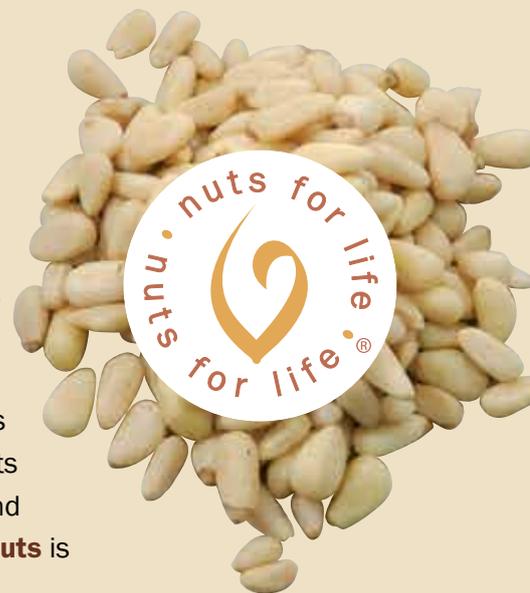


Pine nuts

Pine nuts are a traditional food in many cultures – in Europe they are added to savoury foods as well as pastries and biscuits, while Central America and southern parts of the United States they are roasted and used to make **pine nut** coffee. Probably best known in Australia as a traditional ingredient in pesto, **pine nuts** are the seeds from pine trees. Just like fruit, vegetables and other nuts, **pine nuts** are packed with a wide range of vitamins, minerals, antioxidants and phytochemicals beneficial to health and wellbeing. Enjoying a handful of nuts (30g) regularly as part of a healthy diet may reduce your risk of heart disease and type 2 diabetes and can help with weight management.¹⁻⁵ A 30g serve of **pine nuts** is equivalent to about two tablespoons of nuts. Have you had yours today?



Nutrition and health benefits of pine nuts

Not only do pine nuts add a crunchy texture to meals but pine nuts are a worthwhile addition to your diet for these nutrition and health reasons too:

- **A rich source of healthy fats** – pine nuts contain mostly healthy polyunsaturated fats (57% of total fat), but are also a source of monounsaturated fats (33% of total fat) and a low proportion of saturated fat (6% of total fat).⁶
- **Contains natural plant sterols**⁶ – pine nuts contain around 236mg plant sterols per 100g.⁶ About 2–3g of plant

sterols a day can help to lower blood cholesterol levels by around 10% by reducing cholesterol re-absorption in the intestine.¹²

- **Improves satiety** – research has shown that eating pine nut oil can increase levels of appetite-regulating hormones and reduce appetite sensation for up to 4 hours after a meal.^{8,9} Thirty minutes after a meal containing 3g of polyunsaturated fat derived from pine nuts, overweight women reported almost a 30% reduction in their desire to eat and a 36% reduction in desire for food in the future.^{8,9} Another study found that 2g of pine nut oil given 30 minutes before a buffet lunch reduced the amount eaten by the participants by 9% compared to an olive oil control group.¹⁰
- **Helps with weight management** – although high in fat, research has found that eating nuts does not lead to weight gain and in fact can help with weight management. A number of studies have shown a trend towards a lower body mass index (BMI) in those who eat more nuts.¹⁻⁴ With their proven effect on satiety, pine nuts may be particularly suited to a weight management diet.^{8,9}
- **Reduces heart disease risk** – eating a handful of nuts, including pine nuts, most days may reduce the risk of heart disease by 30–50%.¹⁻⁴ This can be attributed to their content of healthy fats, dietary fibre, plant sterols, arginine and antioxidant vitamins and minerals such as vitamin E (around 4mg per 30g or 40% RDI for **vitamin E – a rich source**)⁶

- **An excellent source of manganese** – a trace mineral in the diet, important for bone formation and the metabolism of protein, fat and carbohydrate. Manganese is also required for several antioxidant enzyme systems. A 30g serve of pine nuts provides around 40% of the adequate intake of this trace mineral.^{6,11}
- **A source of niacin** – a handful of pine nuts provides around 13% of daily requirements of niacin.⁶ This water soluble B vitamin plays a role in many cellular processes in our body, but is particularly important for the nervous system and the production of energy from food.¹¹
- **A source of plant iron and zinc**⁶ – making them a particularly good choice for vegetarians. A 30g serve provides around 10% of the RDI each for iron and zinc.⁶ Improve the absorption of plant irons from pine nuts by eating them with vitamin C rich foods such as tomatoes, capsicum, avocados, citrus fruit and juices.

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Nutrient content of natural pine nuts⁶

Nutrient	Per 100g
Energy (kJ)	2925
Protein (g)	13.0
Fat, total (g)	70.0
Fat, saturated (g)	4.2
Fat, monounsaturated (g)	23.0
Fat, polyunsaturated (g)	39.8
Carbohydrate, total (g)	4.5
Carbohydrate, sugars (g)	3.4
Dietary fibre (g)	5.1
Sodium (mg)	3.0
Potassium (mg)	600
Iron (mg)	4.1
Zinc (mg)	5.3
Vitamin E (mg)	12.9
Niacin (mg)	4.3
Manganese (mg)	6.9
Plant sterols (mg)	236
Arginine (g)	2.4
Total polyphenols (mg GAE) ¹⁵	68

For further information on the nutritional benefits of nuts and for recipes visit www.nutsforlife.com.au

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Go Nuts for Life.
Go Nuts for Health.



Pine nuts



- **A source of plant protein** – particularly the protein building block arginine.⁶ Pine nuts contain 4g protein and 0.72g arginine per 30g serve. The amino acid arginine is converted to nitric oxide in the body, which causes blood vessels to dilate and remain elastic. Hardening of the arteries and blood clotting can lead to heart disease.¹³

Pine Mouth Syndrome

Some people can have a bitter after taste in the mouth starting 24–48 hours after eating certain pine nuts and lasting for up to 2 weeks.¹⁴ While not harmful it has been discovered that there is no difference in the quality or nutritional composition of these pine nuts. It is possible it is caused by a variety of pine nut *Pinus armandii* (Chinese white pine). China is isolating this variety of pine so further reports of Pine Mouth Syndrome should be negligible.

Storage tips

To keep nuts in the best condition, store them in an airtight container in the refrigerator or freezer. Nuts can be refrigerated for up to 4 months and frozen for up to 6 months. Return nuts to room temperature before eating to bring back the nutty taste profile.



8 ways to include pine nuts in your diet

- Blend pine nuts with fresh basil, garlic, olive oil and parmesan to make a traditional pesto to serve with pasta.
- Stuff red or green capsicums with a mixture of brown rice, sautéed onion, freshly chopped herbs, chickpeas and pine nuts.
- Sprinkle lightly toasted pine nuts over your favourite salads.
- Combine fresh breadcrumbs, thyme, pine nuts and egg to make a tasty stuffing for roast chicken.
- Pine nuts go well in rice pilafs and couscous – toast them lightly and add just before serving to keep them crisp.
- Pine nuts make the perfect partner for pasta sauces – try sundried tomato, basil & pine nuts or roasted pumpkin, baby spinach & pine nuts.
- Add pine nuts to meatballs for extra flavour and nutrition.
- Add a mixture of sundried tomato, basil, parmesan cheese and pine nuts to your favourite bread recipe to serve with soup or salad.

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