



Spearheading Health with Asparagus

The official nutrition report of the Australian Asparagus Council

Asparagus has abundant nutrition packed into every spear, including a range of B group vitamins, vitamin C and potassium. Add to that the emerging research that asparagus has bio-active compounds like antioxidants that are helping protect the body against future disease and you have a pretty impressive vegetable.

With so few kilojoules asparagus happily passes on its good nutrition without affecting our weight. Asparagus has no cholesterol, virtually no fat and only 67kjs (16 calories) in a serve. It is well known that the fibre in vegetables such as asparagus is exceptionally helpful in keeping our insides healthy and regular. One serve of asparagus provides 1.7g of fibre, about 7% of our daily needs.

Vitamins & Minerals in Asparagus

Asparagus is a wonderful source of B vitamins, vitamin C and potassium, which are all nutrients essential for good health.

B Vitamins

B group vitamins help the body convert fuel from the diet, such as carbohydrate, into energy. With sufficient B vitamins it is easier for us to be active and get the best out of each day. In addition, several of the B vitamins, like thiamin, riboflavin, niacin and biotin, help enzymes do their job in the normal metabolism of the body. Vitamin B6 helps the enzymes involved in the metabolism of amino acids from protein. Folate is important in the creation of new cells in the body. As you can see from the table to the right, asparagus has plentiful B vitamins.

Folate

One B vitamin that has generated a lot of interest is folate because of its powerful health benefits. For example, adequate folate during pregnancy helps Mum deliver a healthy baby (too little folate is linked to spinal deformities in babies). Less well known is that adequate folate is also associated with a lower risk of heart disease and stroke because folate helps keep the homocysteine in blood at a healthy level, thus reducing the risk of artery blockage (atherosclerosis). High levels of blood homocysteine causes atherosclerosis.

Vitamin C

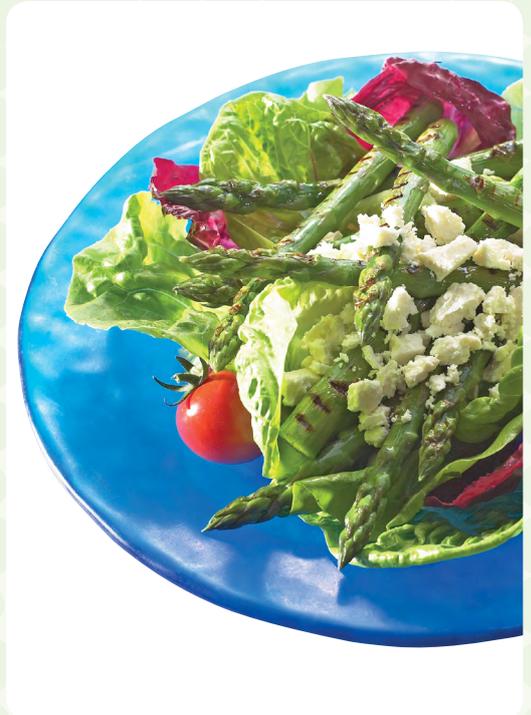
One serve of asparagus provides a quarter of our daily needs of vitamin C. You may have heard that vitamin C acts as an antioxidant in the body to help protect cells from damage. You may also have heard that vitamin C helps the body absorb iron in the diet. Both of these facts are true, yet vitamin C is involved in other vital aspects of our health. Vitamin C is needed to form collagen, which is crucial in forming healthy bones, teeth and even arterial walls. Without vitamin C, many neurotransmitters and hormones would not be made. It is one really important vitamin. When you think of vitamin C, don't just think fruit, think asparagus too.

Potassium & Sodium

Potassium is essential for a steady heartbeat and healthy blood pressure. When people eat lots of salty snacks and processed foods, and too few vegies, then the balance gets out of kilter, leading to high blood pressure. Eating less high sodium (salty) foods and more high potassium foods help keeps fluid balance and blood pressure normal. Asparagus has the balance perfect: plenty of potassium and virtually no sodium.

Iron

Iron is a very important mineral for healthy blood. With adequate iron the body can get adequate oxygen to all parts of the body, especially to the muscles during exercise. Although asparagus provides only a modest amount of iron, being high in vitamin C, the body is better able to absorb the iron in asparagus and the rest of the meal.



Vitamins in One Serve of Asparagus

(One serve = 3-4 spears = 75g)

NUTRIENT	AMOUNT	% OF DAILY NEEDS
Thiamin mg	0.11	10
Riboflavin mg	0.09	7.5
Niacin equiv mg	1.05	7
B6 mg	0.09	7
Biotin mcg	3.6	14
Folate mcg	86	22
Vitamin C mg	11	24

mg = milligram, mcg = microgram

As you can see from the table above, one serve of asparagus provides over 10% of our daily needs of thiamine, biotin, folate and vitamin C, making it an excellent source of vitamins.

Minerals in One Serve of Asparagus

(One serve = 3-4 spears = 75g)

NUTRIENT	AMOUNT	% OF DAILY NEEDS
Iron mg	0.75	4-9
Potassium mg	240	7.5
Sodium mg	1.5	N/A

mg = milligram, N/A = Not Applicable

For more information visit asparagus.com.au





Spearheading Health with Asparagus

The official nutrition report of the Australian Asparagus Council

Antioxidants & Bioactive Compounds in Asparagus

Asparagus provides some powerful antioxidants, such as rutin, carotenoids (e.g. beta-carotene), flavonoids, vitamin C, saponins and glutathione.

Rutin reduces oxidative damage and inflammation in the body. Asparagus has sterol saponins that may protect the body against tumours as they inhibit the growth of human cancer cells in a laboratory setting. The major saponin present in the asparagus is protodioscin. The tip of the spear has the highest amount of rutin, while the bottom of the spear has higher levels of protodioscin. So, you can see that asparagus has goodness through its entire length!

Asparagus has one of the highest glutathione levels of any vegetable and far more than common fruits. Glutathione plays a big role in the antioxidant systems in every body cell and is part of the cells defence against oxidative stress.

Although we cannot promise that asparagus will stop us from getting cancer, it will, in a diet of plentiful fruit and vegetables, really help in keeping our bodies healthy and at a lower risk of cancer.

Seven Very Good Reasons to Eat Asparagus

- 1 Asparagus has a great flavour and is very affordable.
- 2 Asparagus is low in kilojoules, without fat or cholesterol, while providing fibre. That makes it a must for any diet, including a weight loss diet.
- 3 Asparagus provides the essential B group vitamins thiamin, riboflavin, niacin, B6 and biotin.
- 4 Asparagus is a great source of folate, with one serve giving us over 20 percent of our daily needs. Folate is important for expectant mothers and for reducing heart disease risk.
- 5 It's not only fruit that gives us vitamin C. One serve of asparagus provides about 25 percent of our daily needs of vitamin C.
- 6 Asparagus has a brilliant range of bio-active compounds, such as antioxidants like rutin and beta-carotene. The research strongly suggests that the bioactive compounds in asparagus are keeping us healthy, well into old age.
- 7 Asparagus has potassium and the compound nicotianamine to help keep our blood pressure healthy.

Author

Glenn Cardwell, Accredited Practising Dietitian, Accredited Nutritionist, Nutrition Impact P/L, www.glenncardwell.com

References:

1. Bor JY, Chen HY, Yen GC. Evaluation of antioxidant activity and inhibitory effect on nitric oxide production of some common vegetables. *Journal of Agricultural & Food Chemistry* 2006; 54: 1680-1686
2. Chrubasik S, Black A. Asparagus P® cannot compete with first-line diuretics in lowering the blood pressure in treatment-requiring antihypertensives. *Phytotherapy Research* 2009 DOI: 10.1002/ptr.2787
3. Fuentes-Alventosa JM, Jaramillo S, Rodríguez-Gutiérrez G, Cermeño P, Espejo JA, Jiménez-Araujo A, Guillén-Bejarano R, Fernández-Bolaños J, Rodríguez-Arcos R. Flavonoid profile of green asparagus genotypes. *Journal of Agricultural & Food Chemistry* 2008; 56: 6977-6984
4. Mitchell SC. Food idiosyncrasies: beetroot and asparagus. *Drug Metabolism & Disposition* 2001; 29 (4): 539-543
5. Shao Y, Chin CK, Ho CT, Ma W, Garrison SA, Huang MT. Anti-tumor activity of the crude saponins obtained from asparagus. *Cancer Letters* 1996; 104: 31-36
6. Vinson JA, Hao Y, Su X, Zubik L. Phenol antioxidant quantity and quality in foods: vegetables. *Journal of Agricultural & Food Chemistry* 1998; 46: 3630-3634
7. Wang M, Tadmor Y, Wu QL, Chin CK, Garrison SA, Simon JE. Quantification of protodioscin and rutin in asparagus shoots by LC/MS and HPLC methods. *Journal of Agricultural & Food Chemistry* 2003; 51: 6132-6136

Summary of Nutrients in One Serve of Asparagus (One serve = 3-4 spears = 75g)

NUTRIENT	AMOUNT	% OF DAILY NEEDS
Kilojoules	67	N/A
Calories	16	N/A
Protein g	1.9	N/A
Fat g	0.1	N/A
Cholesterol mg	0	N/A
Carbohydrate g	1.1	N/A
Fibre g	1.7	7
Thiamin mg	0.11	10
Riboflavin mg	0.09	7.5
Niacin equiv mg	1.05	7
B6 mg	0.09	7
Biotin mcg	3.6	14
Folate mcg	86	22
Vitamin C mg	11	24
Iron mg	0.75	4-9
Potassium mg	240	7.5
Sodium mg	1.5	N/A

N/A = Not Applicable, g = gram; mg = milligram; mcg = microgram



For more information visit asparagus.com.au

facebook.com/asparaguscouncil

instagram.com/aussieasparagus