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# Healthy Eating to Lower Your Cholesterol

## What is Cholesterol?

Cholesterol is a fat-like substance produced naturally in the liver. Our bodies need a certain amount of fat to help make bile acids, important hormones and precursors for vitamin D. The body also produces other fats called triglycerides.

Cholesterol joins with lipoproteins to travel through blood. **Low-Density Lipoproteins (BAD ONES)** accumulate on the walls of the arteries. **High-Density Lipoproteins (GOOD ONES)** carry excess lipids away for excretion.

## High Cholesterol

Cholesterol can be dangerous when the level is more than necessary in your body. When there are excess lipid carriers (LDL) and inadequate lipid removers (HDL) in your bloodstream, excess cholesterol and triglycerides cannot be removed efficiently from the body. This excess cholesterol is left behind in various parts of the body. The cholesterol that remains on the walls of the arteries can hinder the blood flow.

With a commitment to a healthy lifestyle and your doctor's instruction, you should be on your way to improving cholesterol. Making better food choices can certainly help to lower your fat and cholesterol intake. Researches have shown that eating less saturated fats, trans fats and cholesterol will help to improve cholesterol and triglyceride levels in the blood.

## Healthy Diet to Prevent Elevated Cholesterol

1. Eat less fatty foods, especially those with saturated fat (in animals) and trans fat (in bakeries/ packaged products).
2. Consume high cholesterol foods (yolks, organs, squids, octopus, fish head, etc) moderately. Suggest intake of egg yolks can be five pieces per week.
3. Eat more high fibre foods (vegetables, fruits, whole wheat and dry beans products).
4. Avoid too much sugar.
5. Maintain regular physical activities.
6. Achieve and maintain moderate weight.
7. Eat functional foods which can lower blood cholesterol and improve heart health (oats, soy, mushrooms, deepwater fish, nuts, plant stanol, etc).

## Different Kinds of Dietary Fats

**SATURATED FATS** affect total cholesterol level, particularly increasing the bad ones. Meats, animal skins, dairy products and many processed foods that are made with lard, butter, palm or coconut oils contain mostly saturated fat.

**UNSATURATED FATS** can be classified into **POLY-UNSATURATED FATS** and **MONOUNSATURATED FATS**. **POLYUNSATURATED FATS** increase the clearance of bad cholesterol from circulation, thus lowering bad cholesterol level. However, too much polyunsaturated fats may be associated with the decrease in good cholesterol. Examples of polyunsaturated fats include corn, sunflower and soybean oils. Replacing saturated fats with **MONOUNSATURATED FATS** can reduce both total and bad cholesterol. Olive, canola and peanut oils contain monounsaturated fats.

**TRANS FATS** are found in the food manufacturing process during which the product is hydrogenated to change oil from liquid to solid. This process can lengthen the shelf life and enhance the taste. Trans fats are detrimental to heart health because they increase bad cholesterol, decrease good cholesterol and affect the essential fatty acids metabolism. Consumers are reminded of reading the labels when choosing packaged foods, and be aware of the names like hydrogenated oil, partially hydrogenated oil, shortening, margarine, etc. There is also a small amount of trans fat naturally found in animal meats and dairy products.

## Eat Well, Live Well with Cholesterol

The eating advice issued by the **American Heart Association** recommends 25 to 35% of total calories from total fats, less than 5 to 6% from saturated fats, 28 to 30g fibre (with 10 to 25g from soluble fibre) per day and to reduce foods with trans fat. Here are the data of some common foods. And always read food product labels for specific information.

## Fats, Cholesterol and Fibre Contents of Common Foods

	Serving Size	Energy (calorie)	Total Fat (gram)	Saturated Fat (gram)	Trans Fat (gram)	Cholesterol (gram)	Dietary Fibre (gram)
Meat and Poultry							
Beef, with fat (cooked)	100g	289	19.6	7.7	0	86	0
Beef, lean (cooked)	100g	209	9.2	3.5	0	85	0
Beef tendon (cooked)	100g	150	0.5	0.1	0	51	0
Beef sirloin (cooked)	100g	208	6.9	3	0	77	0
Lamb chop, lean (cooked)	100g	215	10.5	3.9	0	93	0
Ribs (cooked)	100g	238	13.9	4.9	0	88	0
Pork, lean (cooked)	100g	208	9.6	3.4	0	85	0
Pork knuckle (cooked)	100g	232	16.1	4.3	0	107	0
Chicken, with skin (cooked)	100g	237	13.5	3.8	0	87	0
Chicken, skinless (cooked)	100g	188	7.4	2	0	88	0
Chicken breast, skinless (cooked)	100g	140	3	0.9	0	85	0
Chicken wings, with skin (cooked)	100g	274	16.6	4.6	0	120	0
Chicken feet (cooked)	100g	215	12.4	3.3	0	71	0
Duck, with skin (cooked)	100g	336	28.2	9.6	0	84	0
Ham	100g	130	4.8	1.6	NA	36	0
Luncheon meat	100g	334	30.3	10.8	NA	62	0
Chinese sausage	100g	584	48.3	18.4	NA	150	0

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	Serving Size	Energy (calorie)	Total Fat (gram)	Saturated Fat (gram)	Trans Fat (gram)	Cholesterol (gram)	Dietary Fibre (gram)
<b>Organs</b>							
Pork brain	100g	127	9.2	2.1	0	2195	0
Pork lung	100g	85	2.7	1	0	320	0
Pork liver	100g	134	3.6	1.2	0	301	0
Pork stomach	100g	159	10.1	4	0	223	0
Pork blood	100g	55	0.3	0.1	0	51	0
Goose liver	100g	133	16.4	4.3	1.6	515	0
Beef tongue	100g	224	16.1	7	0	87	0

<b>Fish and Seafood</b>							
Squid	100g	92	1.4	0.4	0	233	0
Prawns	100g	109	1.7	0.3	0	152	0
Cuttlefish	100g	79	0.7	0.1	0	112	0
Lobster	100g	90	0.9	0.2	0	95	0
Abalone	100g	105	0.8	0.2	0	85	0
Fish, Grouper	100g	123	4.9	1.5	0	60	0
Crab	100g	90	1.2	0.1	0	55	0
Salmon	100g	208	13.4	3	0	55	0
Oyster	100g	68	2.5	0.8	0	53	0
Sea cucumber	100g	78	0.2	0	0	51	0
Tuna (canned in water)	100g	116	0.8	0.2	0	30	0

<b>Protein</b>							
Egg white	1(33g)	17	0.1	0	0	0	0
Egg	1(50g)	71	9.9	3.1	0	186	0
Duck egg	1(70g)	130	9.6	2.6	0	619	0
Quail egg	1(9g)	14	1	0.3	0	76	0

## Fats, Cholesterol and Fibre Contents of Common Foods

	Serving Size	Energy (calorie)	Total Fat (gram)	Saturated Fat (gram)	Trans Fat (gram)	Cholesterol (gram)	Dietary Fibre (gram)
<b>Fat</b>							
Butter	1 tbsp (14g)	101	11.5	7.3	0.5	31	0
Margarine spread	1 tbsp (14g)	103	11.6	1.7	3	0	0
Olive oil	1 tbsp (13.5g)	119	13.5	1.9	0	0	0
Coconut oil	1 tbsp (13.6g)	117	13.6	11.8	0	0	0

<b>Dairy Products</b>							
Fat-free milk	1 cup (240ml)	91	0.7	0.5	0	10	0
Low-fat milk, 2% fat	1 cup (240ml)	122	4.8	3.1	0.2	20	0
Full fat milk, 3.3% fat	1 cup (240ml)	149	7.9	4.6	0	24	0
Low-fat yogurt, original flavour	Half cup (100g)	73	2	1.3	0	10	0
Cheddar cheese	1 slice (21g)	64	5.2	3.6	0	17	0
Hi-cal soy milk	1 cup (250ml)	100	3	0.5	0	0	0

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	Serving Size	Energy (calorie)	Total Fat (gram)	Saturated Fat (gram)	Trans Fat (gram)	Cholesterol (gram)	Dietary Fibre (gram)
<b>Grains and Cereals</b>							
White rice	1 bowl (150g)	185	0.6	0.1	0	0	1.4
Brown rice	1 bowl (150g)	167	1.4	0.27	0	0	2.2
Egg noodles	1 bowl (200g)	276	4.2	0.84	0.1	58	2.4
Wheat bread	1 slice (30g)	74	1	0.2	0	0	0.9
All bran	1 cup (45g)	128	1.4	0.5	0	0	12.2
Oatmeal	1/4 cup (35g)	129	3	0.6	0	0	3.5
Pineapple bun	1 (82g)	287	9	2.8	NA	25	1.4
Chiffon cake	1 (77g)	270	32	3.5	NA	146	1.2

<b>Vegetables</b>							
Shanghai Greens	1 bowl (200g)	34	0.6	0	0	0	5.6
Tofu	100g	70	4.2	0.9	0	0	0.9
Orange	1 (130g)	62	0.2	0.02	0	0	3.1
Avocado	1 (200g)	321	29.5	4.3	0	0	13.5
French fries (fast food shop)	Medium-size (114g)	356	16.8	2.7	0.1	0	4.3

### Portion exchange:

100 gram = 3.5 ounces = 2.5 taels  
 1 cup/glass = 240ml = 8 fluid ounces  
 1 ounce = 28 gram; 1 tael = 40 gram

### References:

USDA National Nutrient Database for Standard Reference  
 China Food Composition Table  
 Website of Food & Environmental Hygiene Department,  
 Nutrient Information Inquiry System