Boost your health by eating leeks – Britain's winter vegetable

Leeks are allium vegetables that are closely related to onions, garlic, shallots, and spring onions. With a milder flavour they are incredibly versatile in cooking and add a subtle yet punchy flavour to many dishes. Not only are leeks packed with essential vitamins and minerals they are rich in specific health promoting antioxidants and particular types of fibre known to promote a healthy gut. Here are some great reasons to eat more leeks.

Immune Boosting
Worried about the winter sniffles, coughs and colds? Then try making up a warming bowl of leek, tofu and noodle soup. Like onions and garlic, leeks contain sulphur containing compounds such as allicin. Allicin is not only anti-bacterial, anti-viral and anti-fungal making it perfect for the winter months, but research has revealed that allicin breaks down in our body to produce sulphenic acid, a compound that helps protect our body from damaging free radicals in our body, reducing our risk of disease. Leeks are also rich in vitamin C and contain iron which are also important for immune function.

Heart Health
Also present in leeks are impressive concentrations of antioxidant polyphenols. These polyphenols play a direct role in protecting our blood vessels and blood cells from oxidative damage. One of these is kaempferol, a natural flavonol that's also found in broccoli, kale, and cabbage. Various studies suggest it reduces the risk of developing chronic diseases including cancer. It also appears to support cardiovascular health by protecting our blood vessel linings and lowering inflammation. Leeks are rich in a number of heart healthy vitamins too including folate and B6 which help reduce homocysteine in the blood; elevated levels of this amino acid are associated with a greater risk of heart disease, blood clots and strokes.

Bone Health
Like leafy green vegetables leeks provide vitamin K, calcium, magnesium and manganese which are all important bone building nutrients. One cup of raw leeks (89g) provides around 50% of our daily requirements of vitamin K. Leeks are rich in vitamin C which is essential for the production of collagen - the main protein in bone and vital for healthy skin.

How Leeks boost our Gut Health
We all know how important fibre is for our health. It can help with weight management, digestive health and regular bowel movements. But did you know there's a type of fibre found in leeks called inulin that can boost the beneficial bacteria in our gut and support metabolic health as well? Inulin is a prebiotic and leeks are one of the best natural sources of inulin containing up to 16% inulin fibre.

What are Prebiotics?
Prebiotics are types of dietary fibre that feed the friendly bacteria in your gut. Prebiotics are also called oligosaccharides because they are actually long-chain, natural 'sugars,'. This composition makes inulin a non-digestible fibre, which allows it to pass through our digestive tract unabsorbed. During this process, inulin naturally ferments and feeds the

healthy bacteria that populate our gut. These beneficial bacteria are needed for various metabolic functions including improving absorption of nutrients. They also produce an array of nutrients including short chain fatty acids that are vital for a healthy digestive system.

There are a number of key benefits of inulin:

Reduces Constipation: As inulin is a soluble fibre it absorbs water more easily than other carbohydrates and helps form stool that can be easily passed. This makes it ideal for naturally relieving constipation.

Protection from Disease: A 2005 report published in the British Journal of Nutrition highlighted that inulin and other prebiotic fibres can help improve gut health which has very far-reaching benefits: improved immune functioning, protection from heart disease, diabetes, colon cancer and inflammatory bowel diseases, better weight management, improved nutrient absorption, and maintaining a healthy intestinal barrier.

Helps Curb Appetite: If you're looking to lose weight it's important to eat plenty of fibre which can help you to feel more satisfied and prevent blood sugar fluctuations. When combined with water, inulin bulks up and forms a gel-like substance that expands in the digestive tract. This can help decrease appetite and cravings — potentially helping with weight loss. So eating leeks can help you feel fuller for longer meaning less hunger pangs and cravings.

Boosts Heart Health and Healthy Blood Sugar Levels. Research shows that soluble fibre may help lower blood cholesterol and stabilise blood sugar levels. Soluble fibres in the diet can help lower LDL (“bad”) blood cholesterol by interfering with the absorption of dietary cholesterol and reduce the risk for hypertension, heart disease and metabolic syndrome.

Boost mood. Prebiotics offer remarkable benefits when we consume them and may now help keep us happy. This is because they cause changes to the gut microbiome which are now known to affect emotions, mood and cognition. Exactly how our gut bacteria boost mood is still not clear. Research suggests it may be because having a healthier gut bacterium lowers inflammation in the body or because the bacteria increases levels of tryptophan, an amino acid involved in the production of the mood boosting neurotransmitter serotonin.

References

Heap et al Eight-day consumption of inulin added to a yogurt breakfast lowers postprandial appetite ratings but not energy intakes in young healthy females: a randomised controlled trial. Br J Nutr. 2016 Jan 28;115(2):262-70. doi: 10.1017/S0007114515004432. Epub 2015 Dec 1.
Leek nutritional breakdown http://nutritiondata.self.com/facts/vegetables-and-vegetable-products/2470/2

Macfarlane et al Bacterial metabolism and health-related effects of galacto-oligosaccharides and other prebiotics. J Appl Microbiol. 2008 Feb;104(2):305-44. doi: 10.1111/j.1365-2672.2007.03520.x. http://tinyurl.com/y9mqzkhv

Mayer EA, Knight R, Mazmanian SK, Cryan JF, Tillisch K Gut microbes and the brain: paradigm shift in neuroscience. J Neurosci. 2014 Nov 12;34(46):15490-6. PMID: 25392516

Moreno Franco et al Soluble and insoluble dietary fibre intake and risk factors for metabolic syndrome and cardiovascular disease in middle-aged adults: the AWHS cohort. Nutr Hosp. 2014 Dec 1;30(6):1279-88. doi: 10.3305/nh.2014.30.6.7778.

Muir et al Fructan and Free Fructose Content of Common Australian Vegetables and Fruit J. Agric. Food Chem., 2007, 55 (16), pp 6619–6627 http://tinyurl.com/ycepbrj3

Roberfroid M Introducing inulin-type fructans. Br J Nutr. 2005 Apr;93 Suppl 1:S13-25.

Savignac HM, Corona G, Mills H, Chen L, Spencer JPE, Tzortzis G, Burnet PWJ. Prebiotic feeding elevates central brain derived neurotrophic factor, N-methyl-d-aspartate receptor subunits and d-serine.Neurochem Int. 2013 December; 63(8): 756–764. PMID: 3858812

Slavin J Fiber and prebiotics: mechanisms and health benefits. Nutrients. 2013 Apr 22;5(4):1417-35. doi: 10.3390/nu5041417. http://tinyurl.com/yad7bbde

Steenbergen et al A randomized controlled trial to test the effect of multispecies probiotics on cognitive reactivity to sad mood Brain, Behavior, and Immunity Volume 48, August 2015, Pages 258-264