

FIBRE

The modern story of dietary fibre has a mixed beginning. At the beginning of the 20th century it was considered that fibre in the diet could keep the internal parts of the body healthy. This changed because people thought that roughage was an irritant to the intestines. The Western diet started containing less and less fibre. In 1969 this idea changed after the British doctor, Birkitt, observed that certain populations in Africa do not suffer cancer of the colon and rectum. The high fibre content of their diet ensured this. This was the turning point of the discussion around fibre in the diet. Today we know that fibre may protect against cancer, reduce the risk of coronary heart disease, and help control obesity and diabetes. Dietary fibre consists of the cell walls of the plant, which is digested and absorbed in the large intestine. There are two kinds of fibre, soluble and insoluble. You daily need a complex of these different fibres.

Insoluble fibre: Beneficial for a healthy digestive system, because it is a bulking agent.

Present in whole grain, husks of grain, rye, rice, maize and cellulose.

- Beneficial in the treatment of diverticulosis (15-30g/day). A low fibre diet for diverticulitis (NB), because the digestive organs need rest.
- Reduces the risks for some types of cancers like colo-rectal cancer, which are caused by carcinogens present in food. The eating of fibre lessens the period of exposure of the toxins and carcinogens to the body. Through the action of the fibre in the bowel, it eliminates it from the body much faster. Eating too much fat can cause cancer of the colon. Calcium has an important function in the colon, but fat prevents the absorption of Calcium. Insoluble fibre coats the lining of the colon, which reduces the effect of a fatty diet.

Soluble fibre: Good for maintenance of cholesterol, diabetes and weight control.

Is present in fruit, dried peas, beans, oats, pectin, etc.

- Decreased total cholesterol in a study up to 23% and 24% of the low-density lipids (LDL), after 3 weeks of eating ± 200 g fibre per day. Fibre is digested through a bacterial process in the colon and changed to short chain fatty acids, which inhibits the forming, and by binding with the cholesterol, prevent the reabsorption of free cholesterol. It has been proven that this fibre binds with bile in the intestines and reduces the absorption and digestion of fat. The body forms bile for fibre digestion from the cholesterol, present in the blood. The relation in which the LDL cholesterol (bad kind) and HDL should stand with one another is 1:2.
- Diabetics - fibre creates an increased tolerance against glucose by slowing down the digestion and absorption of carbohydrates and thus reduces the rise of blood sugar after a meal. The soluble fibre helps to regulate the rate of absorption of glucose and has shown that insulin-requiring diabetics need lesser amounts of insulin. It makes insulin hundreds of times more effective.
- Controls the appetite by filling the stomach and leaving less space to be filled by food.

Dosage:

A typical western diet contains 10-15g fibre per day. The daily recommended amount of fibre is 40-60g. Increase steadily. Fibre may bind the digestive enzymes preventing it from digesting. This manifests through diarrhoea and drifting stools. Too much insoluble fibre can cause gas and gastro-intestinal discomfort. Too much soluble fibre can cause a feeling of satiation for a long

time (for some this is good). Reduce your fibre intake. Increase your multi-vitamin and mineral intake simultaneously.

HIGH-FIBRE DIET REDUCES RISK OF DIABETES

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CHICAGO (Reuters) - The risk of developing diabetes was 2 times lower among women who ate a low-sugar, high-fibre diet, according to a study published Tuesday.

Diets laden with such foods as white bread, cooked potatoes, white rice and cola beverages increased the risk of developing the disease, which affects 14 million Americans.

Healthy foods found to be low in "glycemic load" included whole grain breads, high fibre breakfast cereals, yoghurt, beans and peanut butter, Harvard University researchers said.

"Beyond the well-known risk factors for (adult-onset diabetes) of age, obesity, family history, sedentary lifestyle and smoking, our finding supports the hypothesis that a diet with high glycemic load and a low cereal fibre content increases risk of (diabetes)," author Jorge Salmeron of the Harvard School of Public Health said.

The study, published in the Journal of the American Medical Association, examined data from the multifaceted Nurses' Health Study and included more than 65,000 nurses 40 to 65 years old, 915 of whom developed diabetes. Women who consumed the most sugar and who ate the least fibre had 2 times more risk of contracting the disease than women who ate little sugar and a lot of fibre.

The nurses were questioned on diet and diabetes beginning in 1986 with a follow-up six years later. The study supported the findings of a smaller one involving Israeli men.

"Because these results are so strong and consistent with previous evidence about the protective benefits of a high fibre diet, we suggest that grains be consumed in a minimally refined form to reduce the risk of diabetes," co-author JoAnn Manson, an associate professor of medicine at Harvard, said.

Among sources of dietary fibre cited by the researchers, cereal was associated with a 28 percent reduced risk of developing diabetes while fruit and vegetable fibre had little impact either way.

The researchers said people with diets high in sugar and low in fibre were likely to develop chronic high demand for insulin, a hormone produced by the pancreas to convert blood sugar. If the pancreas cannot respond to that need, and insulin resistance exacerbates the effect, glucose tolerance and diabetes can result.

Diabetes has been found to increase the risk of heart disease and stroke and is the leading cause of new cases of blindness in adults, kidney failure and nerve damage.