
Nuts and seeds

Summary

- Nuts and seeds are healthy foods and a good source of protein and healthy fats.
 - Nuts and seeds contain monounsaturated fats, polyunsaturated fats and other compounds that influence blood cholesterol.
 - People who are overweight or obese can eat nuts in moderation instead of high-fat processed foods.
 - Regular consumption of 30g of nuts as part of a healthy, varied diet contributes to heart health without weight gain.
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A nut is a simple dry fruit with one or two seeds in which the ovary wall becomes very hard (stony or woody) at maturity creating the shell. Any large, oily kernel found within a shell and used in food may be regarded as a nut. Examples include almonds, Brazil nuts, cashew nuts, chestnuts, hazelnuts, macadamias, pecans, pine nuts and pistachios and walnuts.

The term 'nut' is applied to many seeds that are not botanically true nuts. These may include cape seed, caraway, chia, flaxseed, linseed, passionfruit, poppy seed, pepita or pumpkin seed, sesame seed and sunflower seeds.

Chestnuts are more like a grain than a nut as they are low in fat and rich in low glycemic index carbohydrates and fibre.

Peanuts are in fact legumes (like peas or beans), but are called nuts because they have many characteristics that are similar to tree nuts.

Coconuts are different again they can be a fruit, a nut and a seed depending on how they are botanical classified.

Australian nut and seed consumption is increasing. Research has shown that regular nut consumption as part of a healthy diet can protect against heart disease and diabetes, and may help with weight management.

If eaten as part of a healthy diet in which total energy intake is controlled, nuts do not contribute to overweight or obesity.

Although seeds have not been as well researched as nuts their high fibre content is likely to contribute to satiety and appetite control.

Nutrients in nuts and peanuts

Different types of nuts contain different nutrients, but generally nuts:

- Have a low proportion of saturated fats
- Contain high levels of monounsaturated and polyunsaturated fats
- Have no cholesterol like all plant foods
- Contain phytochemicals, such as phytoestrogens (isoflavones) and phenolic compounds, ellagic acid and flavonoids
- Contain dietary fibre
- Contain plant protein, which makes them a good alternative to animal products. Nuts are also high in the amino acid arginine which helps keep blood vessels elastic
- Contain vitamins E, B6, niacin and folate
- Contain minerals such as magnesium, zinc, plant iron, calcium, copper, selenium, phosphorus and potassium.

Chestnuts are low in fat and rich in low glycemic carbohydrates and fibre. They are also the only nut to contain vitamin C which is slightly reduced when chestnuts are boiled.

Nutrients in seeds

Seeds are eaten in small quantities so may only contribute a small quantity of nutrients however they are nutrient rich. Most seeds are rich in protein, healthy fats, fibre, minerals such as magnesium, potassium, calcium, plant iron and zinc while being naturally low in sodium. They also contain vitamins B1, B2, B3 and some are rich in vitamin E. Little is known of their antioxidant content but in general oil seeds contain antioxidants to stop the fats from going rancid too quickly.

The fibrous coat of seeds may prevent complete digestion so crushing seeds using a mortar and pestle prior to adding them to snacks and meals may help.

Nutrients in coconuts

Dried desiccated coconut is very high in fats and particularly in lauric acid and myristic acid are types of saturated fats thought to increase blood cholesterol. Coconuts are also rich in fibre and contain small amounts of a range of vitamins and minerals.

Nuts and heart disease

Low density lipoprotein (LDL) cholesterol is considered the 'bad' cholesterol. It can contribute to the build-up of plaque inside the arteries, which causes them to become narrow (atherosclerosis) and can lead to coronary heart disease. Increases in LDL cholesterol are mainly caused by excessive dietary intake of saturated fats.

Studies have shown frequent nut consumers have a lower risk of dying from coronary heart disease (CHD). Eating nuts (and some seeds) helps lower LDL cholesterol levels and maintain healthy blood vessels, due to their high content of monounsaturated and polyunsaturated fats, antioxidant phytochemicals, vitamins and minerals, the vitamin folate and the amino acid arginine which helps keep blood vessels elastic.

Are all nuts healthy?

Most nuts – including almonds, walnuts, pecans, cashews, brazil nuts, hazelnuts, peanuts, macadamias, pine nuts and pistachios – contain mainly monounsaturated and polyunsaturated fats with a small proportion of saturated fats. Where fat is found all three types are present just in different ratios. Coconut and palm nuts contain high levels of saturated fats, so consumption of coconut products should be limited.

Roasting nuts, whether oil or dry roasted, have little impact on the fat content of nuts and can in fact boost their “nutty” flavour. Some people prefer the flavour to raw natural nuts. This is because nuts are physically dense and can’t absorb much oil even if submerged in oil unlike potato chips which are porous. Most nuts only absorb 2% of extra fats.

Salted nuts however should not be your every day choice due to the higher sodium content, particularly important if you have high blood pressure. Save salted nuts for parties and make raw and dry roasted nuts your every day choice.

Nuts, overweight and obesity

Dietary fats are energy dense, with twice the amount of kilojoules per gram (37 kJ/g) than either protein (17 kJ/g) or carbohydrate (16 kJ/g). People who are overweight and obese can still benefit from the protective properties of nuts, without associated weight gain, if they swap them for high-fat processed snack foods. A 30g handful of nuts are a nutritious snack.

Nuts assist with weight management in several ways:

- **Satiety:** nut consumption increases satiety likely due to the protein, fat and fibre content of nuts and they release satiety hormones in the intestine.
- **Increased energy expenditure:** nut consumption requires more energy for digestion of the nuts so you burn more energy eating nuts
- **Fat excretion:** not all the fat in nuts is absorbed with up to 20% lost through stools. The nut cell walls and oil bodies are resistant to complete digestion.
- **Glycemic index (GI) lowering effect:** adding nuts to meals with carbohydrate lowers the rise in blood glucose after eating, creating a low GI effect, which also reduces appetite.
- **Reduce insulin levels and increase insulin sensitivity:** nut consumption reduces insulin levels which may make insulin more effective improving insulin resistance. Insulin resistance can result in weight gain.
- **Acceptability of nuts:** dietary trials suggest eating a small serve of nuts more frequently is better accepted with greater compliance. The recommended serve of 30 grams a day is easily achieved and more enjoyable.

The effects of whole seeds on body weight has not been researched extensively but we could assume since they are high in protein, healthy fat and fibre they would contribute to a diet that increases feelings of satiety which would help control appetite.

Nuts, seeds and allergy

All tree nuts, peanuts and seeds have the potential to cause acute allergic reactions particularly in young children. Acute allergic reactions can be life-threatening. Unlike many other allergies where children seem to grow out of it, peanut allergies tend to persist into adulthood.

There is no cure for allergies, so to manage nut and seed allergies, nuts, seeds and foods containing nuts and seeds must be avoided until medically supervised food challenges are undertaken to find out which nuts you may be allergic to. It is important for people with nut and seed allergies to read the label of products to check nuts and seeds are not present and beware of products stating ‘may contain traces of nuts and/or seeds.’

‘Cross-contamination’ can occur during manufacturing of products when products without nuts and seeds are made in the same place as products with nuts and seeds. Food manufacturers are now using VITAL – a new system to help quantify the real risk of cross contamination, to help improve packet labelling and reduce consumer confusion.

Pregnant and breastfeeding women do not need to avoid eating nuts and seeds for fear of causing an allergic reaction in their babies. Only women who are allergic to nuts and seeds should eating them.

It is now recommended by the Australian Infant Feedings Guidelines that nuts and seeds should be introduced to infants at the appropriate time around six months of age as with any other foods. When introducing nuts and seeds to your infant in the form of butters or pastes, to prevent choking. You can give whole nuts your child after age of three years.

Recommended nut intake

Research has shed new light on the role of nuts in protecting us against heart disease, diabetes and weight management.

The Australian Dietary Guidelines recommends one serving of nuts is approximately 30g or one third of a cup. Research suggests the recommended intake is a 30g handful () of a variety of nuts daily.

30g of nuts equals approximately:

- 30 almonds
- 10 Brazil nuts
- 15 cashews
- 4 chestnuts
- 20 hazelnuts
- 15 macadamias
- 15 pecans
- 2 tablespoons pine nuts
- 30 pistachio kernels out of shell
- 10 whole walnuts or 20 walnut halves
- a handful of mixed nuts
- about two of each nut type not including chestnuts

The Australian Dietary Guidelines also recommend the serving size of seeds is 30g.

Whole nuts are not suitable for children under the age of three because they may cause choking if they are not chewed well. However, nut and seed spreads or paste, such as peanut or almond butter, or nut and seed oils can be included in young children's diet from six months of age.

Including nuts and seeds in your diet

Instead of eating a biscuit or piece of cake as a snack, try having a handful of raw or dry roasted nuts. Combining nuts and seeds with low-energy dense foods (such as vegetables) in meals is a good way to make vegetable based meals more appealing – for example, in Asian-style dishes or added to a salad.

Vegetarians, vegans or people who avoid animal foods should eat nuts, seeds and legumes regularly, because they are a good substitute for animal meats, fish and eggs (as they contain protein, fat, iron, zinc and niacin). More than 30g of nuts and seeds a day may be needed to ensure adequate protein. To help boost the non haem iron absorption from nuts and seeds eat them with vitamin C rich foods and beverages such as tomato, capsicum, orange and citrus juices.

There is no need to soak nuts (or "activate" them) unless you prefer the flavour and texture of soaked nuts. Some believe soaking nuts helps reduce the phytate content of nuts but no research has been done to show this in nuts. Phytates do bind to minerals reducing their absorption but phytates themselves have antioxidant and anti-inflammatory properties. In western countries eating a balanced diet means you will consume a wider variety of nutrients..

Where to get help

- Your doctor
- Dietitians Association of Australia Tel. 1800 812 942 or www.daa.asn.au

Things to remember

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