

The official nutrition report of the Victorian Cherry Association

By Glenn Cardwell, Advanced Accredited Practising Dietitian & Accredited Nutritionist, Nutrition Impact P/L

Sweet cherries are rich in flavour and a wonderful source of fibre, potassium and vitamin C, which are essential for good health. However, cherries really begin to shine with their antioxidant content. Cherries are abundant in a particular group of antioxidants called anthocyanins, which are responsible for the red/purple colour of cherries.

Antioxidant compounds in foods are absorbed and boost the antioxidant capacity of the blood, potentially lowering the risk of chronic disease such as heart disease and some cancers (Ferretti 2010).

The sweetness of cherries comes from the natural sugars present, yet they still only have 250 kilojoules (60 calories) in a 100g serve, making them the perfect summer snack. Like most fruits cherries have virtually no fat and are free of cholesterol. In addition, the fibre in cherries is perfect for helping to keep our insides healthy and regular. One serve of cherries (100g) provides 1.5g of fibre, which is about 6% of our daily needs.

Nutrients in One Serve of Cherries

NUTRIENT	AMOUNT
Kilojoules	250
Calories	60
Protein g	0.8
Fat g	0.2
Cholesterol mg	0
Carbohydrate g	12.9
Fibre g	1.5

One serve = 100g
g = grams
mg = milligrams

Vitamin C

One delicious serve (100g) of cherries provides over 40% of our daily needs of vitamin C. We have heard a lot about vitamin C over the years. Yes, it is an antioxidant that helps to protect our body cells from damage. And yes, vitamin C does help our body to absorb iron from the diet, which is particularly important for young women. However many of us may not know that vitamin C plays other roles in our health. Vitamin C is necessary to form collagen, which is critical for healthy bones, teeth, and cartilage. Collagen is even part of our arterial walls. Without sufficient vitamin C in our diet, many neurotransmitters and hormones would not be made. So it's clear to see that vitamin C is important to our health and wellbeing.

Vitamins & Minerals in One Serve of Cherries

NUTRIENT	AMOUNT	% OF DAILY NEEDS
Vitamin C mg	19	42
Niacin equivalents mg	0.63	4
Magnesium mg	8	2.5
Calcium mg	22	2.2
Potassium mg	230	6-8
Sodium mg	0	N/A

One serve = 100g
mg = milligram
N/A = Not Applicable
Source: NUTTAB 2010

Potassium & Sodium

Potassium is essential for a steady heartbeat and healthy blood pressure. You may have heard that specific fruits or vegetables are high in potassium. The truth is that all plant foods have potassium, and cherries contribute significant potassium to our diet.

On the other hand, high salt foods can contribute to a high blood pressure. Sadly, many people eat salty snacks and processed foods, and too few fruits and vegetables, putting them at risk of high blood pressure. The beauty of fruits like cherries is that they have next-to-no sodium (salt) and lots of potassium just as nature intended for keeping our blood pressure healthy.

Antioxidants & Bioactive Compounds in Cherries

Cherries are a rich source of antioxidants, and particularly rich in a group of flavonoid antioxidants known as anthocyanins, which increase exponentially as the fruit ripens (Ferretti 2010; González-Gómez 2010; McCune 2011). Antioxidant compounds in foods are absorbed and boost the antioxidant capacity of the blood, potentially lowering the risk of chronic disease such as heart disease and some cancers (Ferretti 2010).

When healthy men and women enjoyed 45 cherries a day for four weeks their levels of C-Reactive Protein (CRP) were significantly lowered (Kelley 2006). CRP is a marker for inflammation within the body. Another small study by the same research group also found a drop in other indicators of inflammation, prompting the investigators to suggest that there may be long-term benefits to regular cherry consumption (Kelley 2013).

“The significant decrease of markers of inflammation and oxidative stress afforded by cherries may have implications for the management of clinical pathologies associated with high levels of inflammation and oxidative stress and suggests that their consumption may have the potential to reduce cardiovascular or chronic disease in humans.” (Ferretti 2010)

Cherries also contains quercetin, another type of bioflavonoid antioxidant that helps to mop up the free radicals linked to the acceleration of the aging process (McCune 2011). It's best to consume cherries with other fruits and vegetables for us to get all the antioxidants required for good health. No single food can do the job alone.

Inflammatory Conditions

Researcher Melanie Blackhall from the University of Tasmania is currently investigating the effect of eating cherries and the level of inflammation within the body. Many conditions, such as heart disease, increase the levels of inflammation in the body, which in turn accelerates the progression of disease. Any food, or diet, that reduces inflammation has the potential to improve health and wellness.

“Inflammation and the consequences of inflammatory disease are a major health issue for Australia and other Western countries. Anecdotal evidence suggests that consumption of cherries can alleviate issues relating to inflammation such as gout.” (Melanie Blackhall, University of Tasmania, 2016)

Gout is a common inflammatory condition, characterised by high levels of uric acid in the blood, which in turn causes the build-up of sodium urate crystals in the joints. For many people, their first experience of gout is intense pain in the joint of the big toe. Healthy eating, a healthy weight, and avoiding alcohol is the usual advice for people with gout.

The good news is that cherries may indeed reduce the risk of an attack of gout (Zhang 2012; MacFarlane 2014). A study of 633 people with gout found that cherry eaters had a 35% lower risk of an attack compared to people who didn't eat cherries. The fact that cherries appear to lower uric acid levels in the blood (Jacob 2003), combined with their anthocyanins content (Seeram 2001), may be ideal in avoiding gout attacks.

The Arthritis Foundation in the US has also recently written about the potential of cherries to combat both gout and osteoarthritis (<http://blog.arthritis.org/living-with-arthritis/arthritis-diet-cherries/>). Overall the news looks good regarding cherries and their positive effect on the health of our joints.

Brain Health

The procyanidin members of the anthocyanin flavonoid family found in cherries may also help keep dementia at bay as we age. These procyanidin compounds reduce beta-amyloid production, the same amyloid proteins that can form the brain plaques, which are implicated in progression of Alzheimers disease (McCune 2011).

Post-exercise Recovery

There has been a great deal of interest in the role that cherries can have in reducing the inflammatory response after exercise, possibly through protecting muscle cell membranes from oxidative damage (Bell 2014). The early research suggests that cherries help in the recovery from endurance exercise. So, this summer add a bowl of cherries to your exercise nutrition recovery program.

You can see that there are many potential health benefits to eating cherries as part of a wholesome and healthy diet. Expect more scientific studies in the near future on how cherries and cherry extracts can help keep disease at bay and enhance our health. Make this summer a healthy summer with cherries in the fruit bowl.

Facts & Myths

Cherries are high in sugar. False.

Cherries, like all sweet fruits, contain sugar. However, don't let this be a concern because:

1. The small amount of natural sugar in cherries keeps good company with fibre, potassium, vitamin C and antioxidants.
2. Cherries have a medium Glycemic Index (GI) so the natural sugar in cherries doesn't make blood sugars spike after consumption.

Let me explain the second point. The Glycemic Index (GI) of food is a measure of the blood sugar (specifically blood glucose) response to a food. Blood glucose levels are measured in the two hours after eating a food to assess their effect. Of course, it is preferable that most foods we eat have a low or modest influence on blood glucose. Cherries are one of those foods. The GI of cherries is 63, which is medium, and that means that a serve of cherries easily fits into the diet of anyone, including those with diabetes.

Cherries are rich in antioxidants. True.

Cherries contain a group of antioxidants called anthocyanins, which are thought to relieve gout, arthritis and pain from fibromyalgia, a condition with aches and pains throughout the body. Cherries also contain vitamin C, fibre and carotenoids, which can inhibit several types of cancer. As with all foods, moderation is key, while including other wholesome fresh produce in our diet to get the maximum health benefits.

Cherries can be good for gout. True.

The evidence is that all fruits and vegetables are great for general health and avoiding gout. The research on cherries indicates they are very useful in the anti-gout armoury as they lower the uric acid levels that trigger gout. Of course, it is wise to be a healthy weight, eat plenty of plant foods and limit our alcohol intake to put the odds in our favour.

Social Media Messages

Cherries have plenty of potassium and no sodium, a combination that helps to keep our blood pressure healthy.

As you can probably guess, cherries are a wonderful source of vitamin C. One serve of cherries (100g) provides over 40% of our daily needs of vitamin C.

The vitamin C in cherries helps us to absorb iron from our diet. This is especially important for young women.

Cherries are rich in antioxidants, especially those called anthocyanins, helping us to avoid chronic disease.

One serve of cherries (100g) provides only 250 kilojoules, or 60 Calories, without fat or cholesterol.

Cherries have fibre, and we know that fibre is good for our insides. Fibre is used by the healthy bacteria in our large bowel to produce compounds that help protect us from bowel cancer.

Cherries have antioxidant compounds that lower the risk of gout attacks.

Key Points for Cherry Fact Sheet

Cherries have abundant antioxidants and are a rich source of potassium, fibre and vitamin C. Here is a quick guide on the benefits to nutrition and health offered by cherries.

Antioxidants & Bioactive Compounds in Cherries

Cherries are rich in antioxidants, such as anthocyanins, which act to lower the levels of inflammation in the body, helping to avoid chronic conditions such as heart disease. Cherries have compounds that work to lower the risk of gout and gout attacks, and seem to have a positive influence on brain health and muscle recovery after exercise.

Vitamin C

One serve of cherries (100g) provides over 40% of our daily needs of vitamin C, which acts as an antioxidant and helps in the absorption of iron in our diet.

Potassium & Sodium

In Australia over 4 million adults have hypertension (high blood pressure), increasing their chances of getting heart disease, kidney disease and stroke (AIHW 2016). There is broad agreement that a poor diet and physical inactivity contribute to hypertension. The good news is that eating plenty of fruits and vegetables, while minimizing salty snacks and high salt processed foods, makes it a lot easier to have a healthy blood pressure. Of course, cherries are part of the solution with their abundant potassium and zero salt content, making them the perfect summer snack.

Fibre

Cherries contain fibre, which is well known for keeping our bowels regular.

10 Very Good Reasons to Eat Cherries

1. Cherries look luscious, taste delicious and are truly versatile (superb fresh or cooked and tasty in both savoury and sweet dishes). They are also a convenient healthy snack.
2. Cherries are low in kilojoules, without fat or cholesterol. That makes them a must for any healthy diet, including a weight loss diet.
3. Cherries are a good source of potassium, while having zero sodium, making them ideal for keeping our blood pressure healthy.
4. Published research strongly suggests that cherry eaters have a lower risk of gout and gout attacks.
5. One serve of cherries (100g) provides over 40% of our daily needs of vitamin C.
6. Cherries are rich in antioxidants, such as those known as anthocyanins. Anthocyanins are linked to lower levels of inflammation, which in turn, helps to keep us healthy through life.
7. Along with good rehydration and nutrition, cherries seem to help the body recover from exercise-induced muscle damage.
8. Cherries have a medium GI, meaning they have only a modest effect on blood glucose (sugar) levels. That makes a serve of cherries an ideal snack for everyone, including those with diabetes.
9. Cherries provide fibre, keeping us healthy on the inside.
10. All this makes cherries great value for money!

Author

Glenn Cardwell is an Advanced Accredited Practising Dietitian with over 35 years experience working with the food industry and fresh produce.

Glenn Cardwell
Advanced Accredited Practising Dietitian
Accredited Nutritionist
Nutrition Impact P/L

Ph: 08 9367 3556

M: 0413 806 406

E: glenn@glenncardwell.com

W: www.glenncardwell.com

12 October 2016

References:

- Australian Institute of Health and Welfare 2016. Australia's health 2016. Australia's health series no. 15. Cat. no. AUS 199. Canberra: AIHW.
- Bell, P.G., McHugh, M.P., Stevenson, E., Howatson, G. (2014) The role of cherries in exercise and health. *Scandinavian Journal of Medicine and Science in Sports*, 24, 477-490
- Ferretti, G., Bacchetti, T., Belleggia, A., Neri, D. (2010) Cherry antioxidants: from farm to table. *Molecules* 15, 6993-7005
- González-Gómez, D., Lozano, M., Fernández-León, M.F., Bernalte, M.J., Ayuso, M.C., Rodríguez, A.B. (2010). Sweet cherry phytochemicals: Identification and characterization by HPLC-DAD/ESI-MS in six sweet-cherry cultivars grown in Valle del Jerte (Spain). *Journal of Food Composition and Analysis* 23, 533-539
- Kelley, D.S., Rasooly, R., Reddy, A., Jacob, R.A., Kader, A.A., Mackey, B.E. (2006) Consumption of Bing sweet cherries lowers circulating concentrations of inflammation markers in healthy men and women. *The Journal of Nutrition* 136, 981-986
- Kelley, D.S., Adkins, Y., Reddy, A., Woodhouse, L.R., Mackey, B.E., Erickson, K.L. (2013) Sweet Bing cherries lower circulating concentrations of markers for chronic inflammatory diseases in healthy humans. *The Journal of Nutrition* 143, 340-344
- Jacob, R.A., Spinozzi, G.M., Simon, V.A., Kelley, D.S., Prior, R.L., Hess-Pierce, B., Kader, A.A. (2003). Consumption of cherries lowers plasma urate in healthy women. *The Journal of Nutrition* 133, 1826-1829
- MacFarlane, L.A., Kim, S.C. (2014) Gout: a review of non-modifiable and modifiable risk factors. *Rheumatic Diseases Clinics of North America* 40, 581-604
- McCune, L.M., Kubota, C., Stendell-Hollis, N.R., Thomson, C.A. (2011). Cherries and health: a review. *Critical Reviews in Food Science and Nutrition*, 51, 1-12
- Rabello de Lima, L.C., Assumpção, C., Prestes, J., Denadai, B., S. (2015). Consumption of cherries as a strategy to attenuate exercise-induced muscle damage and inflammation in humans. *Nutricion Hospitalaria* 32, 1885-1893
- Seeram, N.P., Momin, R.A., Nair, M.G., Bourquin, L.D. (2001) Cyclooxygenase inhibitory and antioxidant cyaniding glycosides in cherries and berries. *Phytomedicine*, 8 (5), 362-369
- Zhang, Y., Neogi, T., Chen, C., Chaisson, C., Hunter, D., Choi, H.K. (2012). Cherry consumption and the risk of recurrent gout attacks. *Arthritis & Rheumatology*, 64 (12), 4004-4011