



The power of oat beta glucan

Soluble fibre

Scientists have known for some time that soluble fibre has a cholesterol lowering effect. It is found in various grains especially barley and oats, as well as in pulses, fruits and vegetables – rich sources include beans, peas, lentils, broccoli, sweet potato, aubergine, apple, strawberries and prunes.

Soluble fibre is not only beneficial for heart health it also helps slow down the absorption of sugars from the diet. This means that it can help to control blood sugar levels, which are particularly important for diabetics.

What is oat beta glucan?

Oats contain a form of soluble fibre called oat beta glucan which is particularly concentrated in the outer layers of the grain. Much of the research into the cholesterol lowering effects of soluble fibre has centered around oat beta glucan.

How does it work?

Because oat beta glucan is a soluble form of fibre it dissolves inside the digestive tract where it forms a thick gel – a bit like wallpaper paste. This gel is able to bind to excess cholesterol and cholesterol like substances within the gut and help to prevent these from being absorbed into the body. The gel and the cholesterol is then excreted as part of the body's waste.

Oat beta glucan lowers cholesterol in three ways:

	Explanation
Preventing cholesterol in food from being absorbed	Foods provide about 20% of our cholesterol. Many of the foods that are rich in cholesterol are similar to those high in saturated fat.
Preventing cholesterol like substances in bile from being reabsorbed.	Bile is produced from the breakdown of cholesterol. Both bile and cholesterol are released into the gut by the body to help in the digestive process. They help the body to absorb fats from the diet. By binding to bile and cholesterol, oat beta glucan prevents them from being reabsorbed lower down the digestive tract.
Causing more cholesterol to be removed from the circulation	Because less cholesterol is being absorbed by the gut, the body has to take more cholesterol out of the blood stream and process it into bile to help with the digestive process. This serves to help reduce the levels of cholesterol in our body

What is the likely effect on cholesterol?

Experts agree that oat beta glucan can lower both total and the more harmful LDL cholesterol levels. This appears to be a dose response effect, in other words the higher the intake of oat beta glucan the greater the reduction in total and LDL cholesterol. An optimal intake is considered to be 3g or more of oat beta glucan per day and that this can be achieved through eating 2-4 portions of oat based products e.g. breakfast cereals, breads and crackers every day.

In clinical trials this effect is seen within 4 weeks of starting to take oat based products. Realistically a 5% total and LDL cholesterol lowering effect is possible from all forms of soluble fibre.

How can I include it in the diet?

Look out for oat based foods that are also low in saturated fat such as oat based breakfast cereals, oat breads and oat cakes. Luckily for us many more foods now contain oats or oat bran making it easier to consume the recommended amount (3g) of oat beta glucan each day. As a guide to achieving this, aim for 2-3 portions of oat based foods every day. Reassuringly foods that contain oats and wish to claim “cholesterol lowering” on their labels have to contain a standard amount of oat beta glucan in an average portion.

Top tips for getting your oats:

- Start the day with a bowl of an oat based breakfast cereal
- Just 2 oatcakes provides a portion of oat beta glucan. Top with low fat cream cheese, or half fat crème fraiche or just eat plain
- Try mixing a tablespoon of oats into a heart warming soup for two people and cook for a few minutes before serving
- Heap a tablespoonful of toasted oats or granola type cereal into a low fat yoghurt
- Add a tablespoon of oats to the ingredients for a fruit smoothie before whizzing in the blender
- Bake some cheese scones using a small amount of strong hard cheese and substitute half of the flour with oatmeal
- Make your own banana flapjacks using 8oz rolled oats, 1 large banana, 3oz olive oil based margarine, 3oz soft brown sugar and 2 tablespoons honey
- Try adding oats to crumble mixtures, meatloaf, use to coat baked fish or potato rissoles
- Try making your own oat-based muesli or perking up a shop-based muesli with dried fruit and nuts
- Substitute some of the flour in brownies and biscuits with oatmeal
- When choosing breads look out for those made with a significant amount of oat flour. Some have as much as 50% oat flour