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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 feets (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) |
|------------------------|--------------|------------------|------------------|----------------------|------------------|--------------------|----------------------|
| Organs                 |              |                  |                  |                      |                  |                    |                      |
| 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                    |
| Fish and Seafood       |              |                  |                  |                      |                  |                    |                      |
| 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                    |
| Protein                |              |                  |                  |                      |                  |                    |                      |
| 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) |
|----------------------------------|-----------------|------------------|------------------|----------------------|------------------|--------------------|----------------------|
| Fat                              |                 |                  |                  |                      |                  |                    |                      |
| 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                    |
| Dairy Products                   |                 |                  |                  |                      |                  |                    |                      |
| 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) |
|--------------------|---------------|------------------|------------------|----------------------|------------------|--------------------|----------------------|
| Grains and Cereals |               |                  |                  |                      |                  |                    |                      |
| 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                  |

|                               |                    |     |      |      |     |   |      |
|-------------------------------|--------------------|-----|------|------|-----|---|------|
| Vegetables                    |                    |     |      |      |     |   |      |
| 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