

help: cholesterol

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help: cholesterol FAQs

What are cereal beta-glucans?

Beta-glucans are soluble fibres found in cereal such as barley and oats. Due to their structure they have been found to have a number of health benefits and are one of the reasons why products containing barley or oats are considered healthy.

How do they work?

When cereal beta-glucans are taken in by the body they essentially form a barrier in the stomach which slows down the absorption of fat and sugars produced by the action of bile and enzymes on our ingested food.

As the contents of the stomach are removed in line with the standard digestive cycle, the body's loss of bile (which is largely made up of cholesterol) during this process means that more must be produced.

As a result the body's homeostatic mechanisms produce more bile which results in cholesterol from the blood being taken and therefore causes a reduction in blood cholesterol.

What scientific evidence exists to prove their effectiveness?

In human clinical trials barley beta-glucan gives on average 10-14% reductions in total and LDL - cholesterol over a dose range of 3-8g per day. Higher intakes of beta-glucan (6-8g/day) lead to greater improvements in total cholesterol levels, with over 20% reductions in LDL-cholesterol. Barley Beta Glucans have been approved by EFSA in the UK to make a cholesterol maintenance claim.

At high doses, beta-glucan can be as effective as some cholesterol-lowering medications. In a 1 year clinical trial, adults consuming 16g of beta-glucan per day, as part of a diet containing a range of cholesterol-lowering foods, had cholesterol level reductions that were as good as those achieved by statin drug treatment.

Are cereal beta-glucans better than plant sterols?

The recommended daily intake for plant sterols is 3 grams per day. For beta-glucan the recommended intake is 0.75 grams per serving. At recommended intakes, the cholesterol-lowering effects by plant sterols and beta-glucans are comparable, with barley beta-glucan trials showing LDL- cholesterol reductions of approximately 6% (10 mg/dl).

However, whilst in controlled studies 2-3 grams plant sterols give 10-15% reductions in total and LDL- cholesterol, in 'ad libitum' trials (i.e. when plant sterols are added to the participants' normal diet) reductions of about half these levels are achieved.

Interestingly, some studies have examined the effect of a combination of cholesterol-lowering food components and revealed that hypercholesterolaemic adults on a diet high in beta-glucan, soy protein and plant sterols were able to achieve LDL-cholesterol reductions greater than 20%.

So it's definitely worth adding help: cholesterol to soy yogurt for superior cholesterol lowering benefits.

How many sachets of help: cholesterol do I need to take every day to see a difference?

3g of cereal beta-glucans per day is sufficient to show clinically relevant effect in those suffering from mild hypercholesterolaemia. Each 14g sachet contains 2g of Glucagel which contains 1.5g of Barley beta-glucan, contributing one half of the required daily dose. So you need to take 2 sachets per day.



What ingredients, other than beta glucans, are in [help: cholesterol](#)?

Erythritol which is a sugar substitute naturally occurring in fruits. It has a calorie level of zero.

Does [help: cholesterol](#) contain preservatives?

No. [help: cholesterol](#) is completely preservative free.

How many calories in each sachet?

Only 62 calories per 14g sachet – and 0 calories from sugar.

Can I take [help: cholesterol](#) if I am diabetic or pregnant?

It is always advised to consult your healthcare professional before using any form of dietary supplement if you are pregnant or nursing. However, [help: cholesterol](#) contains no flavourings or sweeteners so is completely safe to consume if you are diabetic.

How soon should I begin to see an improvement in my cholesterol levels?

Taking 2 sachets of [help: cholesterol](#) everyday, you should begin to see an improvement within 4 – 6 weeks.



For more information on [help: cholesterol](#), visit our website at:

workswithwater.co.uk



help: cholesterol – case studies

Pauline, 55, was shocked to discover her heart was at serious risk

A healthy weight, slim, active and with no history of high cholesterol in her family, Pauline had no idea that she was at risk from heart disease – a risk which, according to the British Heart Foundation, could make her more susceptible to joining the 103,000 UK women who suffer heart attacks each year.

In 2004, Pauline, then in her 40s, was diagnosed with high cholesterol – news that took her totally by surprise.

"My doctor suggested I have a blood test for my cholesterol when I was having a routine test for my underactive thyroid. When he told me my reading was 6.4 – much higher than it should be – I was really surprised, especially as I always thought I was pretty healthy."

With a family history of heart disease, increased body weight, lack of physical activity and poor diet all contributing factors in developing high cholesterol, Pauline's diagnosis came out of the blue as she couldn't easily apply any of these major risk factors to her own life. Aware of the dangers however, Pauline set about making some serious lifestyle changes, to do all she could to get her cholesterol back down to a healthy level.

"I was already on medication for my underactive thyroid, so I didn't want to have to go down the route of statins and decided to lower my cholesterol some other way.

"Diet was the first to change and since my diagnosis I have cut out cheese, cream, biscuits, crisps and cake in particular, but I also made an effort to examine the fat content of most of the food products I purchased. It was quite an eye opener to carefully read the labels on many supermarket items, only to discover that they are really quite unhealthy. Despite being relatively active anyway, I made a more concerted effort to exercise and now swim every other day and visit the gym once or twice a week – and I feel great for it."

Through these positive lifestyle changes, Pauline not only started to see a reduction in her cholesterol levels, but through regular exercise she also minimised her stress levels, known to be associated with improved mental and physical wellbeing, and more recently, has even been linked to a decreased risk of heart attacks.

However, in February 2009 her father was diagnosed with terminal cancer and Pauline was not able to maintain her healthy eating regime and exercise programme. As a result her cholesterol levels began to creep back up, from 4.9 all the way to 5.6. "It was a really frustrating time for me as I'd been trying so hard and I started to wonder whether I'd ever be able to maintain my cholesterol at a healthy level. But, then my daughter mentioned a product she'd heard of called help: cholesterol. She told me it was natural supplement and made with barley beta-glucans, a 'super-ingredient' of sorts. I read up on the ingredient and discovered that various clinical studies have shown it is effective in lowering blood cholesterol levels among those suffering from mild hypercholesterolaemia – so of course I wanted to give it a go."

In just four weeks of taking help: cholesterol, Pauline's reading had gone down from 5.6 to 5.0 and she was thrilled.

"I was so impressed with help: cholesterol, especially as I could see such a drop in my readings in such a short space of time. My advice to others like me would be, get your hands on this product and combine it with a low fat diet (where possible!) and exercise and you'll definitely be pleased with the outcome – I certainly am!"



help: cholesterol – case studies

At only 37, Steve's sky-high cholesterol forced him to make some serious changes

At 37, weighing only 72kg and active all of his adult life, Steve Easty was the last person you'd expect to have high cholesterol. "My father had raised cholesterol and my grandfather had a heart attack but I wasn't particularly worried about my own health. But when my dad's doctor suggested to him that I should go and get my cholesterol readings checked about six months ago, that's exactly what I did. My reading was very high – at 7.3 I was suddenly one of the 32 million adults with cholesterol levels above what the government recommends as safe – which is much lower, at 5.0."

Despite his alarmingly high readings, Steve didn't feel too worried because he was so young, but knowing that cholesterol levels rise with age and told that doctors would not intervene until he was at least 40, he decided to work out what had caused his high cholesterol and do something about it.

"I was very aware of the dangers of high cholesterol but not about the causes, and although I knew that high saturated food was a cause I didn't know which kinds of foods had high saturate levels – I'd never needed to know this before!"

Although Steve smoked heavily in his twenties and had cut down in recent years, smoking was also one of the other big changes, and he finally gave up for good at the beginning of 2010.

"A combination of not smoking and paying particular attention to my diet, helped to stabilise my cholesterol readings. Now I don't eat pastry, butter, biscuits, or cake – except on birthdays, of course! I eat less lamb and beef and have introduced more oily fish and cashew nuts into my diet – to increase my intake of good omega-3 and polyunsaturated fats."

Steve's physical activity increased too, and he recently completed the Brighton marathon, but he was always on the lookout for non-medical solutions to his cholesterol lowering ambitions.

"I heard about a product called help: cholesterol and decided to give it a go. As I'm not sure about the side effects of statins, and not able to take them yet anyway, this seemed the ideal solution. It's natural and I checked the active ingredients online before trying it, so I knew it was safe.

"I discovered that help: cholesterol incorporates barley beta-glucans which, along with dairy peptides, are hailed as one of the new 'heart health heroes', with various clinical studies showing them to be effective in lowering blood cholesterol levels." In a really short amount of time, just four weeks, Steve's readings had gone down to 6.4 – a really significant drop – something which he feels really positive about.

"Combined with a good diet, more exercise, no smoking and reduced alcohol, I'll potentially get my readings right down so I won't even have to consider statins when I'm 40 – and that's one thing less to worry about."



help: cholesterol – case studies

Elaine, 60, said ‘no’ to statins and is beating her cholesterol the natural way

With high blood pressure and a history of heart disease on her father’s side of the family, Elaine Bradley was not particularly surprised when a routine thyroid check at her doctor’s revealed she was also suffering from raised cholesterol. “I’ve always been aware of the dangers of high cholesterol, but when my doctor told me my LDL cholesterol – the ‘bad’ one – was 5.4, I was determined to deal with it without any fuss.”

Although experts differ on exactly what constitutes a normal LDL cholesterol level, Elaine’s reading was well over the 2.0 to 3.00mmol/l recommended as safe. Already on ACE inhibitors for hypertension, Elaine was reluctant to take additional medication and wanted to tackle her cholesterol naturally.

“I won’t even take an aspirin for a headache if I can help it, and would much rather let nature run its course than rely on a tablet. My doctor told me that statins were available to me, but I wanted to see what I could do without medication first. Even though I’m retired I’m always busy and relatively active so I didn’t want to make drastic changes to my diet or exercise regime either – so I started to look out for natural alternatives to lowering my cholesterol instead.”

It was shortly after her initial reading that Elaine read an article in her regional paper, about a local company producing natural supplements to treat, amongst other conditions, high cholesterol.

“The product, called help: cholesterol sounded really interesting, and there was lots of research supporting its main ingredient, barley beta-glucans, for helping to lower cholesterol, in particular LDL cholesterol, so I decided to give it a go. “It’s easy to take – I just mix the soluble powder with fresh orange juice and have it with my breakfast each morning, so it’s just part of my normal routine.”

After only a month of taking help: cholesterol, Elaine returned to her doctor to discover that her LDL cholesterol was down to 4.5.

“I was really happy to see such a drop in my reading and without making any other changes to my lifestyle at all. To see something work totally independently and show results after such a short time is great. I would definitely recommend to other people with high cholesterol and am continuing to take it to get my readings down even more – and all without statins.”

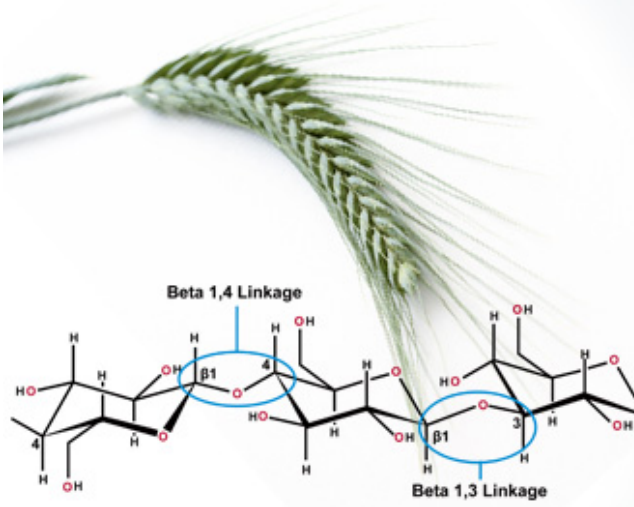
"I checked my cholesterol at the end of the trial and was delighted to see a significant reduction"

Mrs Donnelly, aged 64 from Preston has been taking help: cholesterol for 6 weeks as part of the Works with Water help: cholesterol consumer trial. Here is what she had to say:

“I checked my cholesterol at the end of the trial and was delighted to see a significant reduction. When I first began my reading was 5.11, having recently checked it now reads between 2.6 and 3.2, this is after only 6 weeks. I also introduced more exercise and continued with the prescribed medication from my doctor. A combination of all three certainly shows good results.”




help: cholesterol



The image shows a close-up of a green barley stalk on the left. To its right is a chemical structure diagram of a beta-glucan chain. The diagram consists of several glucose rings connected by oxygen atoms. Two specific linkages are highlighted with blue circles and labeled: 'Beta 1,4 Linkage' and 'Beta 1,3 Linkage'. The rings are numbered 1, 2, 3, and 4. The oxygen atoms are labeled with 'O' and 'β1'.

Barley beta-glucans:

clinically proven
to be effective in reducing
total & LDL cholesterol
in subjects with clinical
hypercholesterolemia.



Barley β -glucans

Cereal β -glucans are best known for their capacity to lower key risk factors for cardiovascular disease, the world's leading cause of death. Both epidemiological and clinical research over the past 50 years has shown that consumption of soluble fiber, and especially cereal (1-3)(1-4) β -glucans is linked with reducing LDL cholesterol. The evidence for barley led to an authorized U.S. FDA Health Claim for barley β -glucan in reducing risks of cardiovascular disease.

How do **barley β -glucans** work?

In the stomach and small intestine, non-digestible, soluble dietary fibers form an increasingly viscous matrix when hydrated, which accounts for a number of their beneficial metabolic results. The non-digestible matrices pass largely untouched through the small intestine, trapping excess lipids, cholesterol, mucins and glucose along the way. Once past the nutrient surfaces of the small intestine, these materials typically become part of the waste stream forming in the colon and then are excreted from the body.

Several modes of action have been observed in many human and animal studies

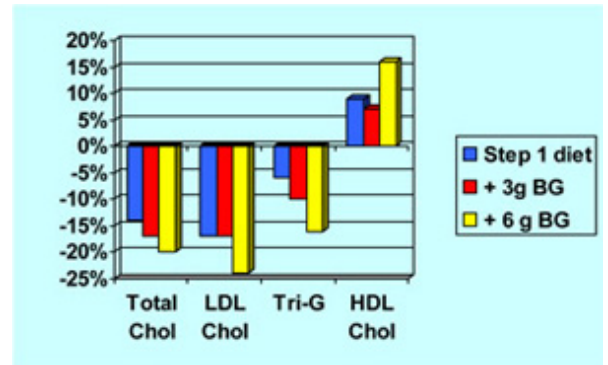
- First, it is generally understood that lipids and cholesterol are trapped or restrained by triple helix β -glucan matrices and are not absorbed.
- Second, it is thought that bile acids formed by the liver are also bound and excreted, allowing less recirculation and signaling the liver to make new bile acid by removing LDL cholesterol from the blood.
- Third, it is evident that β -glucans can reduce blood sugar and thus reduce insulin release, a process that over time may also reduce cholesterol accumulation.



What the scientific studies show

Most clinical studies have shown that barley β -glucans, in the form of high-fibre flours, β -glucan concentrates and high-purity isolates are able to reduce total and LDL cholesterol in subjects over age 35 with clinical hypercholesterolemia. Reductions typically range from above 5% on the low end, to over 20% on the high end, with subjects who are older, heavier and have higher cholesterol being most likely to show a strong favorable response.

Younger subjects (under 35), pre-menopausal women, those with BMI of less than 25 and those with lower starting cholesterol (below 200) are likely to show a less significant response to barley β -glucan.



The diagram shows **Example study – USDA ARS BHNRC, 2004** - Study results with 3 grams & 6 grams of barley β -glucan in diet



help: cholesterol

“ Daily consumption of 3g barley beta-glucans can lower both total and LDL-cholesterol by between 5% and 9%. This may not seem like much, but it can translate into a 10% to 27% reduction in our risk of coronary heart disease... ”

Dr Sarah Brewer Natural Health Guru



Dr Sarah Brewer - The Natural Health Guru says:

"The UK has one of the highest average cholesterol levels in the world, making it a serious health threat - especially for women [1]. For every 1% increase in serum cholesterol level, there is a 2% - 3% increase in risk of cardiovascular disease [2]. Dietary fibre helps to reduce that risk by interfering with the absorption of cholesterol from the gut. Importantly, it doesn't just reduce absorption of the pre-formed cholesterol present in the food we eat; it also reduces the re-absorption of cholesterol made in our liver, which is squirted into the bowel along with bile fluid. This can make a huge difference to our overall cholesterol balance. The form of soluble fibre found in the cell wall of barley grains (barley beta-glucans) is particularly effective. As well as reducing absorption of cholesterol, it is processed in the large intestines to form substances (short chain fatty-acids) that have a direct effect on the liver to reduce the amount of cholesterol we make [3]. Daily consumption of 3g barley beta-glucans can lower both total and LDL-cholesterol by between 5% and 9% [4,5]. This may not seem like much, but it can translate into a 10% to 27% reduction in our risk of coronary heart disease."

- [1] Keil U Coronary artery disease: the role of lipids, hypertension and smoking. Basic Res Cardiol 2000;95 Suppl
- [2] <http://www.heartstats.org/datapage.asp?id=1009> 1:152-8
- [3] Rondanelli M et al (2009). The biological activity of beta-glucans 100(3):237-45
- [4] Keenan JM et al (2007). The effects of concentrated barley beta-glucan on blood lipids in a population of hypercholesterolaemic men and women. Br J Nutr 97(6):1162-8
- [5] Ames NP, Rhymer CR (2008). Issues surrounding health claims for barley. 138(6):1237S-43S



help: YOUR HEART

Now there's a simple, natural way to help look after your heart. **help: blood pressure** soluble supplements and **NEW help: cholesterol** ready-to-eat gel supplements both contain active ingredients that are scientifically supported to help you maintain a healthier heart when taken as part of a healthy and balanced diet.

Help keep your heart health in check. To find out more please visit workswithwater.co.uk



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