

Low Tyramine Diet

What is tyramine?

- Tyramine is a naturally occurring substance that is present in certain foods.
- Some foods contain greater amounts of tyramine than others. Such as foods that have been aged, matured, fermented or that are past their expiry date.
- For most people, the body is able to process tyramine and there is no harm in eating tyramine containing foods.

Why do I need a low tyramine diet?

- A low tyramine diet is needed if you are taking certain types of Monoamine Oxidase Inhibitor (MAOI) medications. For example:
 - Nardil (Phenelzine);
 - Parnate (Tranlylcypromine)These medications may be prescribed for depression or as a chemotherapy treatment for Hodgkin's disease or lymphoma.
- When taking these medications your body cannot process tyramine very well. This puts you at risk of the effects of high tyramine levels in the body.

What are the effects of high tyramine levels?

High levels of tyramine in the body can lead to an increase in your blood pressure. This can cause unpleasant symptoms and can be a serious health problem. You may need to seek urgent medical advice.

Signs and symptoms

- Sever headache
- Increasing chest pain
- Increasing shortness of breath

The degree of symptoms is related to the amount of tyramine you have. Higher levels will lead to more symptoms. Reducing tyramine in your diet will stop these effects whilst taking these medications.

Important points

- Start on the low tyramine diet on the same day as starting your medication.
- Continue on this diet while taking this medication and for 14 days after the medication is stopped (unless advised by your Doctor or Pharmacist).
- Watch for signs and symptoms of a reaction. If you have any symptoms seek urgent medical help.



- As MAOI medications may interact with other medications, always tell all of your Doctors that you are taking this medicine.

How to follow a low tyramine diet

- Prepare and eat fresh foods. Cooking does not reduce tyramine levels.
- Avoid overripe, leftover/spoiled foods and foods past their use-by date.
- Ensure proper handling, storage and refrigeration of protein rich foods (e.g. meat, poultry, fish, eggs, and dairy products).
- Levels of tyramine in food vary. It depends on the way the food was made, stored and aged.
- Eat frozen and canned food immediately after opening or cooking, and eat leftovers within 48 hours or freeze them.
- Use the table provided on the next page as a guide to which foods are **usually low in tyramine**.
- If you have an unpleasant reaction after taking any food or drink, stop taking that food or drink and speak with your Doctor.
- Limit your intake of caffeine (e.g. coffee, tea, cola, energy drinks and chocolate/chocolate drinks). This may cause a migraine-like headache.

Alcohol

- Check first with your Doctor about whether you can drink alcohol and the amount that is safe to drink.
- If it is safe to drink, limit to 1 standard drink per day, or as advised by your Doctor. One standard drink is equal to:
 - 375ml can/bottle mid strength beer
 - 100-120ml or 1 small glass wine
 - 60ml or ½ small glass fortified wine
 - 30ml or 1 nip of spirits
- Use the table provided as a guide to which alcoholic beverages are **usually low in tyramine**.

In general, only some foods that are past their shelf life or 'off', or those prepared using maturation and 'fermenting' techniques, can sometimes be high in tyramine.

The **table below** outlines which foods you should choose or avoid when following a Low Tyramine diet. This list is non-exhaustive. Each person may have a different reaction to tyramine when taking these medications. Foods marked with an asterisk* might be tolerated in small amounts. Please see your Dietitian or Doctor if you have any questions or for individual advice.

FOOD GROUP	INCLUDE	AVOID
Meat & Meat Alternatives	<ul style="list-style-type: none"> All fresh meat, fish or poultry Processed meat (e.g. cooked ham) that has been stored and handled correctly Freshly cooked eggs Cooked beans, peas and lentils Canned poultry and fish (eat these directly after opening) 	<ul style="list-style-type: none"> Aged, dried or pickled meats (e.g. mortadella, hard salami, pepperoni, jerky) Improperly stored pickled or smoked fish (e.g. pickled herring) Spoiled or improperly stored meat, poultry, fish or liver products such as pate (e.g. foods that have undergone changes in colour, odour or have become mouldy) Tempeh or fermented tofu products e.g. soy cheese
Milk & Dairy	<ul style="list-style-type: none"> Non-matured cheeses (e.g. cottage, ricotta and cream cheese) Milk Yoghurt Custard, ice cream Soy milk and soy yoghurt 	<ul style="list-style-type: none"> Some matured cheeses: (e.g. cheddar, camembert, gouda, gruyere, parmesan, provolone, roquefort, stilton, aged fetta and goats cheese)* Buttermilk Yakult Unpasteurised milk
Breads & Cereals	<ul style="list-style-type: none"> All others 	<ul style="list-style-type: none"> Sourdough bread* Bread made with aged cheese, aged meat or yeast extracts*
Fruits & Vegetables	<ul style="list-style-type: none"> All other fresh, frozen or canned fruit, vegetables and legumes 	<ul style="list-style-type: none"> Fermented or pickled vegetables e.g. sauerkraut/ Kim chi Banana peel
Fats & Oils	<ul style="list-style-type: none"> All 	<ul style="list-style-type: none"> None
Spreads & Sauces	<ul style="list-style-type: none"> Jam, honey Peanut butter Sweet chilli sauce, satay sauce Mustards Tartare sauce, BBQ sauce Fresh gravies Salad dressings 	<ul style="list-style-type: none"> Vegemite, Pro-mite, Marmite Soy sauce and any other soy based condiments/sauces, including teriyaki sauce, hoi sin Fish sauce Protein supplements (as may contain yeast extract)
Soups	<ul style="list-style-type: none"> All other soups 	<ul style="list-style-type: none"> Miso

FOOD GROUP	INCLUDE	AVOID
<p style="text-align: center;">Alcohol</p>	<ul style="list-style-type: none"> • Domestic bottled or canned beer[#] • Red or white wine • Fortified wines • Spirits (e.g. rum, vodka, gin) 	<ul style="list-style-type: none"> • Ale and tap beer¹ • Unpasteurised beer (e.g. canned or bottled draught beer)[#] • Belgian, Korean, European and African beers[#] • Home-made beer and wine

¹The amount of tyramine in **beer** can vary. Almost all modern bottle and draught beer is safe. However, some beers produced using non-standard fermentation processes can contain high amounts of tyramine.

References

1. Dietitians of Canada, Eating for a Low Tyramine Diet. Updated 2014-09-15. Available online: <http://www.pennutrition.com>
2. Flockhart DA (2012) Dietary Restrictions and Drug Interactions with monoamine Oxidase Inhibitors: An Update. J Clin Psychiatry 73 (suppl 1):12-24.
3. Gillman PK (2016) Monoamine Oxidase Inhibitors (MAOI), Tyramine and Drug Interactions (Abbreviated). Available online: http://www.psychotropic.com/images/pdf-downloads/3_MAOI_Diet_Abbreviated_2016_3.1.pdf
4. Gillman PK (2016) Monoamine Oxidase Inhibitors: a Review Concerning Dietary Tyramine and Drug Interactions. PsychoTropical Commentaries 1:1 –90. Available online: http://www.psychotropic.com/images/Publicationspdfs/MAOI_diet_drug_interactions_2016.pdf
5. NPS Medicinewise. MAOIs – Monoamine oxidase inhibitors. Available online: <http://www.nps.org.au/conditions/mental-health-conditions/mood-disorders/depression/for-individuals/medicines-for-depression-antidepressants/types-of-antidepressants/maois-monoamine-oxidase-inhibitors>