Diabetes

Introduction

This leaflet is about type 2 diabetes.

If you have type 2 diabetes it's really worth understanding about food. Lifestyle changes can reverse diabetes. Drugs cannot even stop the progression of this disease.

Dr David Unwin, an award-winning GP has now reversed over 120 cases of type 2 diabetes in his practice at Southport, Lancashire using a low carbohydrate diet.

Virta Health in the USA developed an online program to reverse diabetes using a ketogenic diet (this is similar but stricter than a low carbohydrate diet). **Within one year, 60% of participants had reversed their diabetes, 100% had stopped their main diabetic medication, 90% had stopped or reduced their insulin and there was an average weight loss of over 2 stone.** Nothing even close to this has ever been achieved using mainstream diabetic treatment.

Many natural diets work for diabetes but the key is to use a low carbohydrate, high fat diet. This is what we evolved to live on. The modern diet, packed with sugar and carbohydrates, is bad news for diabetes. **In fact the amount of processed food people eat is a good predictor of diabetes.** The amount of sugar and carbohydrates we are eating has increased alarmingly creating an epidemic of obesity and diabetes. Some people think a high fat diet means having lots of meat and dairy. But this is not so. Nuts, seeds and oily fish are full of fat and vegetables are broken down by bacteria in the large bowel to form short chain fatty acids. These are the foods you need.

Sugar and Refined Carbohydrates

It is impossible to get type 2 diabetes or to continue to have type 2 diabetes if you don't eat sugar, or foods that turn into sugar.

The key to controlling diabetes is removing sugar and refined carbohydrates. Sometimes people assume that if they stop adding sugar to tea or cereals then they will be okay. Nothing could be further from the truth. The typical British diet is a health disaster. The reason is simple: 50% of the diet is

made up of sugar and refined carbohydrates. These have zero nutritional value but break down into sugar and cause a range of harmful effects including diabetes.

Removing or substantially reducing sugar and refined carbohydrates will go a long way to dealing with diabetes.

The first rule of diabetes is you must stop or drastically reduce sugar.

How Much Sugar is in your Food

You might be surprised. Sugar is added to almost everything. **The most useful thing to remember is that a level teaspoonful of sugar is 4 grams (a sugar lump is 5 grams). All packets and time will tell you how much sugar is in 100grams so look at the labels.**

You may be shocked at what you find. A single cola drink can contain 10 teaspoonfuls of sugar, an energy drink 15 to 19 teaspoonfuls, a portion of pizza 8 teaspoonfuls, sauces have between 1-3 teaspoonfuls per portion, one sausage 1 teaspoonful of sugar, most ready meals 5 to 10 teaspoonfuls of sugar, a can of baked beans 6 teaspoonfuls, a packet of couscous 6 -10 teaspoonfuls of sugar, a slice of brown bread 3 teaspoonfuls of sugar, 150 grams of basmanti rice 10 teaspoonfuls of sugar, 30 grams of cornflakes 8 teaspoonfuls of sugar, 150 grams of chips 7.5 teaspoonfuls of sugar, 150 grams of jacket potato 9 teaspoonfuls of sugar, bran flakes 3 teaspoonfuls and a yoghurt 5 teaspoonfuls. A pint of milk contains 6 teaspoonfuls of sugar (lactose). On average some fruit juices have the equivalent of 14 teaspoonfuls of sugar in them. Soft drinks deserve a special mention as drinking just one soft drink per day increases the incidence of obesity. Our diet contains, on average, 23 teaspoonfuls of sugar per day.

Some foods use the **traffic light system**. Green is low –less than 5 grams per 10 grams but beware: if you eat a 400grams packet of soup labelled as green you might still be eating 4 teaspoonfuls of sugar. Amber is between 5 and 22.5 grams of sugar per 100 grams. This is labelled as medium but I would regard this as high. Red is above 22.5 grams per 100 grams and labelled as high – I would regard that as ludicrous and certainly a health hazard.

Most breakfast cereals, including those advertised as being healthy, are laced with sugar. **Foods labelled as low fat are nearly always high in sugar.** Sugar is contained in almost anything that comes in a packet or tin. The average ready meal may contain 8 different types of sugar and can be up to 15% sugar. Sugar is not just present in sweet-tasting foods, it is found in savoury foods such as sauces, canned fish and canned vegetables. It's also added to meat. Fruit concentrates are even added to baby foods giving babies a taste for sugar.

Other sugars are produced from starches and include sorbitol, maltitol, mannitol and maldextrins. Anything ending in "ose" or "ol" will be a sugar. The **worst sugar of all is high fructose corn syrup** because it is absorbed very rapidly and can overwhelm the body's normal protective response (by producing insulin). This in most processed foods and a lot of soft drinks. **It has been used experimentally to create diabetes in rats.**

What is Sugar and Why You need to Know?

Sugar (sucrose) is half glucose and half fructose. When you take a reading of your blood sugar you are measuring only the glucose. But did you know that the glucose is far less dangerous than fructose, partly because fructose can only be broken down in the liver (it is more toxic to the liver than alcohol). **Many diabetic foods, such as diabetic chocolate, are made from fructose, not sucrose** These foods won't cause your blood glucose to rise but they will **do much damage to the body than the same amount of sugar.**

Refined Carbohydrates

These include white flour (and most bread), white rice, processed potatoes and chips, have a similar effect to sugar. **This means three of our staple foods: bread, potatoes and rice are a problem for diabetics and need to be reduced or stopped.**

A useful source of information on a low sugar/low carbohydrate diet is the free app: Freshwell.

Fasting and Low Calorie Diets

Type 2 diabetes is a disease of **too much sugar and too much insulin. Insulin goes up whenever we eat.** It goes up when we eat, especially if we eat sugar and refined carbohydrates, but it also goes up when we eat protein, so in effect it goes up with every meal. However it is meant to go down once we stop eating but often it doesn't. The reason is that we snack between meals and it stays up. **And then insulin gradually rises until we develop resistance to insulin and eventually diabetes.**

TO REVERSE DIABETES WE MUST BRING INSULIN DOWN. The most effective way to do this is by fasting.

The 12 hour Break

TV presenter, Dr Michael Mosley has popularised the 12 hour fast. This means leaving at least 12 hours between the last food in the day and the first food eaten the next day. 15 hours is better.

Dr Jason Fung (author of the Diabetes Code) uses 36hours fasts. He sees people reversing their diabetes on a daily basis in his clinic.

The reasons fasts work is they bring down insulin and this is the key to reversing diabetes.

Bariatric surgery also brings down insulin and reverses diabetes (long before weight loss occurs) but does so less effectively than fasts.

Research by Professor Panda at the Salk Institute found that mice fed a high sugar diet put on large amounts of weight as we do, but those mice that ate exactly the same food but within an 8 hour time period but on far less weight. Later studies on humans found the same. Whenever we eat we trigger insulin release (although much more if we eat sugary foods). Most fat burning starts about 6 hours after the last food of the day (this includes alcohol). The longer we can leave it after this the better the effect, with an optimum result at 16 hours. Twelve hours is more realistic for most people but longer is better.

So it makes a real difference to sugar control if we can switch off insulin for as long as possible. So fasting, having long gaps between meals and avoiding snacks is critical to reversing diabetes. Ideally have at least 12 hours between the last meal in the evening and the first in the morning.

Low Calorie Diets

Professor Roy Taylor put 30 diabetic patients on a 700 calorie a day diet for 8 weeks. They lost an average of 14kg and 12 of these patients reversed their diabetes (all of whom had the disease less than 10 years) and remained free of diabetes 6 months later. Dr Michael Mosley, developed the 5:2 diet after finding he had diabetes and experimenting with intermittent fasting. He restricted his diet to 600 calories twice a week, eating normally on the other days. He lost 9kg and reversed his diabetes in 12 weeks. He describes this in his book "The Fast Diet". In a later version of the diet he recommended 2 weeks on a 800 calories a day followed by a 5:2 diet. He also recommends the 12 hour break between eating in the evening and morning.

Flattening the Glucose Curve

A review of 23 trials in 202, found most effective way to reduce diabetes was to flatten glucose curves (more effective than low-carb and low-fat diets).

This information has come to light as more people have used continuous glucose monitors. These have given us vital information about what causes spikes in glucose. These spikes cause long-term harm to both diabetics and people without diabetes. Ways to avoid these spikes are:

1) Flatten the curve at breakfast - doing this has the remarkable effect of improving sugar control throughout the day. This can be done by having some savoury foods or foods with some protein, fat (eggs, yoghurt, cheese) or fibre (fruit and vegetables) for breakfast.
2) Eat foods in right order: that is fibre first, protein and fat second and sugar and starch last. This reduces sugar spikes markedly.
3) Have a green starter before meals.
4) A sweet dessert at the end of a meal causes less of a sugar spike than a sweet snack.
5) Having vinegar before you eat reduces sugar spikes.
6) Exercising within 70 minutes of a meal (when sugar is rising) reduces the spikes.
7) Where possible avoid eating carbohydrates on their own.

All this comes from the brilliant book Glucose Revolution by Jessie Inchauspe which I would strongly recommend reading. It is full of tips on how to best control diabetes.

Fruit

Fruit is healthy and good for us. However some fruits are high in sugar, especially dried fruits and tropical fruits like mango and pineapple (due to more time in the sun). Other fruits such as berries are usually fine. **Fruit juices are a major problem** because, as the fibre has been removed, so sugar is absorbed much more quickly. Commercial juices are also stored for long periods and have minimal nutritional value. Until diabetes is stable it is best to go easy on fruits, **avoid fruit juices** and check your sugar reading after eating fruits.

Remember This Tip

Every packet or tin of food will show a figure for sugars per 100 grams. Remember this: - a teaspoonful of sugar is 4 grams. You will be surprised how many foods such as cereals, soups, yoghurts and sauces have high levels of sugar. The worst offenders are often low fat foods.

Other Tips

Legumes such as lentils, beans and peas stop spikes in blood sugar even if sugary foods are eaten later.

Two tablespoonfuls of apple cider vinegar at bedtime can improve blood sugar readings the following morning.

More about Food

Stimulants such as **coffee, tea, cigarettes and alcohol** can cause the body to **release sugar** and make control of diabetes more difficult. Be careful with **alcohol.** It is **higher in calories than sugar** and can cause the blood sugar to drop suddenly as the alcohol level drops. Keep the amount of alcohol low and take it with food.

Artificial Sweeteners: Beware of These

Ground-breaking research in 2013 followed 66,000 women for 20 years and gave **results which were totally unexpected**. They found that those **women who drank artificially sweetened drinks had twice the risk of diabetes compared with those who drank sugary drink** (which also increased the risk of diabetes). These sweeteners are bad news and seem to stop us processing sugar in the normal way. They also create sugar craving. They have other side effects: saccharin is associated bladder cancer in rats, aspartame is associated brain tumours in animals and can cause severe hypoglycaemia (low sugar) making diabetes uncontrollable, sucralose increases body weight and damages good bacteria in the gut. A study published in Stroke in 2017 found artificial sweeteners increased dementia and stroke by 300%. Avoid anything with Diet on the label. Some foods labelled as sugar-free contain maltodextrins. These are modified corn sugars which can cause spikes in sugar levels in a similar way to simple sugar. The safest sweetener is probably Stevia but it's best to avoid all sweeteners.

Seed Oils: An Unsuspected Cause of Diabetes

However, there are other unsuspected villains out there when it comes to diabetes. I'm talking about the seed oils. In a **ground-breaking study,** mice were fed either coconut oil, fructose, soybean oil, a high fat diet or a combination. All diets contained the same number of calories. Those given soybean oil rapidly developed diabetes. Those given a combination of fructose and soybean oil also developed diabetes but surprisingly it was less severe. Those on the other diets did not develop diabetes. What does this mean? It means that **soybean oils (and other processed oils) are a major and usually overlooked cause of diabetes.**

Vegetable oils are everywhere; they make up 32% of the calories in the standard western diet (sugar 22%); the commonest are soybean and canola oils. Soybean oils were responsible for 0.02% of calories in 1909 but 20% by 2000. They cause **9% more weight gain than fructose** (the sugar most responsible for weight gain). They have no nutritional value and a worrying number of harmful effects (weight gain, diabetes, heart disease, increased mortality). They are one of the most harmful foods we can eat. They are found in virtually all processed foods and in cooking oils. One of the best things you could do for your health is to avoid processed foods and these industrially-produced oils (sunflower, soybean, safflower, rapeseed -also called canola- and corn oils). Cook in butter, lard (or good quality olive oil) instead.

Good and Bad Fats

Make sure you have the right fats in the diet. Cut down on hydrogenated fats such as margarines (a small amount of butter is better), and beware of supermarket oils (cook with olive oil, coconut oil or butter), and fried foods. **It is particularly important in diabetes to get enough essential fats** (to protect the arteries). Good sources of essential fats are oily fish (mackerel, sardines, anchovies, pilchards, herring but not farmed salmon) and seeds (linseed, sunflower, safflower, pumpkin). You can sprinkle these on cereals or salads.

Diabetes: the Chemical Connection

The major cause of both diabetes and obesity is well-understood: the flooding of the food market, in the last two to three decades, with poor-quality, high-sugar foods. However the relationship between obesity and diabetes is not as straightforward as it may seem. We know that persistent organic pollutants (POPs), notably BPA, are linked to obesity; this connection has shown up in a number of studies. Research in several countries has, found that obesity is far more likely to progress to diabetes in those who have higher levels of POPs in their bodies. In one study it made getting diabetes thirty-eight times more likely. In other words sugar is the fuel behind the diabetes epidemic but POPs were acting like a catalyst, accelerating its development.

We all have chemicals in our fat and removing them is not straightforward, however causing the body to sweat (exercise, saunas), avoiding excess chemicals (pesticides, many personal care products, air fresheners, plastics) and having a good diet will help.

Special Foods

The first is **cinnamon**. The problem in type 2 diabetes is the sugar cannot get out of the bloodstream and into the cells. A chance discovery by Dr Richard

Anderson found that cinnamon helped sugar to get into the cells and diabetic volunteers given between 1 and 6 grams of cinnamon daily reduced their sugar levels by 20%. Some even had normal sugars. It also reduced bad cholesterol (LDL). The amount needed was ½ teaspoonful daily. This can be added to salads, curries, stews or oatmeal. Not all studies of cinnamon have given positive results. The type of cinnamon used as a spice in cooking (Ceylon or sweet cinnamon) has been associated with negative studies but a meta-analysis (review of many studies) of cassia or Chinese cinnamon gave positive results. Using doses of between 1 and 6 grams daily it reduced fasting sugar, HbA1C and slightly reduced blood pressure. The best dose may be about 1 gram daily of the powdered herb.

A study of diabetic patients given either the herb **berberine** 500mg three times daily or metformin 500mg three times daily for 3 months found both compounds had identical effect on diabetic control and the HbA1c dropped from 9.5 to 7.5 in the berberine group. In another group given berberine 500mg three times daily the HbA1C dropped from 8.1 to 7.3 and sugar and cholesterol levels were significantly reduced. Other studies have shown similar results with berberine plus a reduction of blood pressure. It is thought that berberine improves insulin activity by activating an enzyme.

Another good food is oats –especially **oatbran**. Taking this with your meal can reduce the peaks of sugar by half – which is a greater effect than the drug metformin.

Another food long known to be helpful for diabetic control is the **Jerusalem artichoke.** Other foods which have anti-diabetic effects are green tea, buckwheat, garlic, cherries and plums.

HbA1C

Diabetes is a disease of sugar overload. The disease happens when the cells of our bodies get jam-packed with sugar. Doctors measure blood glucose (to see how much sugar is in your blood stream) and the HbA1C to measure sugar in the blood stream over a longer period. **But there's a major problem with these measurements.** They measure what's in the blood and the blood has only a teaspoonful of sugar in it: –most of the sugar is elsewhere in the body. So if we use a drug to bring the sugar down it simply pushes more sugar into the cells. The HbA1C goes down, doctors rejoice but the diabetes gets no better. Numerous studies have shown that controlling HbA1C makes little difference to outcomes in type 2 diabetes (though it helps in type 1). This is not the answer. The solution is to stop putting sugar in to the body (through diet) and to get sugar out of it (through fasting and exercise).

Glycaemic Index

The problem in diabetes is the body can't handle sugar. Too much sugar gets into the blood stream too fast leading to too much insulin being released. This is what happens every day with a typical western diet. After a few decades of this the body can't cope any longer. So it is important to know which foods release sugar quickly and often to avoid them. Foods that release sugar quickly are said to have a high glycaemic index. Charts of glycaemic index are available on the internet. Eat foods with a low number on glycaemic index.

The glycaemic index doesn't take into account the calories in food. There is a slightly different system called glycaemic load which takes both into account. For instance watermelon has a high glycaemic index but little carbohydrate so it is not a problem but has a low glycaemic load. Discussing the glycaemic load is beyond the scope of this leaflet but it is well worth looking into.

Testing Your Sugar

Although testing glucose has limitations (as explained above), finding what foods push up blood sugar is useful. When it comes to diabetes everybody is different. One food may be a problem for you but not another person with diabetes.

The only way to find this out is to test your own blood sugar. You can either test it before or after meals (1 or 2 hours after). **Although the ideal time is after meals, I would recommend doing it before meals** simply because it's easier to remember. A simple system is to test before each meal three times weekly (Monday, Wednesday and Friday for example). Ideally all readings should be below 8. Write down your results. **If you get a high reading then think back to your last meal and see what you ate and try and work out why the sugar was high**. Something in that meal caused a problem. Once you have been taking readings for a while then you may be able to guess what your reading will be. Before taking the reading, think back to your last meal and guess what your reading will be. You will soon get good at this and then you will be able to do a lot less blood tests.

Testing your sugar will give you two crucial pieces of information: which meals are okay and which meals are not.

Remember exercise also affects your sugar reading. Many people find that they have lower readings at work if they are doing a physical job and higher readings at weekends.

Supplements

There is also evidence that a deficiency of **chromium** plays an important part in diabetes, particularly late onset diabetes. Like metformin, chromium makes the cells more sensitive to insulin. There have been over 20 studies of chromium in diabetes. Not all have been positive but benefits have been shown to occur where 250mcg or more was used, especially when the supplement was chromium picolinate. A Chinese study using 500mcg of chromium picolinate showed halving of fasting and after meal blood sugars. A study using 600mcg of chromium picolinate with 2mg of biotin caused a drop in sugar that was 7 times as great as with metformin. Chromium is very safe and you would need to take over a hundred tablets daily to reach toxic levels. A good regime is to take 200mcg with meals for 3 months then 500mcg daily.

Magnesium is another key nutrient. Animals made magnesium deficient develop insulin resistance – the first step towards diabetes. Low magnesium levels make diabetes more likely in humans as well and diabetes progresses more rapidly if magnesium is low. Magnesium is found in green leafy vegetables, seeds and nuts but progressive depletion of magnesium in the soil over the last 50 years means the majority of people now have low levels of magnesium. In addition fructose in the diet depletes the body of magnesium as do many drugs, especially diuretics (water pills) and PPIs (like omeprazole/lansoprazole).

Pycnogenol lowers blood sugar in a dose-dependent manner: the higher the dose the greater the reduction (the study used doses from 50 to 300mg daily). It also protects against diabetic retinopathy.

Vitamin K2 alters our sensitivity to insulin. It can reduce the need for insulin by up to half. For more information on vitamin K2 see leaflet on osteoporosis.

Diabetic Drugs

No drug can reverse diabetes as they don't deal with the root cause of the disease (too much sugar). However some drugs are far superior to others. Unfortunately they have strange and confusing names and there are many of them.

However let's keep it simple. **Type 2 diabetes is a disease of too much sugar and too much insulin. The higher the insulin the more difficult it is to lose weight (and hence reverse the disease) and the more hunger**. The major cause of death in diabetes is **heart disease**. It follows logically that the best drugs should reduce sugar, reduce insulin and reduce heart disease. In addition we want a drug that does not cause hypoglycaemia (low blood sugar). So now we know what we are looking for.

Unfortunately some drugs do the opposite of what we want.

The most commonly prescribed drug for diabetes is **Metformin (Glucophage).** It has several advantages: it doesn't cause obesity, it doesn't raise insulin (but doesn't lower it either), it doesn't cause hypoglycaemia and it does reduce deaths from heart disease. It also reduces cancer risk by an impressive 21 to 57%. However it doesn't remove sugar from the body and doesn't stop the disease progressing.

Another class of drugs are called **sulphonylureas.** Perhaps the most commonly prescribed is Gliclazide. These increase insulin, increase weight, increase heart disease (by 40-60% compared to metformin), increase cancer (by 36% compared to metformin) and often cause hypoglycaemia. These drugs have little to recommend them.

The most well-known drug is **insulin;** it is usually given for more severe type 2 diabetes. It obviously raises insulin (and makes weight loss near impossible), it causes atherosclerosis and increases heart disease. It also increases cancer risk (by 44 -90% compared to metformin). A meta-analysis of 20 studies in 2016 found that insulin had no benefit of any clinical outcomes but had significant adverse effects. It often causes weight gain and hypoglycaemia. Again it has little to recommend it.

Another group is the **thioazolidedones (TZDs) or glitazones** such as pioglitazone. These cause weight gain and in the case of rosiglitazone increase heart disease. Pioglitazone is linked with higher rates of bladder cancer. Again these drugs have little to recommend them.

Another group of drugs are the **gliptins or dipeptidyl peptidase-4 (DPP-4) inhibitors.** These include drugs such as sitgliptin and linagliptin. Like metformin they neither increase or decrease insulin. Unlike metformin they have no heart benefit (but don't increase heart disease like insulin and the sulphonylureas do). They have no effect on weight.

A study published in JAMA in 2016 found none of the above drugs reduced the complications of diabetes.

Another group is the **gliflozins or sodium-glucose cotransporter 2 (SGLT2) inhibitors.** These include canogliflozin, empagliflozin and dapagliflozin. These work by excreting sugar in the urine. These reduce sugar, reduce insulin, reduce weight, reduce heart and kidney disease and reduce mortality. The excretion of sugar in the urine can sometimes cause adverse symptoms, such as urinary infections. However it is easy to see they have marked benefits compared to most other diabetic drugs.

Another group are the **alpha-glucosidase inhibitors such as acorbose.** These block the digestion of carbohydrates and for this reason bloating can be troublesome. However they also reduce weight, insulin and heart disease.

Another group is the **glucagon-like peptide1 (GLP-1) analogs or glutides** such as liraglutide. These drugs are given by injection and are sometimes used for weight loss.

They can cause a feeling of fullness and nausea and increase the chance of gallstones. However they also cause weight loss, lower insulin and reduce heart disease (though less so that the previous two).

The last three groups together with metformin have obvious advantages. So why aren't they used more? The reason is, in the case of SGLT2 inhibitors and CLP-1 analogs, that they don't reduce HbA1C much. Why is this important? Doctors are taught that reductions of HbA1C mean an improvement in diabetes (forgetting HbA1c is just a measure of glucose in the blood not in the whole body). Unfortunately many of these drugs just push sugar out of the blood (hence lowering HbA1C) into the body where it causes just as much, if not more, damage.

But the real benefit of any drug is not HbA1C going down; it is insulin, weight and diabetic complications going down.

Diabetic Neuropathy

This is typically difficult to treat. Well here's a treatment your doctor may not have told you about. In a study of 22 patients put on a plant-based diet, 17 out of 22 recovered after 4 days of treatment. This was an in-house diet but these 17 patients were later followed up for years and all but one remained free of the neuropathy and some improved further. **Regression of Diabetic Neuropathy with total vegetarian Diet. J Nutr Med, 1994;4(4):431-9**

When Diabetes Gets Difficult: Hidden Allergies and Toxicity

This section is for people with hard-to-control diabetes, sometimes called brittle diabetes. Sometimes it can be hard to control in spite of doing all the right things. First make sure you are not using aspartame. However the most likely reason for poor control is an **idiosyncratic reaction to a specific food** or chemical which specifically affects you. This can cause inflammation and destroys the receptor (called glucose transporter type 4 or GLUT 4) which normally allows glucose to enter the cell. The sugar is then dumped in the fat stores, usually in the abdomen.

To avoid this **you need to identify the food causing the inflammation**. Make a list of foods you eat every day, those you eat two or three times a day and those you eat once a week or less. Note chemicals like aspartame and

monosodium glutamate can also cause this problem and may need to be tested. Start with those you eat daily.

Leave one of these off for 5 days then take a blood glucose reading before breakfast, eat this food on its own and then take another reading one hour later. Keep testing the daily foods and then the two to three times daily foods and then other commonly eaten foods until you have identified the culprit or culprits. Once you know which foods cause your sugar to spike and have eliminated them from the diet your diabetic control will improve, sometimes dramatically. Sometimes the diabetes can disappear completely. This method was a favourite of the late holistic practitioner Dr Patrick Kingsley who specialised in complex problems and used it for many years; it is based on the book Victory over Diabetes. The authors noted a wide range of foods could cause problems.

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