High protein, high energy diet for children and adolescents

Children need enough energy, protein and nutrients to grow. Sometimes children require extra nutrition to promote weight gain or catch up growth. This may be due to increased needs from short or long term illnesses. A high protein, high energy diet may be recommended for your child to meet these needs. Extra nutrition is provided through energy (calorie / kilojoule) and protein rich foods.

It is important that your child still eats a variety of foods including breads and cereals, fruits, vegetables, meats and dairy. These food groups provide important nutrients for growth and development. As nutritional status and weight improve, often appetite and well-being improve. When your child is at a healthy weight they may be able to return to a normal eating pattern after discussion with your dietitian.

High protein foods
- Dairy products such as milk, cheese, yoghurt
- Calcium fortified soy milk
- Meat, fish & chicken
- Eggs
- Legumes such as lentils and beans
- Nuts, seeds and their pastes (e.g. peanut butter, tahini)

High energy foods
- Plant based oils (e.g. olive oil)
- Avocado
- Margarine, butter, cream
- Full cream dairy products
- Oil based salad dressings (e.g. mayonnaise)
- Your dietitian may prescribe additional carbohydrate, protein or fat supplements

What about ‘junk’ foods such as lollies and takeaway?

Allowing your child to eat lots of high energy snack foods (e.g. chocolate, lollies, chips, biscuits, soft drinks) or fast foods may reduce your child’s appetite for nourishing foods. These foods provide lots of calories, but are low in nutrients that are important for your child’s growth and development. They may also learn to prefer these foods. Include these foods only occasionally.
Tips for increasing protein and energy

- Include high protein / high energy foods at every meal and snack
- Offer your child small frequent meals and snacks every 2-3 hours
- Enrich foods with sauces, gravies, dips or toppings
- Replace low fat foods with full cream options
- Try foods that require less chewing or are easier to eat
- Don’t let your child fill up on fluids before meals
- Take advantage of times when your child feels hungry to encourage intake
- Encourage your child to drink nourishing fluids such as milk based drinks (in preference to water)
- Keep lots of ready-to-eat snacks handy, such as yoghurt, nuts, cheese and dip
- Give your child lots of encouragement and praise, even if they do not finish their meal
- Make mealtimes as pleasant and relaxed as possible; avoid distractions

Nourishing drinks

Milk is a great base for nourishing drinks as it is high in protein and energy. Choose full cream milk as it contains more energy than low fat milk. Full cream calcium fortified soy milk (e.g. So Good, Vitasoy) or lactose free milk (e.g. Zymil) is also suitable for children with special dietary requirements.

Fortified milk can be made by adding extra milk powder or evaporated milk. Speak to a dietitian before using for your child; the protein level may be too high for young children. You can use this milk in place of regular milk. The recipe is as follows:

- To every cup of milk (250mls) add 1 heaped tablespoon of full cream or skim milk powder and whisk until dissolved. (For 1 litre of milk, use 4 heaped tablespoons of milk powder)
- or
- To 2 cups of milk (500mls) add 1 cup of evaporated milk.
Your dietitian may also recommend a special supplement for your child (e.g. *Pediasure* or *Sustagen*). These drinks provide extra protein, energy, vitamins and minerals. Speak to your dietitian before starting these drinks to ensure they are appropriate for your child.

**Some ideas for encouraging nourishing fluids are:**

- **Smoothies:** blend full cream milk with frozen fruit (e.g. berries, bananas), ice cream or yoghurt. You may like to add honey or other flavourings
- **Creamy milkshakes with icecream, toppings or flavourings such as *Milo***
- **Serve with colourful straws or in fun glasses and cups**
- **Involve your child in choosing the ingredients and preparing / blending**

**Meal and snack ideas**

- **Porridge prepared with cream**
- **Cereal with milk, sultanas & cream**
- **Ham and cheese toasted sandwich**
- **Tuna mornay, made on cream, with vegetables**
- **Sandwiches with high protein fillings: cheese, ham, chicken, baked beans, avocado, mayonnaise, margarine**
- **Scrambled eggs – add cheese, cream and vegetables**
- **Avocado, peanut butter or other nut pastes spread thickly on bread**
- **Homemade mini pizza – add cheese, meats and vegetables**
- **Creamy casserole with mashed potato & grated cheese on top**
- **Omelette with cheese, ham, chicken, tomato, mushrooms**
- **Macaroni cheese or spaghetti bolognaise with grated cheese**
- **Homemade nachos with mince, kidney beans, cheese, salsa and sour cream**
- **Cream, full cream yoghurt or custard mixed with fruit**
- **Crackers with avocado, cheese, cream cheese, tuna, hommus, nut paste or cream cheese dips**
- **Hardboiled egg**
- **Dried fruit or fruit and nut based muesli bar**
- **Roasted nuts (if age appropriate)**
- **Fried rice with egg, vegetables, meat and generous amounts of oil**
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<tr>
<th>Food / fluid</th>
<th>Ideas to enrich calories and protein</th>
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| **Meat and meat alternatives** *(High protein)* | • This group includes meat, chicken, fish and meat alternatives such as baked beans, lentils, kidney beans, tofu  
• Include at each main meal and snacks as appropriate |
| **Cheese** *(High protein)* | • Serve on crackers/sandwiches  
• Grate onto vegetables  
• Add to rice/pasta  
• Cut into small blocks as a snack  
• Make cheese sauce to add to meals/vegetables |
| **Full cream milk** *(High protein)* | • Try milk based drinks (see nourishing fluids)  
• Make soups, puddings, custards, desserts or packet mixes with milk instead of water |
| **Eggs** *(High protein)* | • Try a hardboiled egg as a snack or add to a salad plate  
• Mash egg with mayonnaise as a sandwich topping or stir through potato salad  
• Try an omelette or quiche with chopped meat, vegetables and cheese |
| **Nuts and seeds** *(High protein)*  
**Whole nuts are a choking hazard for children under 3 years old** | • Try smooth peanut butter or other nut pastes in preference to jam or vegemite  
• Try hommus or tahini as a dip or spread  
• Serve whole roasted nuts as a snack if age appropriate  
• Use in baking (e.g. almond meal) |
| **Margarine, butter and oil** | • Add to vegetables  
• Add to rice/pasta (after cooling)  
• Spread thickly on bread and on savoury biscuits  
• Add to soups |
| **Cream** | • Add to milk, on breakfast cereals, porridge, desserts, custard, yoghurt, sauces or soups  
• Add sour cream to potato  
• Add coconut cream to meals |
| **Avocado** | • Spread on crackers, toast or sandwiches  
• Blend into vegetable mixtures  
• Add in salads  
• Try guacamole dip (avocado mashed with lemon, salt and pepper) |
**Example meal plan**

**BREAKFAST**
- Cereal with fortified milk and fresh or dried fruit
- 1 slice toast
- 1 egg

**MORNING TEA**
- 1 milkshake / Smoothie*
- **OR**
- 1 tub fruit yoghurt with fruit

**LUNCH**
- Sandwiches with protein filling, eg peanut butter, egg, ham, chicken, tuna, baked beans, cheese
- Fruit and ice cream/custard/fruit yoghurt

**AFTERNOON TEA**
- Banana smoothie / glass milk, Milo or flavoured milk
- Fresh or dried fruit eg. Sultanas

**DINNER/TEA**
- Meat/fish/chicken + cheese sauce
- Potato/vegetables + cheese/butter

**SUPPER**
- Hot chocolate/Milo made with fortified milk
  - **OR**
  - Biscuits and cheese

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*Fortified milk adds protein & the fruit gives energy

Can add more margarine/butter if the toast is warm. Peanut butter, avocado and honey give more energy.

Dairy dessert adds protein

Good energy and protein from the milk and fruit.

Another easy but tasty way to add more protein

Mayonnaise and avocado are tasty sources of extra energy.

**Fortified milk adds protein & the sugar gives energy**

Extra butter / margarine give extra energy while the cheese adds protein.

Good energy and protein from the cheese.