



Metabolic.ie

National Centre for Inherited Metabolic Disorders

Managing High Cholesterol



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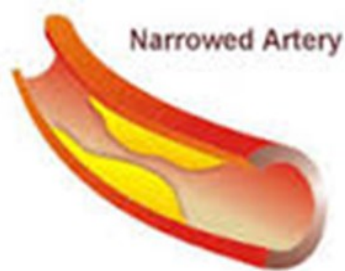
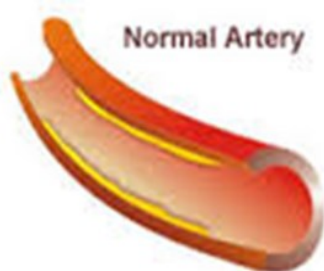
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What is Cholesterol?

Cholesterol is a type of fat found in your blood. It is essential for your cells and to produce important hormones needed by the body. However, excessive cholesterol can build up in the blood and can stick to your artery wall which is bad for your heart and blood vessels if not managed correctly. Once any cholesterol has lined your arteries, you cannot remove it, but you can stop it from getting worse.

Checking cholesterol

Total cholesterol is made up of different types of cholesterol, low density lipoproteins (**LDL**) and high density lipoproteins (**HDL**). LDL is often referred to as the **bad cholesterol** as it carries cholesterol to your surrounding arteries and veins. High density lipoproteins (**HDL**) which is referred to as **good cholesterol** as it takes cholesterol from the blood to be broken down in the liver. You can check your cholesterol by getting a **simple blood test**.



High Density Lipoprotein (HDL) ✓	Low density Lipoprotein (LDL) ✗
<ul style="list-style-type: none"> High levels of HDL protect against heart disease and stroke Takes excess cholesterol from the walls of blood vessels to the liver where it is broken down Regular physical activity can help increase your HDL levels Aim for more than <u>1 mmol/l</u> 	<ul style="list-style-type: none"> High levels of LDL increase your risk of heart disease and stroke Carries cholesterol around the body and can deposit it in the walls of the blood vessels Eating foods high in saturated fats and being overweight can increase your LDL levels Aim for less than <u>3 mmol/l</u>
Total Cholesterol should be less than: <u>5mmol/l</u>	
Triglycerides should be less than: <u>1.8 mmol/l</u>	



A good rule of thumb is to aim to keep **HDL High** and **LDL Low**. People with high cholesterol generally have no symptoms and so it is really important to regularly get your cholesterol checked.

What are triglycerides (TAG)?

They are a type of fat found in the body.

They are different to cholesterol as they provide the body with energy.

Unused calories in the body are converted into triglycerides.

High triglycerides and high LDL **increase your risk** of heart disease.

Aim to keep triglycerides **less than 1.8mmol/l**

How do I lower triglycerides?

1. Reduce alcohol consumption



2. Reduce sugar intake



3. Consume oily fish twice per week



When getting your cholesterol checked it is import to look at the **breakdown** of cholesterol and not just total cholesterol

How to interpret your cholesterol results (example)

Cholesterol	Value	✓/✗	Target Range	Possible Causes
Total Cholesterol	9.9 mmol/l	✗	Less than 5 mmol/l	High LDL Cholesterol
HDL Cholesterol	1.4 mmol/l	✓	Greater than 1 mmol/l	Adequate exercise and oily fish consumption
LDL Cholesterol	7.3 mmol/l	✗	Less than 3 mmol/l	Excess saturated/ trans fat
TAG	2.2 mmol/l	✗	Less than 1.8mmol/l	Excess sugar intake

Changes Implemented

- ⇒ Switched to a polyunsaturated spread such as olive based spread (↓ LDL)
- ⇒ Replaced cakes and biscuits with healthy snacks (↓ LDL)
- ⇒ Replaced sugary breakfast cereal with high fibre no sugar cereals (↓TAG)
- ⇒ Bloods Cholesterol checked 6 months later * See below

Type of Cholesterol	Value	✓/✗	Target Range	Possible Causes
Total Cholesterol	6.2 mmol/l	✗	Less than 5 mmol/l	Reduced saturated fat intake
HDL Cholesterol	1.5 mmol/l	✓	Greater than 1 mmol/l	Exercise and oily fish
LDL Cholesterol	3.9 mmol/l	✗	Less than 3 mmol/l	Reduced saturated fat intake
TAG	1.7 mmol/l	✓	Less than 1.8mmol/l	Reduced Sugar intake

Although total and LDL cholesterol are not within target range there is a significant improvement

What Causes High Cholesterol?

- 1. Hereditary** - having a parent with high cholesterol
(familial hypercholesterolemia)



- 2. Dietary**- having a diet high in saturated and trans fats



- 3. Obesity**- related to diet and lack of exercise



Always remember that making **small dietary and lifestyle changes** can **improve your cholesterol levels**. Try and make **realistic changes** that can be sustained over a long period of time. This booklet will give the information and practical advice on how to improve your cholesterol levels.

What is Familial Hypercholesterolemia?

It is an inherited genetic disorder that can often **run in families**. Familial means it runs in families. You only need to get the abnormal gene from one parent in order to inherit the disease. Cholesterol is elevated from birth. The body has a reduced ability to remove LDL cholesterol from the blood resulting in high levels of LDL. High LDL is a known risk factor for heart disease and increases the risk of narrowing of the arteries from an early age. Familial hypercholesterolemia is managed primarily through diet and lifestyle changes. This is a **life long condition**. However, in some cases medications for example statins may be required. In the early years there are often no signs or symptoms. With extremely high levels of cholesterol some people may experience:

- Chest pain (angina)
- Cholesterol deposits in the eye lids (xanthelasmas)
- Fatty skin deposits called xanthomas over parts of the hands, elbows, knees, ankles and around the cornea of the eye

What are statins?

They are the most common medication used to **help lower cholesterol** when dietary and lifestyle changes are not effective. If you require statins these must be taken in conjunction with a healthy diet to optimise cholesterol levels. Your doctor will advise you if you require these.




The Different Types of Fats

There are lots of different types of fats and it can be confusing to know which ones are good for us or not. The tables below will help you learn about the different types and how they affect our cholesterol.

Saturated fats

They are usually solid at room temperature. They are mainly found in meat and dairy products. The table below shows you common foods that contain saturated fats.










Saturated Fats ↑ LDL		Trans Fats ↑ LDL and ↓ HDL	
Butter	Cakes/ Biscuits	Pastries	<p>Foods that have 'hydrogenated oils or fats' or 'partially hydrogenised oils or fats' in the list of ingredients likely contain trans fats</p> 
Hard cheese	Cream	Cakes	
Whole milk	Lard	Biscuits	
Fatty meat	Dripping	Crackers	
Meat products	Suet	Deep fried foods	
Stearic Acid	Coconut oil	Takeaways	
Palm oil	Pastry	Hard margarines	

Trans fats

- Occur naturally in a small amount of dairy food and some meats. These are considered safe to eat in small quantities
- A process called hydrogenation is used in the manufacturing of changing vegetable oils into solid fats. This process is not good for our health and as a result trans fats **increase LDL & reduce HDL**
- **Industrially produced trans fats** from spreads and cheap cakes/ biscuits have been linked with an increased risk of cardiovascular disease and are best **avoided!**
- Trans fats are the only fat that reduces HDL and increases LDL.
- Currently the nutritional information on food packaging is not obliged to include information on trans fats.
- Foods that contain hydrogenated fats or oils are most likely going to contain trans. This information is generally on food labels.

Unsaturated fats

They are usually liquid at room temperature. Some are also found as spreads. It is good to have a mixture of monounsaturated, polyunsaturated and omega 3 fats in your diet. The table below shows you common foods that contain unsaturated fats.

Monounsaturated fats ✓ <i>Reduce LDL</i>	Polyunsaturated fats ✓ <i>Reduce LDL</i>	Omega-3 fats ✓✓ <i>Increase HDL</i> <i>Reduce LDL</i> <i>Reduce triglycerides</i>
Peanut oil, olive oil and rape-seed oil, sesame oil 	Corn oil, sunflower oil and soya oil 	Fish oil 
Avocado 	Nuts and seeds (walnuts, pine nuts, sesame seeds and sunflower seeds) 	Oily fish such as mackerel, trout, pilchards, sardines, salmon, trout and fresh tuna 
Nuts and seeds (almonds, cashews, hazelnuts, peanuts and pistachios) 	Some spreads made from polyunsaturated fats 	
Some spreads made from monounsaturated fats		

Remember!!!

All fats have similar calorie values, too much of any high energy food can contribute to weight gain therefore it is important to use all fats sparingly no matter how heart healthy they are.

Tips for lowering cholesterol

Top Tips

1. Maintain a healthy weight

Being overweight can put more pressure on your heart. Weight particularly around your abdomen (tummy) has the highest risk as it is linked with having a higher LDL and lower HDL. If you are overweight, then losing weight, even if it is just a few pounds can make a big difference.

2. Reduce intake of saturated fat

The most up to date research recommends replacing saturated fat with unsaturated fats. When choosing foods always check the label to see if a food is high in saturated fat and always eat them sparingly. Recently, there have been a lot of conflicting information about saturated fats and whether they negatively impact our cholesterol and are as bad as we once thought. All leading health organizations have found a definitive link between saturated fat and heart disease and the recommendation still remains: **Reduce saturated fat intake and replace it with mono and polyunsaturated fatty acids.** Research is on-going in this area.

3. Increase intake of fruit and vegetables

Eating at least **5 portions of fruit and vegetables** a day can help reduce your risk of heart disease. These foods can come from fresh, frozen or tinned sources. Fruit juice should only be counted as 1 portion of fruit per day. As a general rule it is always better to consume fruit and vegetables from foods rather than juice. Fruit and vegetables are a source of fibre, vitamins and minerals found in the skin of the food. **If you consume 5 portions of fruit and vegetables per day you do not require a multivitamin supplement.** More is not always better.



4. Increase intake of oily fish

Fish is naturally low in saturated fat and is a good source of protein. Oily fish contains essential fatty acids known as omega 3 fatty acids. Oily fish is found in fresh tuna (not tinned tuna), sardines, herring, mackerel, trout and salmon. These foods should be included in the diet at least **twice per week**. Try to avoid crumbed/battered/deep fried fish as a source of omega 3. Smoked varieties contain fewer omegas 3 than fresh, canned or frozen. Oily fish contains omega 3 fatty acids which are thought to:

- Help keep heart beat regular
- Reduce the level of triglycerides
- Prevent blood clots from forming in the blood
- Increase HDL cholesterol



5. Complex carbohydrate and fibre

Starchy foods such as cereal, bread, beans, pulses, pasta and rice should be included at most meals particularly wholegrain versions as they contain a source of fibre. Fibre has been shown to reduce the absorption of cholesterol from the intestine into the body. There are two types of fibre insoluble and soluble, both are beneficial at reducing cholesterol. The fibre in the skin of fruit and wholegrain products would be insoluble fibre. The fibre in the flesh of fruit and oats would be soluble fibre. Oats in particular are an excellent food choice as they are high in fibre and low in fat. They also contain beta glucans which have been extensively studied and shown to have cholesterol lowering properties.



6. Reduce alcohol intake

Excess alcohol can damage the heart muscle, increase blood pressure and triglycerides. Excess alcohol on a regular basis can lead to liver damage and weight gain. If you have heart failure or a weak heart, you should avoid alcohol completely. If you take aspirin daily, you should avoid or limit alcohol, depending on your doctor's advice. You should not drink alcohol if you are pregnant.

Irish recommendations

Men: 17 standards drinks per week

Women: 11 standard drinks per week

It is important that they are spread out over the week and not saved for one session, and that no more than 5 standard drinks are consumed in one sitting.

What is a standard drink?

- A small glass of wine
- Half a pint of beer or lager
- Pub measure of spirits



CONTAINER	SERVING	EST NO. STANDARD DRINKS
Naggin of spirits	200 ml	6
Can of beer/lager	500 ml	2
Bottle of wine	750 ml	7.5

7. Reduce salt intake

A little salt is needed for maintaining water balance, healthy blood pressure and for healthy muscles and nerves. However, too much salt in your diet will lead to high blood pressure. Salt acts like a sponge in your body soaking up liquid and retaining fluid. This extra fluid puts pressure on your heart to pump blood around your body. It is estimated that in Ireland we consume approximately 166% of the salt that we need per day. **Children** should have no more than **4g of salt per day** and **adults** should have a maximum of **6g** of salt per day.



Where do we get salt from?

- Processed & packet foods & eating out: 65-70%
- Home cooking & at the table: 15-20%
- Naturally in food: 15%

Tips to reduce salt intake

1. Sea salt, rock salt, garlic salt all have the same effect on the body and should be avoided.
2. Avoid salt alternatives such as potassium salt. They do not help you adapt to a low salt diet. If you are taking certain blood pressure medication they may not be appropriate.
3. Avoid adding salt when boiling pasta, rice or vegetables.
4. Use freshly ground black pepper, herbs and spices for flavouring when cooking.
5. Limit the use of stock cubes, gravy granules and ready-made sauces, which are all high in salt.
6. Choose fresh vegetables and lean meat more often than tinned or processed varieties e.g. cured hams, bacon and rashers.
7. If choosing tinned products e.g. fish opt for those tinned in fresh water, olive oil or lower salt varieties and rinse these products with water to remove excess salts.
8. Try and use less jars and packet soups and sauces, try to make at home.

8. Increase physical activity

Being physically active is one of the most important things you can do to reduce your cholesterol. The Irish guidelines for **physical activity for children** recommends at least **60 minutes of exercise daily** and for adults 30 minutes of moderate activity daily. Try to build more physical activity into your lifestyle aiming for at least 30 minutes of moderate intensity activity on five or more days of the week. This can be broken up into segments of 10-15 minutes. Remember to check first with your doctor if you have heart problems or are new to exercise. This may include vigorous walking, gardening, football, basketball, skipping, tennis, dancing, cycling, rugby, swimming, running, hurling/camogie. Remember to always choose an activity you enjoy as you are more likely to keep it up.

Regular exercise improves ✓✓✓

- HDL cholesterol
- Controls body weight
- Controls blood pressure
- Reduces stress levels
- Improves self esteem
- Exercise boots energy
- Promotes better sleep
- Exercise is fun!!



9. Plant stanols and sterols

Plant stanols and sterols are natural substances found in some foods such as oats, barley, almonds, soy bean oil, sesame seeds and some fruit and vegetables. The amount you get from natural foods is too little to reduce cholesterol. Plant stanols and sterols work by **blocking the amount of cholesterol your body absorbs from the food** you eat. Cholesterol also gets into your digestive tract from your liver and the plant sterols/stanols help to reduce the amount of this type of cholesterol you re-absorb as well. If taken in the right amounts they may lower LDL cholesterol by **10-15%** when combined with a healthy diet. Manufacturers have started adding them to foods and are commonly found in spreads, yogurts and drinks. These products need to be taken consistently in conjunction with a healthy balanced diet for them to be effective. Just remember that although these ingredients can help to lower cholesterol, they are not miracle workers - you will still need to eat healthily to get the best benefit.

Products containing plant stanols and sterols are not recommended for children under the age of 5 years, breastfeeding or pregnant women. If your cholesterol levels are normal there is no need to take foods with added plant stanols/sterols. Your dietitian will advise you if you need to start taking them.

The recommended amount of plant stanols and sterols is **2g** per day to help lower cholesterol. It is usually achieved by consuming **three portions** of a fortified food per day.

- 2 teaspoons of spread (0.8g)
- 1 yogurt drink (2g)
- 1 yogurt (0.8g)
- 250ml glass of milk (0.8g)

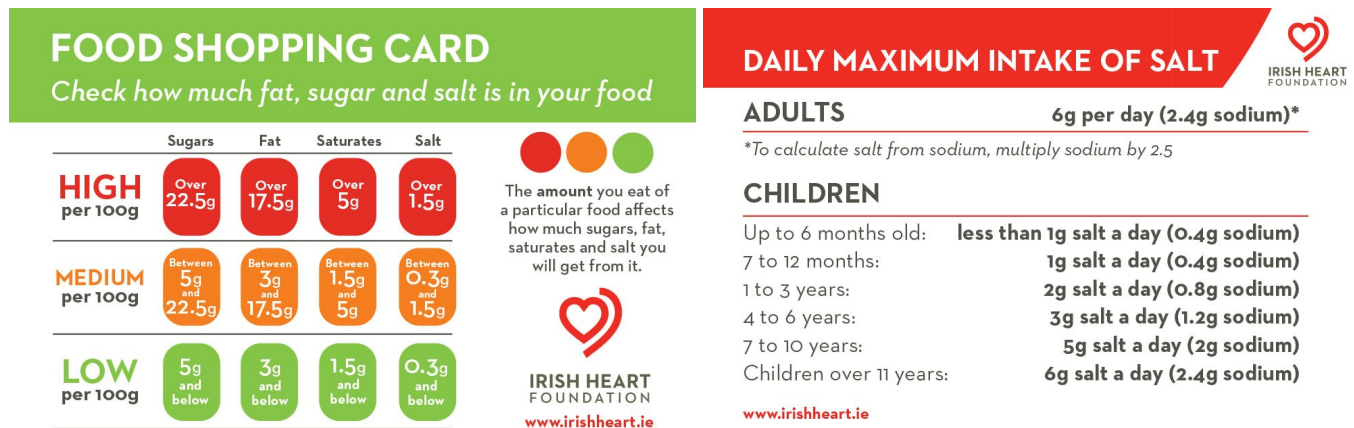
Some brands include Benecol, Flora Pro-Activ, Danocol as well as supermarket own brands.

****Remember**** More is not better. Extra spread with or without stanols and sterols means extra calories and is not recommended.



Reading Food Labels

Reading food labels is an important part of healthy eating. Food labels can be confusing. This card is designed to help you understand the information on food labels more easily using the traffic light colour coding system. When comparing products it is best to look at the ingredients per 100g this way products can be easily compared. There can be big differences in fat content between similar products so it is worth checking the label to help you find the healthiest product.. See below for examples of different products .



You are able to order a copy of these food shopping cards for your wallet from the Irish heart foundation : www.irishheart.ie

The main thing you need to check on food labels in the

1. Type of fat
2. Amount of fat
3. Amount of saturated fat
4. If it contains any trans fats

High saturated fat is more than 5g of saturated fat per 100g of the food

Low saturated fat is less than 1.5g of saturated fat per 100g of the food

Can you pick the healthiest food?

Product per 100g	Fat	Saturated Fat	Sugar	Salt
	2.9g Milk Fat	1.9g	11g	0.1g
	0.2g Milk Fat	0.1g	6g	0.2g
	8.7g Palm oil & rapeseed oil	3.3g	20g	0.7g
	22g Palm oil	13g	30g	0.3g
	14g Sunflower oil	1.5g	20g	1.2g

Can you pick the healthiest food?

Product per 100g	Fat	Saturated fat	Sugar	Salt
	11g Palm oil	8g	36	0.6g
	17g Sunflower oil	2.4g	28g	0.8g
	15g Rapeseed oil	1.3g	22g	1.4g
	10g Palm oil	4.6g	41g	0.4g
	25g Palm oil	14g	52g	0.2

The importance of label reading

Sometimes you think a product is healthy at a glance for example brown bread. However, when you read food labels this is not always the case. There are often hidden sources of unhealthy fats in unexpected products. If you become confident at label reading you will be able to pick the healthiest variety of that food. Below are a few examples of reading food labels. Don't forget your food label card when shopping it will help remind you of what you should be aiming for.

High saturated fat is more than 5g of saturated fat per 100g of the food

Low saturated fat is less than 1.5g of saturated fat per 100g of the food



Ingredients: Flour (Wheat Flour, Calcium, Iron, Niacin, Thiamin), Vegetable Oil (**Palm**), Salt

Total Fat: 7.7g/ 100g

Saturated Fat: 3.3g/ 100g



Ingredients: Flour (Wheat Flour, Calcium, Iron, Niacin, Thiamin), Vegetable Oil (**Palm**), Salt, Raising Agent (Sodium Bicarbonate), Yeast

Total Fat: 13.5g /100g

Saturated Fat: 6.2g /100g



Ingredients: Wheat Flour (Wheat Flour, Calcium, Iron, Niacin, Thiamin), Vegetable Oil (Rapeseed Oil), Salt, Sugar, Sugar Beet Fibre

Total Fat: 2.8g /100g

Saturated Fat: 0.4g /100g



Ingredients: Wholemeal Wheat Flour, Water, Fermented Wheat Flour, Yeast, Salt

Total Fat: 1.7g/100g

Saturated Fat: 0.4g/100g



Ingredients: Flour, Calcium Carbonate, Iron, Niacin, Thiamin), Water, Vegetable Oils (**Palm Oil**, Rapeseed Oil), Humectant, Sugar, Emulsifiers, Salt, Stabilisers Raising Agents, Preservatives

Total Fat: 7.2g/ 100g

Saturated Fat: 3.1g/ 100g



Ingredients: Wheat Flour , Water, Sugar, Poppy Seed Yeast, Salt, Soya Flour, Vegetable Oils (**Palm**, Rapeseed), Flour Treatment Agents: Calcium Sulphate, Ascorbic Acid

Total Fat: 1.6g/ 100g

Saturated Fat: 0.3g/ 100g



Ingredients: Wheat Flour, Water, Grain Mix, Oatbran, Toasted Soya, Flaked Wheat, Poppy Seed), Yeast, Fermented Wheat, Malt Barley Flour, Soya Flour, Salt, Wheat Gluten, Vegetable Oil, Dextrose, Flour Treatment Agent, Folic Acid

Total Fat: 1.6g/ 100g




Saturated Fat: 0.3g/ 100g

Remember!!







Crackers are commonly high in saturated fats– try and find a healthier alternative

Pitta breads are lower In fat than wraps because they do not contain palm oil. Always compare brands to find the healthiest option.




Take Away and Eating Out

When eating out	Swap....	For this
Pizza 	Deep Pan pizza Processed meat Garlic sauce Extra cheese	Thin based pizza Vegetable toppings Tomato salsa Low fat cheese
Curry house 	Korma dishes, Chicken tikka masala Deep-fried pakora Bhaji and samosas Poppadoms Naan bread	Tomato based dishes, dry curries Clay baked meat Grilled kebabs Vegetables with tomato salsa Chapati
Thai restaurant 	Deep-fried egg rolls Spring rolls Egg Fried Rice Satay dishes/ Coconut based curries Deep-fried egg noodles	Mango and papaya salad Hot, clear soups with chicken or prawns Steamed rice Vegetable or tomato based curry Steamed noodles

Take Away and Eating Out

When eating out	Swap....	For this
Italian 	Pasta carbonara, cream based sauces Breaded meat  Cheese-covered crostini Garlic bread	Pasta in tomato (Arrabiata) vegetable, Marinara sauce Grilled/ baked meat or fish in lemon/wine sauce Minestrone soup or bruschetta Mixed salad (dressing on the side) with bread sticks
Deli 	Mayonnaise and coleslaw Breaded chicken/ processed meat Large white roll/ Panini  Cheddar/ Parmesan/ Brie Crisps	Tomato relish/ hummus Tinned tuna, turkey/chicken breast Wholegrain wrap or bread Low fat cream cheese or cottage cheese Popcorn
Chinese 	Deep fried wontons Prawn crackers Duck with skin/ battered chicken Fried rice or noodles  Satay sauce	Hot and sour soups Crispy vegetables Grilled seafood Boiled rice or noodles Yellow or black bean sauce, oyster, ginger, hoisin or plum sauce

Take Away and Eating Out

When eating out	Swap....	For this
Coffee shops 	Full fat latte Full fat mocha Caramel Macchiato Hot chocolate with cream Croissant/ muffin with butter and jam	Skinny latte Skimmed cappuccino Plain iced coffee Low fat hot chocolate with no cream Brown toast with low fat spread and jam
Ice cream parlour 	Ice cream Caramel/ chocolate sauce Toppings: chocolate, marshmallows, toffee	Fruit sorbet Fruit coulis Toasted almonds, mixed fruit
Drinks 	Large glass of wine Fizzy drinks Juice	Small glass wine Sparkling mineral water with lemon instead /Diet versions Sugar free dilutable squash

Some Commonly Asked Questions



1. Should I include coconut oil in my diet?

Coconut oil is currently popular in the 'Paleo' and 'clean eating' diet trends. It claims to have a number of health benefits and is popularly called the latest 'superfood'. **There is currently not enough evidence to recommend coconut oil over healthy fats such as olive or rapeseed oil.** Making the switch to coconut oil is likely to lead to less favourable fat profiles and potentially increase the risk of coronary heart disease based on the information we know now.



The facts about coconut oil

- Coconut oil is very energy dense. 92% of which is made up of saturated fatty acids
- Coconut oil is particularly high in one type of saturated fatty acid called lauric acid
- Unlike some other oils, it provides no vitamins or antioxidants compounds like those found in extra virgin olive oil
- It is thought that lauric acid mimics unsaturated fats by increasing HDL and preventing negative health effects. However, studies show that with the consumption of coconut oil, healthy HDL cholesterol levels appears to rise but so does total cholesterol and LDL cholesterol in the blood and overall are **not** cardio protective. Evidence is not consistent
- Based on the latest scientific evidence **we do not recommended coconut oil over poly unsaturated fatty acids such as olive and rapeseed oils**

2. Choosing Butter or Spread?

Butter	Monounsaturated & Polyunsaturated Spreads
Butter contains saturated animal fat	Olive oil and sunflower spreads are examples of mono and polyunsaturated fats
This type of fat increases your LDL cholesterol which is a risk factor for heart disease	These types of fat can reduces your LDL or raise HDL cholesterol
For example butter: <u>Nutritional information per 100g</u> Saturated Fat: 53.5g Polyunsaturated: 2.7g Monounsaturated: 19.4g	For example olive spread: <u>Nutritional information per 100g</u> Saturated Fat: 10.5g Polyunsaturated: 9.5g Monounsaturated: 22.4g

The verdict?

- For **people with high cholesterol** it is best to swap saturated fat for a mono or polyunsaturated fat e.g. olive oil or sunflower spread.
- Always remember to check individual food labels as there is a huge variety of spreads available. Most supermarket brands of spreads have improved their manufacturing and are trans fat free. However, it is always a good idea to double **check the label** particularly with **low cost spreads**.
- Therefore most **heart healthy spreads are better for people with high cholesterol**. Whatever spread or oil you decided to use try to use it as sparingly as possible.
- See pages 8/9 for the breakdown of the different fats. Too much of any fat in the diet is not beneficial, particularly if you have high cholesterol.

3. Should I be juicing?

The simply answer is **NO!** Juicing has recently become a very popular trend. People have started going on juice 'detox' where no food is consumed for a number of days and the diet is based solely on juice. Celebrities are regularly commenting about the health benefits of juicing. They claim that juicing helps flush toxins from your body leading to more energy and weight loss, promising amazing results in a limited amount of time. However, when it comes down to the scientific evidence, detox diets fall short and could potentially cause more harm than good.

The facts

- Fruit contains soluble and insoluble fibre. Insoluble fibre is found in the skin of fruit and soluble fibre (invisible fibre) is found in the flesh of the fruit.
- All of the fibre has been removed from juices and so blood sugars increase rapidly
- It is always better to choose whole fruit versus juices
- Your liver is designed to eliminate toxins from the body **not juices**



5. Is chocolate good for me?

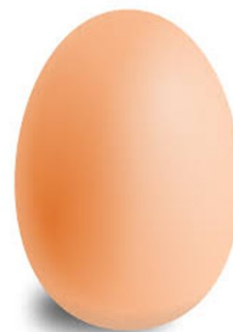
Chocolate is a **source of antioxidants called polyphenols**. Fat in chocolate comes from cocoa butter which is made up of a mix of oleic acid, steric acid and palmitic acid which is a combination of monounsaturated and polyunsaturated fats. It is thought that stearic acid may have a neutral effect on blood cholesterol neither lowering or increasing it. However, the type of chocolate you choose is very important. The darker the chocolate the greater the health benefits. White chocolate is extremely high in sugar. There is currently no established serving size that is thought to be cardio protective so the recommendation remains the same saying that **chocolate should only be consumed in moderation and try to choose a chocolate with a cocoa content of greater than 70%.**

Despite the potential cardiac benefits all types of chocolate are **high in calories and is not good if you are concerned about your weight.**



7. Can I still eat eggs?

- Eggs contain cholesterol but they have little effect on your blood cholesterol
- Recent research confirm that ‘an egg a day is ok’ ✓
- There is no cholesterol in the egg whites. The egg yolk does contain cholesterol but also nutrients including vitamin A, B12, D, iron and folate
- The best way to cook an egg is either poached or boiled. What accompanies the egg often has a greater effect on cholesterol rather than the egg itself. For example fried eggs, hollandaise sauce and butter



Cholesterol is made by our liver but some foods contain cholesterol such as eggs, shellfish and liver. Evidence shows that cholesterol found in food has little or no effect on blood cholesterol. These foods can still be eaten in moderation as part as a healthy diet.

6. Is there such thing as super foods?

The simple answer is **NO**. It is important to remember that we need to look at the whole diet for the prevention of disease. Our body's require a range of different nutrients for optimal health. Our diets should vary of whole foods, fruits, vegetables, legumes, grain-based foods, nuts, lean meats, fish and reduced-fat dairy, rather than focusing on a select set of so called ‘super foods’ to boost our health. Remember, no one food provides all the nutrients we need. The best way to ensure you are getting all the nutrients you need is to consume a variety of foods and aim for 5 portions of fruit and vegetables per day.



4. What about red wine?

Antioxidants in red wine called polyphenols may help protect the lining of blood vessels in your heart. The general consensus is that red wine is thought to improve your heart health if taken in moderation. **There is not enough evidence to recommend that you start drinking alcohol just to prevent heart disease.** However, if you enjoy the occasional glass of red wine it is ok to continue with it. Any alcohol taken in excess will negatively effect your heart health.

Cooking Tips



- Use a rack to drain off fat when you broil, roast or bake
- Don't cover foods with drippings; use wine, vinegar or fruit juice instead
- Use lemon, yogurt or fruit based marinades instead of oil based marinades
- Broil or grill foods instead of pan-frying
- Cut off all visible fat from meat before cooking, and take all the skin off poultry pieces. (If you're roasting a whole chicken or turkey, remove the skin after cooking.)
- Use a vegetable oil spray to brown or sauté foods
- Serve smaller portions of higher-fat dishes, and serve bigger portions of lower-fat dishes like pasta, rice, beans and vegetables
- Instead of regular cheese, use low-fat, cottage cheese and other fat-free or low-fat, cheeses (generally the harder the cheese the higher the fat content e.g. Cheddar and parmesan cheese).



Useful Tips for Eating Out

- It is easier to control your fat intake at home but eating out is something that can still be enjoyed when trying to lower your cholesterol
- Takeaways are generally extremely high in fat and salt and should only be eaten occasionally or for special occasions
- Always plan ahead if eating out and consume low fat foods at every other meal during that day
- Ask for vegetables/ salads to be served without sauces or butter or for sauces to be served on the side. This way you have control over your portions
- Choose dishes that have been grilled, baked or steamed instead of deep fat fried
- Choose dishes that are based on a tomato sauce rather than cream based sauces
- Foods that contain pastry, cheese, large amounts of meat and cream are generally high in saturated fat and are best avoided

Recipes

Quick and Easy Pizza Wrap , Serves 1

Ingredients	Method
<ul style="list-style-type: none"> 1 Wholegrain wrap 1 table spoon of tomato puree 2 sliced tomatoes 1 teaspoon of mixed herbs (or fresh) Low fat cheddar cheese grated Variety of toppings i.e. olives, sweet corn, peppers, mushrooms, onions and pineapple and rocket 	<ol style="list-style-type: none"> 1. Spread the tomato puree, herbs and sliced tomato on the wrap. 2. Add a variety of toppings onto your pizza. 3. Finish with some grated cheese. 4. Bake in a pre heated oven at 180 degrees for 15 minutes or until golden and bubbly.



Fruity Apricot Dessert Serves 4

Ingredients	Method
<ul style="list-style-type: none"> 250g Dried Apricots (quartered) 200ml Freshly Squeezed Orange Juice 4 tsp Honey 150ml Low fat Natural or Greek Yogurt 15 g Shelled Pistachio nuts (roughly chopped) 	<ol style="list-style-type: none"> 1. Place the apricots in a small saucepan with the orange juice and 2 tsp of honey. 2. Simmer for about 10 minutes or until soft and plump , allow to cool. 3. Divide the fruit between 4 glasses, then add the yogurt, spooning it over the fruit before drizzling each serving with 1 teaspoon of honey and scattering over with Pistachio nuts .



Recipes

Baked Potato with tuna surprise, Serves 1

Ingredients	Method
<ul style="list-style-type: none"> • 1 Large Potato • Olive oil • Small tin of drained tuna • 1 tbsp low fat natural yogurt • 1 tsp mustard • Squeeze of Lemon Juice • 1/2 apple, grated • 1 gherkin sliced (optional) • Black pepper • Side salad 	<ol style="list-style-type: none"> 1. Wash the potato, Pierce with a fork several times. 2. Rub with a little bit of olive oil . 3. Bake in a pre heated oven at 200 degrees for 1 hour. 4. Make the tuna mix by mixing the remaining ingredients. 5. Serve the baked potato with a side salad . 6. You can fill the potato with your own choice of healthy fillings.



Zingy Yogurt Dip, Serves 4

Ingredients	Method
<ul style="list-style-type: none"> • 50g Extra light mayonnaise • 100g Low fat natural or Greek yogurt • Handful of fresh coriander leaves • A squeeze of Fresh Lemon juice • 1- 2 teaspoons of curry powder • Black pepper 	<p>Combine all of the ingredients in a bowl</p> <p>Serve with:</p> <ul style="list-style-type: none"> - Carrot, Pepper, Celery stick - Baked sweet potato wedges -Whole grain pitta bread



Recipes

Sesame Crusted Salmon with rosemary potato wedges, Serves 4

Ingredients	Method
For the salmon <ul style="list-style-type: none"> • 4 salmon fillets • Lemon cut into 4 wedges • Fresh or dried herbs e.g. coriander / parsley/ basil • Black Pepper 	For the salmon: <ol style="list-style-type: none"> 1. Squeeze and place a wedge of lemon on each salmon fillet . 2. Sprinkle with fresh or dried herbs of your choice . 3. Season with black pepper. 4. Wrap and seal in tin foil. 5. Place on baking tray and cook in a preheated oven at 180 degrees for 20 minutes.
For Potato Wedges: <ul style="list-style-type: none"> • 4 Potatoes • Sprinkle of Olive oil • 4 sprigs Fresh rosemary • 4 cloves of garlic • Black pepper 	For Potato Wedges: <ol style="list-style-type: none"> 1. Wash potato. Cut into wedges (leave skin on). 2. Sprinkle with olive oil, rosemary, garlic and pepper. 3. Cook in a preheated oven at 180 degrees for 40 minutes (depends on size of wedges). 4. Serve salmon and wedges with lemon, selection of vegetables and some dip.



Recipes

Minestrone soup, Serves 6

Ingredients	Method
<ul style="list-style-type: none">• 1 onion• 2 garlic cloves• 1 teaspoon rapeseed oil• 1 carrot, chopped• 1 red pepper, chopped• 1 red chilli pepper, chopped (optional)• 1 celery stick, chopped• 500ml chicken or vegetable stock• 400g can of chopped tomatoes• 1 tsp tomato puree• 1 tin of chickpeas• Fresh coriander or other fresh herbs• 1 tbsp of balsamic vinegar• Season with black pepper	<ol style="list-style-type: none">1. Place the oil in a pot and add in the onion and garlic and sauté for 10 minutes until soft.2. Add the carrots, peppers, chilli, celery, stock, tomatoes, balsamic vinegar and tomato puree.3. Cook for 15 – 20 minutes or until the vegetables are just cooked.4. Add the chickpeas and cook for a further 5 minutes.5. Add fresh herbs and serve hot.6. Add a dollop of low fat natural yogurt, fresh yogurt coriander and serve with brown bread.



Bon
Appétit 

Disclaimer: Where specific brands are shown or mentioned these are for illustrative purposes only. We do not endorse any particular products.

Note: The information in this booklet is correct at the time of writing and the recommendations made are based on the most up to date scientific evidence at the time of printing so we recommend you use this only under full dietary and medical supervision.

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