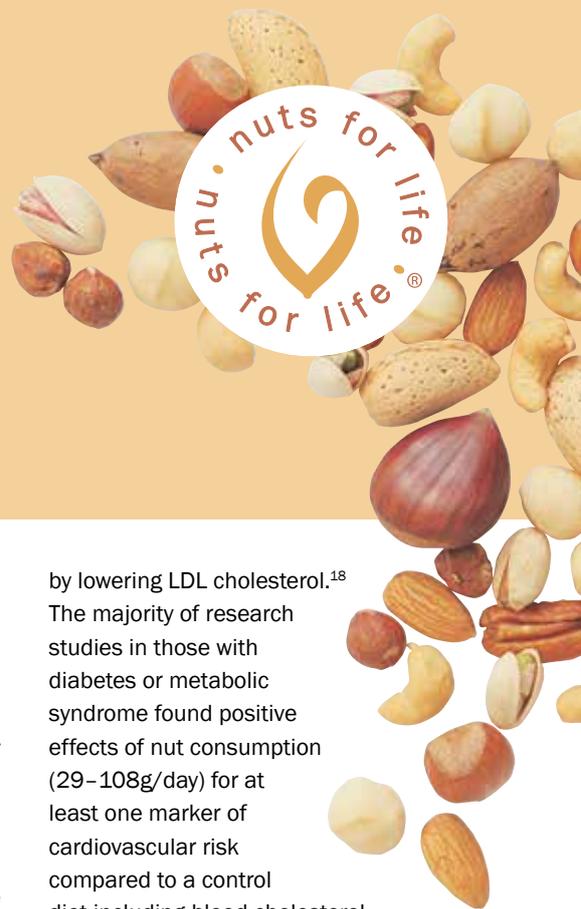


Nuts and diabetes

Around 8% or 1 in 12 Australians aged 18 years and over have either diabetes or pre-diabetes⁴. Tree nuts such as **almonds, Brazil nuts, cashews, chestnuts, hazelnuts, macadamias, pecans, pine nuts, pistachios** and **walnuts** have a wide variety of nutritional benefits which are not only important for those with diabetes, but also those wanting to reduce the risk of developing type 2 diabetes.



Got type 2 diabetes or at risk of it? Here's why you should eat nuts regularly:

Reduce your risk of type 2 diabetes –

Of the five large population studies to look for a link between eating nuts and a reduced risk of diabetes three found this positive link while two found no association at all.²⁻⁶ The largest study of almost 84,000 women found that eating nuts can reduce the risk of developing type 2 diabetes (T2D).² Women who ate a 28g serve of nuts (a handful) five or more times per week had a 27% lower risk of diabetes compared to those who never or rarely ate nuts.² The 4 year PREDIMED Mediterranean Diet study found those following the Med diet enriched with 30g of nuts a day reduced their risk of diabetes by 52% compared to a reduced fat diet and regardless of changes in body weight and physical activity.⁷ A recent meta analysis of 6 studies found a regular 30g handful of nuts reduce the risk of type 2 diabetes by 13%.⁸

Improve blood glucose levels – studies have found that including nuts in meals can reduce the rise in blood glucose levels following the meal.⁹⁻¹¹ High blood

glucose after eating is common in people with diabetes and contributes to diabetes-related complications (involving damage to eyes, kidneys, nerves and blood vessels).¹² In general the majority of research shows consuming nuts, in a healthy diet, will either help improve glycemic control or have a neutral effect.

Prevent heart disease – people with diabetes are more than twice as likely to die from cardiovascular disease than those with normal blood glucose.¹³ Studies have shown that eating a handful of nuts most days can reduce the risk of heart disease by 30–50%.¹⁴ This can be attributed to the healthy fats, dietary fibre, plant sterols, arginine and antioxidant vitamins and minerals (including vitamin E) nuts contain.¹⁵ One study found women with T2D who ate at least five serves of nuts per week reduced their risk of heart disease by almost half.¹⁶

Improve blood fats – people with diabetes are more likely to have abnormal blood fat levels, including higher 'bad' LDL cholesterol and triglycerides, and lower 'good' HDL cholesterol.¹⁷ High blood cholesterol is a risk factor for heart disease. Eating nuts regularly can improve blood fats, particularly

by lowering LDL cholesterol.¹⁸

The majority of research studies in those with diabetes or metabolic syndrome found positive effects of nut consumption (29–108g/day) for at least one marker of cardiovascular risk compared to a control diet including blood cholesterol and triglycerides, blood pressure, lipid oxidation, inflammatory markers and endothelial function.

Lower blood pressure risk (BP) – an important Australian study of people with diabetes found that compared to those with normal blood glucose levels, people with diabetes were more than three times as likely to suffer from high BP.¹⁷ In another study young adults who were followed for 15 years found that those who ate the most nuts reduced their risk of developing high blood pressure by 15%.¹⁹

Control your weight – carrying extra weight is a major risk factor for T2D and can make managing your diabetes more difficult. A major Australian study also found that almost three times as many people with diabetes were obese compared to those with normal glucose levels.¹⁷

continued next page

Tips for including nuts in your diet

To obtain maximum benefits from nuts, enjoy them every day. Try the following for variety in your diabetes-friendly, heart-healthy eating plan!

- Unsalted mixed nuts make a portable healthy snack that won't raise blood glucose levels like most snack foods do.
- Toss almonds or cashews through your favourite stir fry.
- Top fish with a mixture of crushed hazelnuts or Brazil nuts and fresh herbs.
- Puree roasted hazelnuts or macadamias as a tasty alternative to peanut butter.
- Toss pistachios, pecans or walnuts in a salad.
- Combine pine nuts or pistachios with fresh basil, garlic and olive oil to make a tasty pesto to use with pasta.
- Crush almonds, macadamias or walnuts over fresh fruit and yoghurt for dessert.
- Replace potatoes with roasted chestnuts or stuff chicken with chestnut stuffing.

For further information on nuts and health refer to www.nutsforlife.com.au follow us @nutsforlife or like us at [facebook.com/nuts4life](https://www.facebook.com/nuts4life)

Nuts for Life has been funded by Horticulture Innovation Australia Limited with co-investment from members of the Australian Tree Nut Industry and funds from the Australian Government.

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Go Nuts for Life.
Go Nuts for Health.



Nuts and diabetes



The good news? Eating nuts may help with weight management. A meta analysis of 33 studies has shown that diets enriched with nuts (30–100g/day) do not increase body weight, body mass index, or waist circumference in controlled clinical trials.²⁰ Studies have found that incorporating nuts (28–108g/day) into the diet either leads to no weight gain or a small weight loss.^{21–23}

Why are nuts so good for type 2 diabetes?

- **Low glycemic index (GI)** – while not a high carbohydrate food, nuts have a GI-lowering effect – they reduce the overall GI of a meal.^{9–11} A low-GI diet has been shown to reduce the risk of T2D and help in its management.²⁴
- **Rich source of healthy fats** – nuts contain mostly healthy monounsaturated and polyunsaturated fats, plus are low in saturated fat and trans fats.²⁵ Replacing saturated and trans fats with unsaturated fats improves insulin sensitivity and reduces T2D risk.^{26–28}
- **A good source of fibre** – diets high in fibre may help manage diabetes and weight and can reduce the risk of developing type 2 diabetes.²⁹
- **A natural source of plant sterols** which can help to lower cholesterol levels by reducing cholesterol reabsorption in the intestine.^{30, 31}
- **High in potassium and low in sodium**, providing benefits for blood pressure and heart health.²⁹
- **A good source of arginine** – this amino acid helps keep blood vessels elastic and helps prevent blood clotting.³² Hardening of the arteries and blood clotting can lead to heart disease.
- **A rich source of magnesium** – a higher intake of magnesium is linked with a reduced risk of type 2 diabetes.^{33, 34}
- **High in vitamin E** – an essential vitamin and antioxidant which can help protect against heart disease. Some studies suggest that vitamin E may protect against diabetes complications such as nerve, eye and kidney disease.^{35–37}

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