



## Study of the Effect of Nutrition-Rich Products on the Human Body

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**Annotation:** One of the problems that worries modern people today is non-communicable diseases caused by inactivity and malnutrition. In this study, an attempt was made to find a simple solution to this problem. It is said that various legumes and legumes can be used to slowly eradicate non-communicable diseases.

**Keywords:** non-infectious, sedentary lifestyle, dietary fiber, wheat bran, flaxseed.

One of the most pressing problems of the healthcare system of Uzbekistan remains non-communicable diseases. About 79% of all deaths in the country are caused by non-communicable diseases. Dr. Lianne Kuppens, the World Health Organization's representative in Uzbekistan, said: "About a third of the country's adult population is hypertensive, and one-fifth are at risk of heart attack or stroke." "In addition, more than a quarter of men smoke, and about half of adults are overweight or obese." To alleviate this concern, in early 2020, the Ministry of Health of Uzbekistan, with the support of the Presidential Administration, began working on rules that would make food healthier for the entire population of the country.

Many negative factors affect the health of modern people, including emotional and physical overload, frequent stressful situations, sedentary lifestyle, unfavorable environmental situation. To all these negative effects you can add irregular diet, lack of vitamins and minerals, lack of dietary fiber needed by the body, among which fiber plays an important role.

Fiber in food is the most important component of human nutrition, and its deficiency can lead to serious, sometimes even life-threatening diseases. And if we are not able to have a significant impact on the environment around us, then we can change our daily diet for our own benefit. The following is information about fiber.

Advantages of consuming fiber

1. Cholesterol and blood sugar levels are normalized. Prevents diabetes.
2. Intestinal microflora is restored and preserved.
3. Helps to weaken and eliminate many pathogens.
4. Helps cleanse the intestines of toxins and toxins.
5. Improves the functioning of the digestive system.
6. Helps to lose weight as it slows down the absorption of proteins, fats and carbohydrates.
7. Helps remove harmful substances and heavy metals from the body
8. Reduces the risk of death from cardiovascular disease.

Coarse plant fiber is abundant in vegetables and fruits and should be in our diet every day. To get fiber in vegetables, it is very important to consume them raw.



The fruit peel contains a lot of fiber. In order to get as much pectin and dietary fiber from local apples as possible, they should be eaten without peeling them. In recent years, it has been found that dietary fiber also neutralizes various carcinogens (causing cancer) that enter the gastrointestinal tract and protects against malignant tumors. Lack or absence of dietary fiber in the diet reduces the formation of feces in the colon, which moves very slowly. As a result, the pressure rises. Low levels of fiber in the diet have also been linked to gallstones. Deficiency of dietary fiber in the diet leads to obesity, diabetes, cardiovascular disease, premature aging. The bran of these grains is a dietary fiber that combines all these qualities. Therefore, it is useful to eat wholemeal bread and other similar products. Similarly, wheat and other cereals are high in fiber. Wheat bran is one of the most important foods of our ancestors, and it is recommended to eat it with dried apricots, peas and greens. The average daily requirement for fiber is 30 g.

At the same time, it should be noted that if the diet contains more than the required amount of dietary fiber, it is difficult to absorb a number of minerals (Ca, Mg, Zn, Cu, Fe) from the intestines into the blood. Table 1 provides information on the amount of dietary fiber in foods

Products (100 grams)	Wheat	Dryingn	Figs	Dryingn	Bodom	Walnuts	Flaxseed	Bean	Lentils	Fresh peas	Barley porridge	Rice	Corn on the cob
The amount of dietary fiber in grams	43	15	13	18	12	7,5	8,5	13	11	10,3	9	10,5	12

As you can see from the table above, bran has a lot of fiber. Let's take a look at bran. Bran is the residue after grinding the flour, i.e. the coarse part of the grain. Bran is rich in fiber, sometimes up to 75%, but in addition to fiber, bran contains macro and micronutrients, including B vitamins. The energy produced by bran is also good, with 100 g of bran producing 250 kcal and the fiber itself a maximum of 35 kcal. This is because, in addition to fiber, which acts as a direct "adsorbent", bran also contains protein, starch and vitamins A and B. These substances make dandruff healing and beneficial. Bran is also the most common food product to ensure daily fiber intake.

Vegetables also contain insoluble dietary fiber, and Table 2 shows the amount of fiber in vegetables. Table 1

The amount of fiber in vegetables and fruits.

We checked the content of coarse insoluble fiber in food. Table 3 shows which foods contain soluble fiber, i.e. pectins. The composition of pectins in fruits and vegetables differs sharply from each other due to types, diversity, degree of ripening, place of growth and other factors



Table 3  
The amount of pectin in vegetables and fruits.

Products (100 grams)	Dietary fiber (g)	Products (100 grams)	Dietary fiber (g)
Apricot	0,8	Mandarins	0,6
Pineapple	0,4	Carrots	1,2
Orange	1,4	Sea kale	4,7
Watermelon	0,5	Bodring	0,7
Eggplant	1,3	Sweet pepper	1,4
Bananas	0,8	Peaches	0,9
Grapes	0,6	Tomato	0,8
Cherry	0,5	Peaches	0,9
Nok	0,6	Plum	0,5
Melons	0,8	Black currant	3
White cabbage	1,4	Red currants	2,5
Potatoes	1,2	Dates	0,5
Lemon	1,3	Cherry	0,3
Onion	0,7	Apples	0,6

Knowing the amount of fiber in food can solve the problem of reducing non-communicable diseases that bother most adults by focusing on nutrition and fortifying foods with fiber. In this experiment, mainly cereals and legumes were added to the diet of the elderly in the required amount to reduce the symptoms of sweating and constipation. Crushed corn, wheat grains, flax seeds, beans and vegetables were used. These products are rich in dietary fiber and essential nutrients. Corn is rich in potassium, vitamin A, calcium and vitamin K, and low in carbohydrates. Beans are high in calories but high in fiber and protein. Crushed flax seeds contain large amounts of omega-3 fatty acids. The outer layers of grains, seeds, beans, vegetables and fruits are much richer in fiber than the inner layers. It was therefore strictly adhered to to eat grains as well as fruits and vegetables as lean as possible. In the experiments of researchers, it is recommended to consume from 5 to 25 grams of fiber, depending on how healthy a person is. Nowadays, we get most of it from fruits and vegetables, but it is difficult to get the required amount. For good health, you should try to get 35 grams of fiber a day. In the experiment, attention was paid to the diet of the elderly in a normal home environment. Along with the necessary vegetables and fruits, beans with cereals and soft beans were added to the meal. The results given in Table 4 were obtained by continuously adding to the daily diet for 3 months.

The amount of cereal was gradually increased so as not to burden the body. The process is shown in Table 4.



**Table 4.**  
**The amount of fiber in the products.**

Products	Corn porridge	Wheat porridge	Flaxseed	Bean	Total
1-month	10 g	10 g	10 g	10 g	40 g
The amount of fiber	1,2 g	4,3 g	0,85 g	1,3 g	7,65 g
2- month	15 g	15 g	15 g	15 g	60 g
The amount of fiber	1,8 g	6,45 g	1,225 g	1,95 g	11,475 g
3- month	20 g	20 g	20 g	20 g	80 g
The amount of fiber	2,4 g	8,6 g	1,7 g	2,6 g	15,3 g
3- weeks	25 g	25 g	25 g	25 g	100 g
The amount of fiber	3 g	10,75 g	2,125 g	3,25 g	19,125 g

Modern people, especially the elderly, are accustomed to soft foods, so they need to gradually train their bodies to fiber foods. Otherwise, the fibers may swell and damage the stomach. During the heat treatment, the fiber structure expands, thereby losing some of its beneficial properties, so an attempt was made to steam or slightly boil the fibrous food. Fiber swells in the body and is then digested, so care has been taken to ensure that the amount of water consumed is adequate. Fibers lose some of their properties in the absence of fluid and do not leave the body in time.

In addition to the daily consumption of fruits and vegetables, cereals can absorb up to 20 grams of fiber. The results showed that in the elderly, constipation decreased and the digestive system began to function better. There was no heaviness in the stomach as the amount of cereal was slowly increased.

In conclusion, by focusing on foods rich in dietary fiber, it is possible to prevent and correct a number of interconnected, non-infectious, diseases of the digestive system.

## Books

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