



HOW TO MAKE THE *perfect*

HEART ATTACK



Do you worry when you're constantly reading information that reminds you how bad different foods and different activities are for your health? Well, I do, and I'm a doctor. Take heart attacks, for example. We were first told that eating fat would cause fatty streaks and blockages to build up in our arteries, and so, to avoid a heart attack, we should eat "low-fat" foods. This kind of made sense, and for years I would confidently start my day with sugary cereals that had the promise of a low-fat label on the box. Then, more recently, it was explained that eating sugary carbohydrates will inflame the arteries and cause a heart attack.

And, of course, we all know that smoking, stress, inactivity and possibly even overactivity could lead us down the path to our most common cause of death: a heart attack. I could just worry myself silly until I disappeared into a vortex of distress.

I'm quite sure these studies are, for the most part, sincere in their intent. However, they can't all be equally correct. For example, on nutrients alone, if I cut out all the fats and stop eating the carbohydrates, I might only have protein left to eat. Apparently, that could give me cancer of the colon!

So, if we want to get to the bottom of this information overload and find out what the most important rules are for health, let's look at things a little differently.

What makes for a perfect heart attack?

The primary aim in creating a heart attack is to block an artery that feeds the heart. If we can stop the blood and nutrients from getting to the heart, that part of the heart will die and we will have achieved our goal. To do that, we need two ingredients: an inflamed artery, plus some inflamed cholesterol.

What is important here is the "inflamed" part. We need sticky (or inflamed) cholesterol to attach to a sticky (or inflamed) artery wall. If we fail to inflame either one of these items, our attempt at a heart attack

flops. Of these two, the most important component is the sticky arterial wall. It is one thing to have inflamed cholesterol, but to get it to stick to an artery wall and create a blockage, we need to inflame the arteries around our heart.

How do we inflame the arteries?

Our biggest hurdle in creating a heart attack is to inflame arteries. As it turns out, there are three reliable ways to do this:

1 Eat sugary carbohydrates over many years. When we eat sugar, sweets, fizzy drinks, starchy foods (bread, potatoes) and sweet fruit (bananas, grapes, dried fruit), we are forced to release the hormone insulin to remove all this glucose from the blood and store it in fat cells. If we can eat sugary foods on a daily basis, we should successfully over-rev our sugar-insulin system and inflame our arteries.

2 If we really want to get the artery walls inflamed, constant worry is an excellent way to achieve this. We have all heard of someone who dropped dead from a heart attack after receiving really bad news. The emotional shock will tighten up the arteries and cut off any blood vessel that is already half-blocked. However, it's the daily stress and worries that we put ourselves under that successfully inflame arteries and allow blockages to start forming.

3 If all else fails, a sure-fire way to inflame arteries is to smoke. This doesn't even take much effort; if you can manage only one cigarette a day, this will inflame your arteries and give you a 50% better chance of a heart attack.

Add some cholesterol

So, now that we have inflamed our arteries, we just need the cream on the cake: some cholesterol, preferably inflamed. It turns out that we can't eat any old fat and expect it to clog up an artery – we need to be quite specific about which one we choose:

- Fish and fish oils, for example, tend to reduce inflammation in arteries and make our arteries irritatingly healthier.
- Olives, avocados, nuts and seeds all contain healthy fats that move us further away from our goal of a heart attack.
- We used to think that eating cholesterol-laden foods such as meat, eggs and dairy would successfully block off arteries with the cholesterol that we'd consumed. Eating these saturated fats certainly increases our LDL cholesterol levels in the blood, but it turns out they don't worsen the really bad LDL cholesterol levels. The final nail in the coffin for our considering meat to be the bad

boy of nutrition was a huge 2017 study that focused not on blood cholesterol levels, but rather on whether those people who ate butter and eggs died from a heart attack or not. What they showed was that eating meat, eggs and butter didn't result in heart attacks, but eating starchy carbohydrates did.

Your heart is not the same as mine

No two humans are alike, and genetics means that about one in 500 people will be excellent at over-absorbing cholesterol into the bloodstream. For this select group, eating steak and eggs may raise bad cholesterol levels.

Thankfully, for the rest of us, there are two groups of fats that won't disappoint when it comes to successful heart attacks:

- Trans fats, such as margarine, are vegetable oils that have been damaged chemically to make them thicker; and
- Seed oils, such as sunflower or canola oil, are quickly damaged when heated and used to deep-fry foods.

What is so special about these oils is that they have already been damaged and inflamed, either with chemicals or in the frying pan, so both arrive in the body as pre-oxidized fats. Once we have inflamed arteries, these fats are one of our best tools to block that artery.

Lastly, an often-forgotten way of increasing our bad cholesterol in the blood is to damage the very organ that makes our blood cholesterol: the liver. What we need is a fatty liver, and apart from drinking excessive alcohol, consuming regular amounts of sugar and starchy foods is a great way to achieve this. Once we have a fatty liver, it will not only make bad cholesterol, but it will also contribute to inflaming the arteries.

How to inflame cholesterol

So, now that we have successfully made our bad cholesterols, we mustn't forget to inflame them, to make sure they can stick to the arteries. We have two easy choices here: we can either smoke cigarettes, or if we can't stomach that, going for regular runs along a busy highway should do the trick. Inhaling thick car fumes is an excellent method of inflaming cholesterol.

It always used to confuse me why, after every London Marathon, one or two seemingly healthy middle-aged athletes would drop down dead with a heart attack. After all, isn't

exercise meant to be good for you? However, if you consider that runners pack in the pasta, potatoes and other carbohydrate favourites, then train in a city heaving with diesel fumes, you start to see how they are following a recipe for inflamed arteries and inflamed cholesterol.

What then becomes surprising is that there aren't more heart attacks on long-distance athletes. This suggests just how much exercise protects us from bad eating habits and a toxic environment.

It is clear that a heart attack is a massive problem of inflammation. Everything from making an artery sticky to the cholesterol plaque depends on inflammation. To prevent a heart attack from forming, our first goal must be to cut out sugary carbohydrates, remove continuous stress and avoid cigarettes – the three best things to do to protect arteries from inflammation.

Next, we need to avoid trans fats such as margarine and seed oils such as sunflower oil to fry our foods. These fats are pre-oxidised and can quickly turn our cholesterol rancid. Only if we are genetically predisposed would eating saturated fats such as egg and butter be problematic, but for most of us, these foods are back on the menu.

Here are a few supplements that have been shown to protect us:

- Fish oil is a natural artery anti-inflammatory;
- Half an aspirin a day will reduce artery inflammation; and
- Vitamin C, alpha lipoic acid and glutathione all work hard at protecting our arteries from inflammation.

Conclusion

Of course, we need to try to avoid the bad air of inner cities. Breathing this air, particularly during exercise, is the other main way of oxidising our blood cholesterol.

Lastly, if you have a very high risk of a heart attack and the above activities have not reduced your risk, your doctor might prescribe you a statin tablet such as Crestor. Although these tablets do lower cholesterol levels, their main action is to reduce arterial inflammation and oxidised cholesterol.

Why don't we all get these tablets? Because they can come with some nasty side-effects. All that most of us need to do is follow some good lifestyle advice.

ABOUT THE AUTHOR

Dr Duncan Carmichael is a medical doctor with 25 years of experience, the founder of the Institute of Healthy Aging (IHASA) in Cape Town, and the author of the acclaimed book *Younger for Longer: How you can slow the ageing process and stay healthy for life.* **L**