete and should only be used when patient still managing some of meals



Patients requiring supplements or having been screened and deemed malnourished should be seen by a Dietitian.

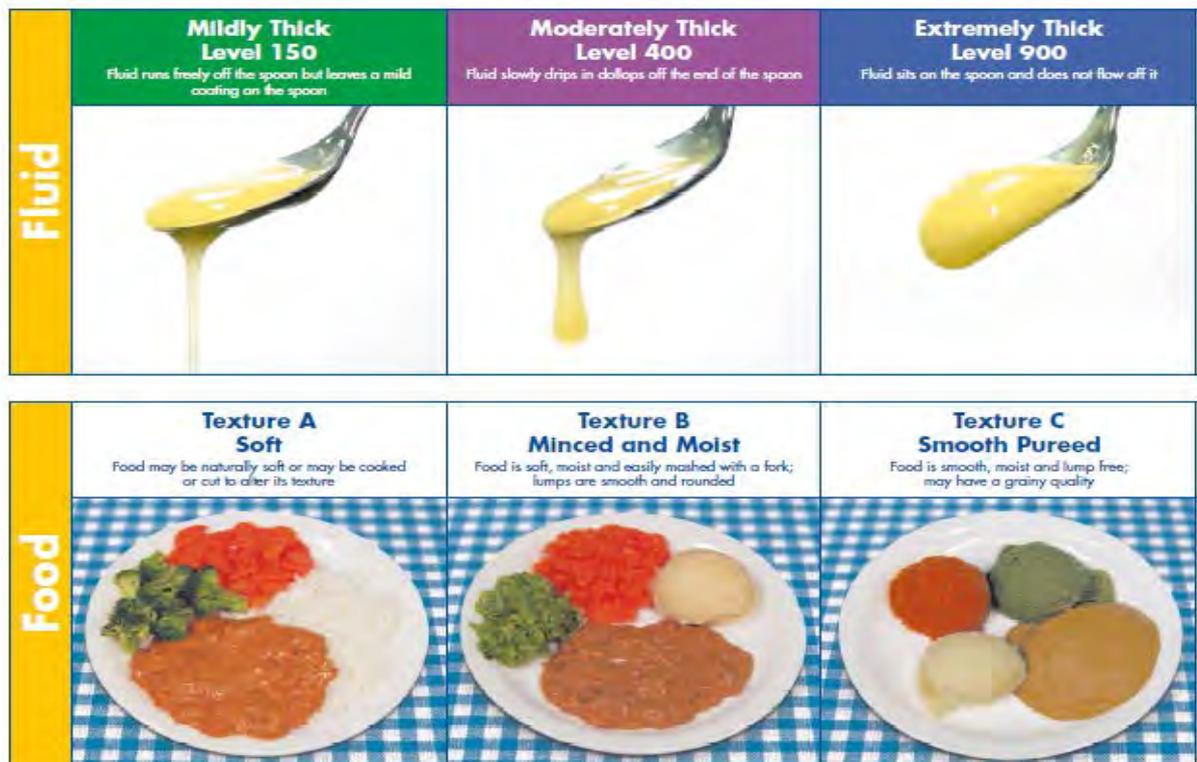
## Tube Feeding

- Prescribed by a Dietitian or Doctor.
- Soft, lubricated tubing is usually inserted via nose into the stomach (nasogastric) or directly into stomach (gastrostomy, PEG).
- Used by people who cannot safely manage food orally- e.g. unconscious.
- May be used to supplement the oral diet and is nutritionally complete when given in the correct quantities.
- Commercial tube feeds are preferred to in-house made versions (due to sterile solutions, equipment, and Quality Assurance checks, etc.).

## Dysphagia and Texture Modification

Texture modification is when the physical characteristics of foods and fluids have been changed:

- Foods (e.g. chopping, mashing, mincing, pureeing, sieving - this changes the texture of the food).
- Fluids (e.g. make thicker by adding powders/food). Thickness can vary from naturally thick, like nectar, to thick-shake, then mousse.



(Dietitians Association of Australia and Speech Pathology Australia, 2007)

Indications of usage of texture modification:

- Swallowing difficulties
- Chewing difficulties for medical or surgical reasons
- Ill-fitting dentures or missing teeth
- Weakened oral muscle control
- Reduced oral sensation
- Tongue or palate resection

### The Swallowing process

1. Chewing of food leads to a bolus formation
2. The tongue pushes the bolus against the soft palate
3. This triggers the soft palate to rise and block off the nasal passage
4. The upward movement of the larynx closes off the airway
5. Bolus moves downwards towards the stomach by peristalsis
6. Specific muscles relax and allow the bolus to continue to the stomach



**DANGER: In dysphagia, aspiration can occur at any of these points**

### Dysphagia

Texture modification of foods and thickening of fluid forms a routine part of the assessment and treatment of swallowing difficulties (dysphagia) (DAA & SPA, 2007).

- The provision of texture modified (TM) foods and thickened fluids (TF) is a prescription for patients with dysphagia.
- By determining the severity of the dysphagia, the safest levels of food texture and fluid thickness can be recommended (DAA & SPA, 2007).
- Dysphagic patients have difficulty manipulating solid or particulate foods.

General symptoms of dysphagia include:

- Feeling that food or liquid is 'stuck' in the throat
- Coughing or choking during or after meals
- Avoiding certain foods
- Unplanned weight loss
- Too much or not enough saliva

- Frequent throat clearing
- Constant chest infections
- Long meal times or eats slowly
- Irritability or sleepiness during feeding

Potential warning signs of dysphagia:

- Difficulties moving tongue
- Collection of food in the cheeks
- Poor lip closure
- Food pushed out of the mouth
- Food or liquid held in the mouth for an extended period
- Difficulty initiating the swallow
- Coughing, choking or wet gargled voice
- Slowed/absent movement of Adam's Apple

### Aspiration

Potential for aspiration is a state in which an individual is at risk for entry of gastric, oropharyngeal secretions, or food/fluids, into the trachea/bronchial passages. This is caused by the lack of the normal protective mechanisms.



Danger- **dysphagia** is serious and can potentially cause death. Texture modified diet and fluids are not usually employed by choice but *necessary* for survival

Potential nutritional concerns for the patient with dysphagia

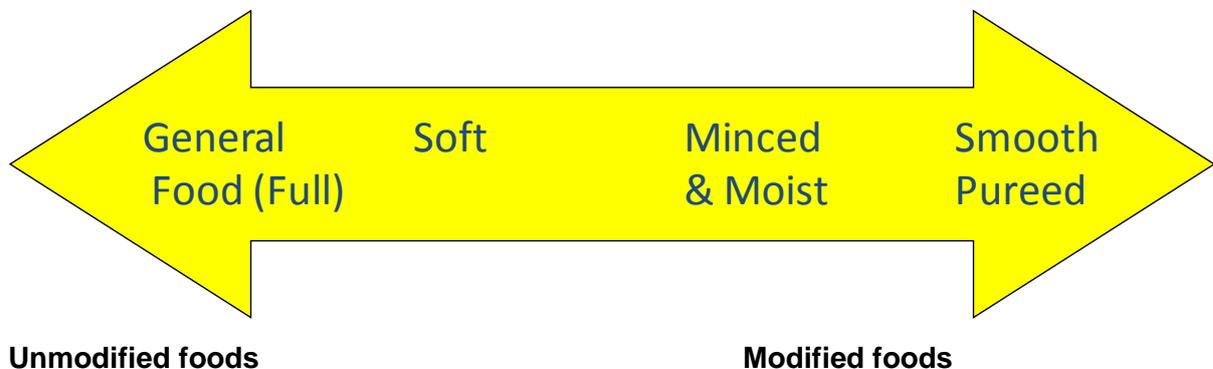
- Poor nutritional intake
- food is diluted by water
- large volume of fluids
- loss of appetite
- individual food preferences
- fatigue during eating
- Reduced intake of vitamins and minerals
- Constipation

- Dehydration

General guidelines for provision of texture modified foods:

- Foods and fluids should be varied in colour, texture and flavour
- Include a balance of sweet and savoury foods and fluids
- A high standard of presentation is essential
- Provide small frequent meals and suitable snacks
- Protein and energy supplements may be necessary
- Intake may be improved if patients don't drink with meals

**Continuum of texture modified foods (DAA & SPA, 2007)**



**Texture A – soft diet (DAA & SPA, 2007)**

- Food that is moist, soft, and easily broken into pieces with a fork.
- Minimal biting but some chewing required.
- Should be served with a sauce or gravy.

**Texture B – minced and moist diet (DAA & SPA, 2007)**

- Foods should be easily broken up with tongue.
- Should be moist and easily form a ball in the mouth.
- Food should be able to be mashed with a fork and lumps should be soft and rounded.

**Texture C – smooth pureed diet (DAA & SPA, 2007)**

- No lumps; texture should be soft and smooth, some graininess is OK.
- Food should hold together on a spoon and be able to be moulded or piped.
- This consistency is useful when chewing or swallowing becomes very difficult.

## Thickened Fluids

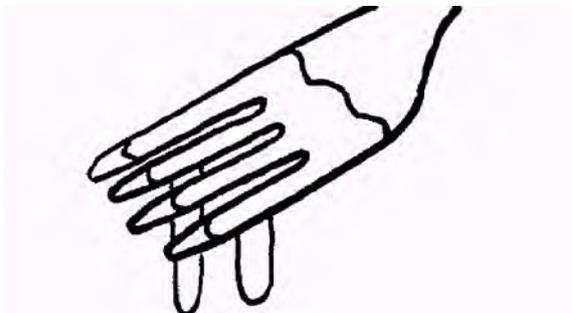
- People with swallowing problems may find it particularly difficult to swallow thin fluids such as water, milk, tea, coffee, etc.
- Thin fluids do not hold together well in the mouth, and can be easily aspirated if you have a swallowing difficulty.
- Thickened drinks may be safer as they move around the mouth more slowly and allow better control of swallowing for someone with a swallowing difficulty.
- Drinks should be thickened using a blender for large quantities or sachets for small volumes e.g. a cup of tea.
- Commercial pre-packaged thickened fluids are also available.



Level 900 – extremely thick



Level 400 moderately thick



Level 150 – mildly thick



Thin fluids

**Figure 7: Thickened fluids (Queensland Health, 2007)**

The following fluids are only appropriate if you thicken them to the required consistency first:

- Water
- Milk
- Fruit juice
- Soft drink and cordial

- Tea and coffee
- Soup
- Commercial supplements e.g. Sustagen, Ensure

These fluids are NOT OK as they become too thin; they should be avoided:

- Jelly and gelatine desserts
- Icy poles/ice blocks
- Ice-cream
- Thin custards (ok if you can have mildly thick fluids)



## Activity 15 – Texture-Modified Diets

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1. Tick (✓) the texture-modified diets your menu caters for.
  - Texture A – soft diet
  - Texture B – minced and moist
  - Texture C – smooth pureed diet
  - Thickened Fluids
  - Other (Please specify) \_\_\_\_\_
  
2. Pick two of the texture-modified diets that you ticked in the list above. Using your facility's menu, complete a day's menu for a client on each of these diets. Fill out the information below, or attach the menu card to the back of this page.

Menu One	
Type of Diet	
Breakfast	
Morning Tea	
Lunch	
Afternoon Tea	
Evening Meal	
Supper	

*Activity continues on the next page.*



## Activity 15 – Texture-Modified Diets continued

Menu Two	
Type of Diet	
Breakfast	
Morning Tea	
Lunch	
Afternoon Tea	
Evening Meal	
Supper	

3. Record any thoughts you have on these menus and discuss them with your supervising Dietitian.

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*Activity continues on the next page*

Please read the following case study and answer the proceeding questions



### Case Study

Mr Smith has just been reviewed by the Speech Pathologist and placed on a Texture C smooth pureed diet and extremely thick fluids with no allowance for thin fluids. You notice on your delivery round of supplements that the patient's wife is assisting Mr Smith with a glass of water and he appears to be coughing after swallowing the fluid.

4. Do you think it is important to discuss this scenario with any staff member? If so list those that you would approach and discuss it with.

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5. If you were unable to find a staff member on the ward to discuss the above scenario would you just wait until you spoke with the Dietitian in passing before mentioning it?

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6. List two situations where patients may require a texture modified diet.

One:

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Two:

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*Activity continues on the next page*

7. List two warning signs of dysphagia.

One:

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Two:

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## 3.3 Working with Food Services

### Food Service Systems

- **Cook fresh (Cook-serve)** – meals are made at a central kitchen, plated, and delivered to the patient bedside by food service staff.
- **Cook-Hot-Hold** – meals are cooked and kept hot at a temperature that minimises bacteria risk (such as cafeteria-style or buffet-food like a curry). Meals are usually served the same day as prepared.
- **Cook chill** – food is cooked in a central kitchen and rapidly chilled to about 3°C. When ready for distribution it is sent (usually plated and on trolleys) to a satellite kitchen for reheating to the appropriate temperature (and cooking completed – if necessary) e.g. 'Lite n' Easy' meals, some airline food trays.
- **Sous-vide** – this method slowly cooks food over a low temperature for a long time (e.g. 24 hours). Unlike cooking in a slow cooker, sous-vide cooking uses airtight plastic bags placed in hot water well below boiling point.
- **Cook freeze** – selected menu items including main meals, desserts and a limited range of vegetables and modified consistency items are prepared in bulk, packed into foil containers of between 1 and 12 serves, frozen and boxed for delivery. They are heated and served either cafeteria-style, on a plating line, or in satellite kitchens at ward level.

### Menu Systems

The collection of meal orders is not limited to the use of a paper based system. Other systems may include a buffet style and off-trolley select style of service, which may be more commonly used in nursing homes or other supportive accommodation.

The distribution of menus may vary depending on your work environment and is within the scope of a Nutrition/Dietetic Assistant. Examples of distribution include

- Menus placed on meal tray
- Menus handed to the patient directly
- Menus placed on tables in a dining room setting where patients/residents gather for meal times
- Meal orders may also be collected verbally

## Recording Patient Food Preferences

- Who records this information?
  - Nutrition Assistants/Diet Aides/Nutrition Aides
  - Dietitians
- Where is it recorded?
  - Nutrition Care Plan/Food and Fluid Record Chart entry
  - Diet card or form/schedule
  - Ward list
- How is the information used?
  - To guide staff when completing menus for patient
  - To increase customer satisfaction
  - To encourage patient to eat

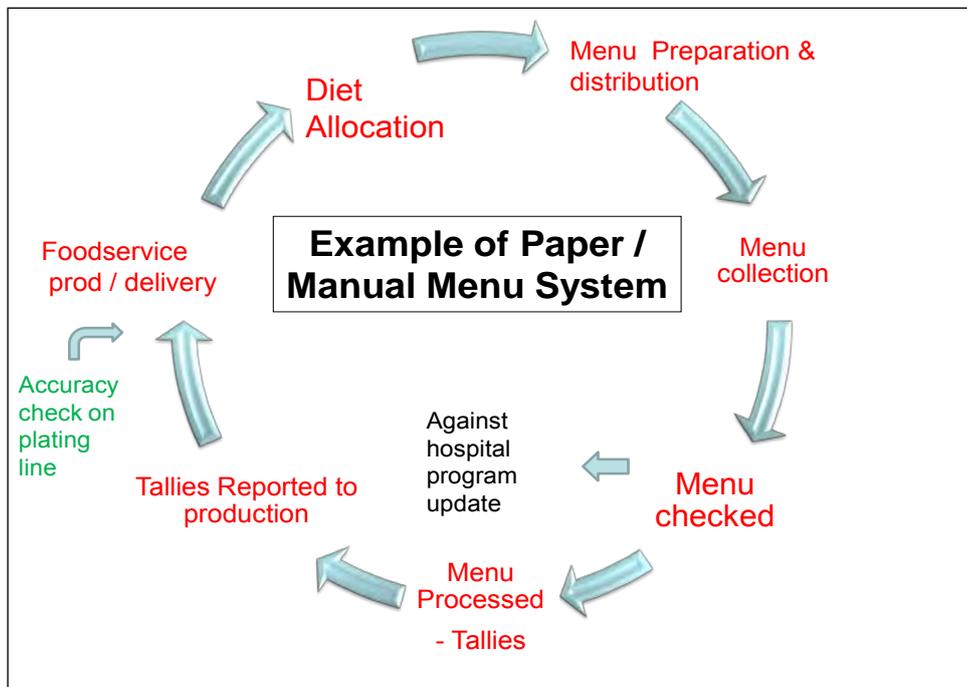
Meal and menu ordering vary greatly between healthcare facilities. It can be either:

- Manual
- Electronic

### Steps involved in meal and menu ordering.

1. All patients must be assigned a diet status/code
  - Manual or electronic
  - Usually updated three times per day
  - Usually linked to Admissions/Discharges /Transfers information systems
  - For example, Hibiscus OR Clinical information and Work Management system, which is usually different in each organisation.
2. Patients are required to make a selection for meals
  - How menu selection is obtained varies greatly between facilities
  - 'How' influenced by many factors:
    - staffing/budget
    - efficiency
    - cliental (aged care +/- menu dependent on areas),
    - services offered by facility (day unit – no choice therefore no menu),

- location (rural/metropolitan)
3. Meal choices collected
    - Menu System pre-determines tasks of Nutrition/Dietetic Assistant
      - Manual or electronic
      - Assisting with menus/nutrition education
      - Providing valuable feedback on preference/poor selection etc.
  4. Meal choices collated
    - Menu/meal items are checked against
      - Updated diet status/code
      - Nutrition Care Plan or standard guidelines
      - Therapeutic diets are processed accurately (Meal items added or removed according to guidelines)
  5. Tally and report to Foodservice (production)
    - Orders tallied on specific tally sheets
    - Collated onto meal production lists
    - Reported to Foodservice within designated timeframe



**Figure 8: Paper/Manual Menu System**



## **Activity 16 – Communicating Special Dietary and Other Requirements**

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Answer the following questions.

1. As a Nutrition Assistant, what information would you need to communicate to food services to ensure the Nutrition Care Plan can be implemented?

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2. Name two methods for communicating with food services that exist at your facility; highlight the advantages and disadvantages of each

One:

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Two:

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When taking a patient's food preference:

- Introduce yourself and where you are from e.g. Nutrition Services.
- Inform the patient that you are going to ask them about their food preferences (likes and dislikes) and ask if they are happy for you to continue.
- Ask if they have any food allergies or intolerances.
- It is useful to collect the information systematically e.g. ask about specific meal occasions or food groups.
- Leave a week's worth of blank menus for the family to complete when they visit.

Common reasons for patients requiring assistance to complete menus:

- They are unable to mark the menu card e.g. due to fractures, stroke/paralysis, weakness.
- They are unable to read the menu card e.g. low literacy, poor English, loss of vision.
- They are suffering from 'aphasia' – communication trouble that can affect talking, comprehension, writing, and reading e.g. after a stroke.
- They are unable to make appropriate choices that are in line with the Nutrition Care Plan/therapeutic diet.

Common reasons for patients being unable to communicate their menu preferences:

- Non-English Speaking.
- Some may be able to speak basic English but not read the language (make an attempt to speak to them in simple language to gather basic preferences).
- Use pictures of the meals or meal components.
- Speak to relatives about the client's preferences.
- Ask the Dietitian or nursing staff to gather some food preferences when using interpreters with the client.



If patients refuse to follow the Nutrition Care Plan inform the Dietitian immediately.

### **Assisting a Client with Aphasia**

- Some patients have severe aphasia and may be unable to communicate at all.
- Other patients with aphasia are able to communicate but *you* will need to take more responsibility for the communication interaction.
- You can assist by:
  - Talking in a natural, relaxed way – no need to shout
  - Speak slowly and clearly
  - Use short sentences
  - Give the patient time to respond
  - Reduce distractions – e.g. you may need to pull the curtains
  - Repeat the sentence
  - Use gestures
  - Ask short questions that require a yes or no answer
- Talk to the Speech Pathologist about the needs of individual clients.



## **Collecting Menu Information**

Tallying and collating general menus/meal orders may vary depending on your workplace. Variations include:

- Manual counting of menu items chosen
- Data entry of menu choices into a Nutrition and Food Services computer system
- Scanning of menus and automatic summary generated

Information to support the delivery of menu items chose may include

- A ward diet list
- Client locations lists
- Meal tickets
- Meal tallies
- Labels

## **Important Elements in Evaluating Menus and Meals**

- Understanding your client base
- Getting client/staff feedback
- Understanding your work profile (strengths and limitations)

## **Queensland Health Standards – Client Feedback**

- Client feedback should be sought on both a regular and 'ad hoc' basis.
- Methods used may be innovative and not always in the form of 'patient satisfaction' surveys.
- Client feedback should be a continuous process that is regularly reviewed with corrective action being taken if necessary.
- Systems should also be in place to respond to informal feedback from clients, such as verbal comments/suggestions/complaints.

## **Patient Satisfaction Surveys**

Queensland Health uses the validated Acute Care Hospital Foodservice Patient Satisfaction Questionnaire (Capra et al, 2005). The survey consists of 19 questions about the food, the foodservice experience and about choice. There are an additional 3 questions which are still to be validated.

Introduce the survey with a preamble to inform the client of why their responses are important. The aim is to allow clients to respond anonymously however, it is important to collect information on:

- ward/location
- type of diet
- length of stay
- age

This data is on the back of the form.

Once completed the data is entered into an excel spreadsheet which then provides a result between 1 and 5. Five is the highest score, and the aim is to score over 4 for each category. Completing a patient foodservice satisfaction survey at least annually or when there is a significant change to the menu, allows for areas for improvement to be identified.

Go to the Statewide Foodservices Webpage on QHEPS and print off a copy of the Acute Care Hospital Foodservice Patient Satisfaction Questionnaire and familiarise yourself with the questions.

<http://qheps.health.qld.gov.au/statewidefoodservice/html/resources.htm>

### **Collating Client Information**

- Provides information as to what areas of the foodservice are satisfactory and what areas may need attention.
- Serves as a starting point for providing a better service.



Collecting customer feedback is not a valuable exercise if data is not collated, discussed and put to use.

Other measures of client satisfaction include:

- Some client groups may not be able to complete structured surveys (e.g. children, frail elderly and mentally ill clients)
- Indirect measures of client satisfaction include:
  - Feedback (written or verbal) from family members, carers or clinical staff
  - Plate and supplement waste surveys
  - Weight management charts for long-term residents



Remember, the client is the best measure of satisfaction!

### **Compliment or Complaint Registers**

All food compliments or complaints made by patients, staff, or visitors should be dealt with promptly, courteously and confidentially. All complaints must be taken seriously.

Document:

- Who is making the complaint, where and when and how they made the complaint
- The nature of the compliment/complaint
- The time of the incident
- Which meal service it relates to e.g. breakfast, lunch, dinner
- Action requested and action taken
- Person authorising the record – signature and date



## Activity 18– Evaluating Client Satisfaction with Menus

1. Use the Acute Care Hospital Food Service Patient Satisfaction Questionnaire survey 10 patients.
2. Collect the surveys, and complete the table below

Question	Yes	No	Unsure
1. Patients were generally satisfied with the variety of choices on the menu			
Why? Please explain.			
2. Patients were generally satisfied with the presentation of their meals.			
Why? Please explain.			
3. Patients were generally satisfied with the taste of their meals.			
Why? Please explain.			
4. Patients were generally satisfied with the texture of their meals.			
Why? Please explain.			



## Activity 19– Workplace observation checklist

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- 1) Candidate's Name: \_\_\_\_\_
- 2) Date of Assessment: \_\_\_\_\_

For this assessment the candidate will require access to their usual workplace equipment, including, but not limited to:

- Diet sheets/Nutrition Care Plans
- Admission/discharge lists
- Menus
- Computers/calculators/telephone and other business technology as required
- Tally sheets/Special nutrition items
- Food intake records

Complete the following checklist.

## Workplace Observation Checklist

*Workplace Supervisor to date and sign*

Essential Skills and Knowledge <i>The learner demonstrates the following skills and knowledge:</i>	1 <sup>st</sup> observation date and initial	2 <sup>nd</sup> observation date and initial	Comments	*FER
<b>Updating information of client admissions, transfers and discharges</b>				
Update admissions, transfers and discharges using workplace procedures and routines e.g. phone call with ward, using computer updates				
<b>Distributing and collecting menus from clients</b>				
Distribute correct menu to patients, which is appropriate to their needs				
Leave menu on tray or give to patient				
Collect menus				
<b>Providing guidance and assistance to clients when they are completing their menu</b>				
Access policies, procedures, work procedures and special dietary resources within the workplace				
Provide guidance (if required) to clients to ensure meal choices are consistent with Nutrition Care Plan				
Provide assistance (if required) to clients with marking menus or placing meal orders				

<b>Essential Skills and Knowledge</b> <i>The learner demonstrates the following skills and knowledge:</i>	<b>1<sup>st</sup> observation date and initial</b>	<b>2<sup>nd</sup> observation date and initial</b>	<b>Comments</b>	<b>*FER</b>
<b>Recording and responding to client food preferences</b>				
Record and respond to client food preferences according to workplace procedures				
<b>Providing feedback to Dietitian or other relevant Health Professional on consistently poor client food choices, and consumption and acceptability of meals</b>				
Provide feedback to the Dietitian if consistently poor food choices are made by the client				
Provide feedback to the Dietitian on poor acceptance/tolerance of food by the client				
<b>Checking meal orders for accuracy</b>				
Routinely check meal orders to ensure choices are consistent with the Nutrition Care Plan.				
Check meal orders according to workplace procedures and routines				
<b>Collating, tallying and reporting meal orders and special meals to Food Services</b>				
Tally, collate and report menu items to Food Services according to workplace procedures and supervision				

<b>Essential Skills and Knowledge</b> <i>The learner demonstrates the following skills and knowledge:</i>	<b>1<sup>st</sup> observation date and initial</b>	<b>2<sup>nd</sup> observation date and initial</b>	<b>Comments</b>	<b>*FER</b>
Provide Food Services with special diet order information within designated time frames				
Follow workplace procedures and routines to meet specific time frames				
<b>Preparing and delivering nutrition support/ menu items</b>				
Deliver nutrition support items according to workplace procedures and routines				
Ensure nutrition support items were prepared appropriately according to instructions from Dietitian				
Routinely check nutrition support items to ensure items are in date				
Discard out-of-date nutrition support items according to workplace procedures and routines				
<b>Filling out a food intake record</b>				
Food intake is documented and reported according to workplace procedures and routines				

Essential Skills and Knowledge <i>The learner demonstrates the following skills and knowledge:</i>	1 <sup>st</sup> observation date and initial	2 <sup>nd</sup> observation date and initial	Comments	*FER
<b>Effective communication skills</b>				
Communicate with others in a helpful and polite manner				
Use appropriate oral and written language for the audience				
Use clear and concise oral communication when performing work tasks				
Seek clarification where required				
Access information from internal and external sources to solve routine problems				
Respond promptly to requests for information				
Discuss difficulties or problems with appropriate person				
Ask for help and assistance if required				
Take appropriate action from feedback				
Follow instructions and work schedules				
Write information in a legible and easy to understand manner				

<b>Essential Skills and Knowledge</b> <i>The learner demonstrates the following skills and knowledge:</i>	<b>1<sup>st</sup> observation date and initial</b>	<b>2<sup>nd</sup> observation date and initial</b>	<b>Comments</b>	<b>*FER</b>
Present written information within designated timelines e.g. menus, tally sheets				
Present written information in accordance with the requirements of the Qld Health facility				
Manage interruptions effectively				
<b>Adherence to Code of Conduct</b>				
Carry out work in a responsible and positive manner				
Show respect for others				
Treat clients and colleagues in accordance with the Qld Health Code of Conduct				
Deal with clients and staff in a courteous, diligent and helpful manner				
Respect the dignity, rights and views of clients and staff				
Remain impartial and objective when performing their work duties				
Ensure public resources are not wasted, abused or used improperly or				

<b>Essential Skills and Knowledge</b> <i>The learner demonstrates the following skills and knowledge:</i>	<b>1<sup>st</sup> observation date and initial</b>	<b>2<sup>nd</sup> observation date and initial</b>	<b>Comments</b>	<b>*FER</b>
extravagantly				
<b>Ability to work as part of a team</b>				
Request advice as required				
Receive feedback and work within a team				
Give support to other team members				
Use problem solving skills				
Give encouragement				
Provide feedback to others where appropriate				
Explain/discuss issues or instructions				
Work with others as a team				
Contribute to goals and tasks				
Share appropriate information				
<b>Ability to use technology effectively</b>				
Communicate using technology appropriately				
Use technology effectively and appropriately				

\*FER – Further Evidence Required

## Key Points:

**Nutrition Care Plans** are developed for a variety of reasons:

- Diseases of the digestive system or surgery to any part of the digestive system can affect a person's ability to digest food and/or certain nutrients.
- This can mean a special diet is required to maintain/improve health.

Special diets should also be considered when:

- A person has a medical condition or takes medication which affects the way their body digests or absorbs certain nutrients
- A person has poor oral intake before admission to hospital.
- Someone cannot eat enough food to meet their nutritional requirements.
- A person is at risk of poor intake or has higher nutrient requirements than normal.

The *Nutrition Standards for Meals and Menus* (NSMM) are designed to provide a framework to assist menu planning in hospitals, residential care, mental health facilities, and acquired brain injury units managed by Queensland Health (QH).

**Menu planning** – meeting the nutritional requirements of clients (nutritional adequacy)

- Should provide the minimum serves of the core food groups outlined in the Australian Guide to Healthy Eating (AGHE).
- Nutrient analysis computer program can evaluate whether it provides the recommended Nutrient Reference Values (NRV's).
- Dietitians should be involved in the menu planning to ensure that menus are nutritionally balanced.

The Nutrition Care Team revolves around the patient and includes the Dietitian, Nurses, Doctors, family, carers, Foodservice Staff, Nutrition Assistants, and other Allied Health Staff including Speech Pathologists, Cleaners, and Ward Persons.

## Dysphagia and texture modification

- Texture modification is where the physical characteristics of foods and fluids have been changed.
- Danger- **dysphagia** is serious and can potentially cause death
- Texture modified diets and fluids are not usually used by choice but *necessary* for survival