

FOOD INTOLERANCE NETWORK FACTSHEET

Atrial fibrillation and other heart rhythm disorders

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Key symptoms: palpitations – tachycardia (fast heart beat) - supraventricular tachycardia (SVT) - atrial fibrillation (AFib) - ventricular tachycardia (VT) – chest pain – chest pressure – heart attack

Introduction

- Palpitations are an awareness of the beating of your own heart – it can be normal, too slow, too fast (tachycardia) or irregular - skipping a beat or with extra beats.
- Tachycardia means fast heartbeat, bradycardia means slow heartbeat.
- Supraventricular tachycardia (SVT) is an irregular and rapid heartbeat in the lower chambers of the heart (or atria).
- Fibrillation means irregular heartbeat.
- Atrial fibrillation (AFib) is the most common kind of SVT (heart rhythm disorder). AFib without underlying heart problems is known as lone atrial fibrillation, meaning the cause is not known by the medical profession. AFib can be a risk factor for strokes and heart attacks.
- Ventricular tachycardia (VT).is an irregular and rapid heartbeat in the upper chambers of the heart (or ventricles). VT can sometimes change without warning into a deadly arrhythmia called ventricular fibrillation (VF).
- Ventricular fibrillation is the main cause of sudden cardiac arrest (SCA). The patient can lose consciousness within seconds and without emergency medical help can die within minutes.

MSG and heart rhythm disorders

Although doctors rarely realise, all of these conditions - lone atrial fibrillation, supraventricular tachyarrhythmia and ventricular tachycardia – have been associated with MSG in medical journals^{1,2,3}. So have the symptoms below^{4,5}:

- burning sensations in the back of the neck, forearms, chest
- facial pressure/tightness
- chest pain
- headache
- nausea
- palpitations
- numbness in back of neck, radiating to arms and back
- tingling, warmth, weakness in face, temples, upper back, neck and arms;
- bronchospasm (difficulty breathing, asthmatics only)
- drowsiness
- weakness

Food additives associated with heart symptoms

The following additives have been associated with heart symptoms by our members and references are supplied where also mentioned in the medical literature:

- MSG (flavour enhancer 621)^{1,2,3,4}
- new flavour enhancers - disodium inosinate(627, DSI or IMP); disodium guanylate (631, DSG or GMP); ribonucleotides (635, combination of IMP and GMP also called I&G)
- sulphite preservatives 220-228
- propionate preservatives 280-283 including calcium propionate⁶
- sodium benzoate (preservative 211)

Additive reaction reports are generally regarded with suspicion by food regulators because food reactions are easy to misinterpret. Reader reports in this factsheet have been checked for accuracy. It seems possible that any of the food chemicals commonly linked to food intolerance reactions including natural chemicals like salicylates^{7,8} could also be linked to heart symptoms. See [Introduction to Food Intolerance](#).

Food additives as a possible explanation for the increase in atrial fibrillation

In Australia, hospital admissions due to atrial fibrillation more than tripled over the 15-year period from 1993 to 2008 and doctors do not know why⁹.

There are reports in medical journals of a link between MSG and lone atrial fibrillation, supraventricular tachyarrhythmia, and ventricular tachycardia^{1,2,3}.

In the mid-1990s newer and stronger ribonucleotide flavour enhancers designed to boost the effects of MSG up to 15 times¹⁰ were introduced into our food supply.

Of 27 Food Intolerance Network reader reports concerning food-induced heart symptoms, approximately:

- 60% reported reactions to MSG and other flavour enhancers
- 25% reported reactions to sulphites (of whom 3 also reacted to MSG)
- 11% reported reactions to calcium propionate (bread preservative 282)

As well there was one report of a reaction (palpitations and severe arrhythmia in a 14 yo to sodium benzoate (211).

In an internet forum specifically for people with atrial fibrillation, 10% listed MSG and 4% listed aspartame as triggers for their attacks (The AFIB Report, www.afibbers.org).

In view of the cost of both potentially unnecessary hospitalisations and human suffering, it would make sense for doctors to question their patients' intake of food additives.

Food regulators and additives

The food industry is worth billions of dollars. It has been shown that government agencies often take on the values of the companies they are supposed to regulate and this has been shown to be the case with the US FDA (Food and Drug Administration)¹¹. Food regulators have concluded that reports of serious symptoms such as atrial fibrillation, ventricular tachycardia and arrhythmias are not worth considering because they are 'single case reports that lacked confirmatory evidence linking the reactions to MSG content of foods'¹².

People frequently ask how the government can allow such dangerous additives and how we can get them banned. Understand this: there is no-one in government protecting you. We cannot get additives banned. But you can refuse to buy – and spread the word. When manufacturers realise that consumers don't want to buy products with nasty additives they will first hide the additives (so you have to know how what to look for, see [How to Recognise MSG](#), below) and secondly, they may eventually remove the additives. In the meantime, don't eat out unless you know the ingredients in what you are eating. There are many delicious additive-free recipes in my Failsafe Cookbook.

In 1986, emergency medical technicians were warned to consider whether they were dealing with MI (myocardial infarction, the medical name for heart attack) or MSG when the patient's symptoms include sweating, numbness around the face and neck, chest pressure and burning sensations, palpitations, nausea and vomiting⁵.

Since then, the Chinese Restaurant Syndrome - now officially called MSG symptom complex¹² - has been discredited by the food industry in numerous articles targeting the medical profession¹³. However, some consumers continue to experience these symptoms. When reading any scientific article, remember that results can be influenced by the source of the funding¹³.

Reader reports

[933] 635: AF (atrial fibrillation) due to flavour enhancers (July 2010)

I would like to relate my experience, which I consider was due to the ingestion of 635. I have in the past had episodes of AF (atrial fibrillation) which vary both in frequency - not thankfully very often - and severity. A couple of weeks ago I had such an attack and had that evening eaten a product called Borg's Chicken & Vegetable rolls. I did not associate these latter with the AF. However we had a few left in the freezer and late yesterday afternoon, I had another.

Last night having gone to bed I awoke about 9 p.m. realising I was having an attack. Various medication I have did not relieve it and the episode lasted for 3 hours. Next morning I examined the Borg's packet and found the 635 ingredient. I would be interested to know whether you have had similar complaints. - Brian, Qld

[872] 635: Increasing episodes of tachycardia, arrhythmia and ectopic heart beats (November 2009)

I had been suffering increasing episodes of tachycardia, arrhythmia and ectopic heart beats - two to three episodes a day. Despite escalating testing with various cardiac specialists over the past 6 months, nothing was determined apart from the fact I had high blood pressure and was placed on a low dose of appropriate medication for that. No known cause for my cardiac anomalies.

Last Tuesday (tis Wednesday of following week now) I ate a delicious bowl of my home made potato and leek soup for lunch. I experienced my usual (but scary and increasingly strong) palpitations and (frustrated, a little frightened and upset), I broadly Googled "heart palpitations" on Australian sites. Up came your website that mentioned 'soup' in the first Google lines that came up. Thinking "that's funny, I just ate soup, I'll have a look at that one before I find what I'm really after", I looked at it. Well, that's what saved me. What I found there were countless, comforting, case studies of people just like me, suffering consequences to MSG (635 in particular), just like me, who didn't know what was causing it. Just. Like. Me.

For me, it was a revelation, an epiphany. I was euphoric. My God, what have I been poisoning my family with, for so many years? Weekly, particularly in winter, I lovingly make risotto, casserole, beef in red wine, soup, etc, etc. Thinking I'm making healthy foods for my husband and my children, I've made all these dishes with more than a liberal dash of commercial stock (cube and/or liquid), all of which (no exceptions, I find) are loaded with MSG.

I stepped, willingly, into the world of chemical additives, flavour enhancers, neurotoxins, excitotoxins and ribonucleotides.

To cut a long story short, I have strenuously avoided any flavour enhancers (particularly 635) and all MSG in its myriad disguises since that bowl of soup on Tuesday. I did not expect things to settle immediately, but I've gone from having 2-3 cardiac episodes a day and thinking I was going to die like my father, at 46, to NOT ONE EPISODE IN MORE THAN A WEEK.

Gotta be something to this and I'm sincerely and eternally grateful for the information you have on your website and the comfort and advice it gave me. I think you saved my sanity and my life. – Shannon, WA

[640] 220: Ventricular arrhythmia link to sulphites (May 2008)

I just thought I'd tell you that although my cardiologist never questioned my diet, after two hospitalizations in emergency for ventricular arrhythmia, and nearly two years of fearing for my life, feeling my heart jumping all over the place, and being miserable, I finally linked a very bad episode to a wedding and consumption of red wine, and then to the foods in my cupboard. Since eliminating sulphites, I have had NO problems. None of the medication I was given worked, (medication rarely does for arrhythmia). I wonder why didn't anyone mention this, not when I went to the doctor, not when I was in hospital fearing I was going to die. I've tested this three times, having been 'arrhythmia free' for months, and then drunk champagne or wine, eaten foods (everything you would normally eat and drink at a function) and each time, 4 to six hours after, my heart goes crazy and I can't sleep for the whole night. It's like I'm 'buzzing' and restless, with my heart banging around. This is the honest truth, I have no symptoms, and I'm medication free, and even felt so good I've got back into exercise without fear of dropping dead! It's been six months (since the wedding that triggered the biggest attack ever, and the linking to red wine), that I've been 220 free, and free of symptoms (apart from the three 'tests' which were one night tests). The link was obviously cumulative, the more 220 over the day the worse the problem that night and the next days. Alcohol with 220 is a big trigger - so much for drinking red wine every night for your health! My normal diet was toxic, I was eating dips, fruit juice cordial, I ate cereal with dried fruit (and 220) every morning, and sauces (it's in everything) and consumed dried fruit as snacks, thinking it was 'good for me'. My mother said (in her wisdom) that the foods I told her about seem to have both MSG & sulphites and she thinks they react in some way, but MSG on its own doesn't create a problem, and sulphites on their own, in wine, do. Only asthma is mentioned on the official government additive information site, but this is a message I wish could get out, so others could at least try it, as it won't cause harm to avoid this preservative - Michiko, WA

[457] 635: Heart palpitations from 635 (September 2006)

I have been getting heart palpitations for about 18 months. I saw a doctor who said it was anxiety attacks. Rubbish. So I started to take more notice of the foods I was eating. I noticed that it was instant after certain foods - corn chips, Sanitarium veggie sausages and some Chinese foods (fried rice etc.).

I know it's 635 because the palpitations come within half an hour of eating those foods, and are quite strong for about 2-3 hours. I'm still trying to figure out if it lasts to a lesser degree for a few more days, or if I've eaten something else in the meantime that I don't react well to. – by email.

[710] 635: Chest pain from flavour enhancers 627 and 631 in Weight Watchers meals (December 2008)

Some months ago I started eating Weight Watchers meals at lunchtime on week days as a change from sandwiches and thinking they were healthier than bread. My favourites were the lasagna and spaghetti and meatballs. During that time I saw my doctor and had an ECG done because I was getting chronic heart/chest pains.

After a couple of months the pains went away and I've not had them again until yesterday when I ate a WW Lasagne meal for the first time in months. The last time was when I was having chest pains. Yesterday the chest pains came back very badly. Today I'm better but still a bit sore. When I looked up the ingredients, I found 627 and 631 amongst other things can cause chest pains. It's very scary that this is what it was – they must put a bucketload of the stuff in there because I had not had the chest pains before I had the WW Meals. I honestly did think I was having a heart attack, the pain was incredible. – Caroline, by email

[937] 635: Labile blood pressure & chest pain from weight loss products (October 2010)

I have been suffering from extremely labile blood pressure since 1995. The worst problem associated with this was raised BP within an hour or two of going to sleep. I wake feeling unwell, head hurting, cold extremities, always need to urinate, and at times, shivering uncontrollably. I used to suffer from palpitations with it - but in recent times this is rare. I've been investigated for everything possible over the years. I am inclined to eat organic food and always watch the labels on any packaged food.

About 5 weeks ago I decided to join Jenny Craig as I felt I needed to lose up to 10 kilos and have been struggling to get this weight off. In the first week I was appalled to see how many 'numbers' were listed in the food. I could not eat things like their packaged snacks - with colours, flavours etc in them. At this point I consulted with them and asked for the food to be adjusted to suit not eating some of the colours that I know are not good, any sweeteners and Nitrates/Nitrites. This gave me a very limited list - and I could not avoid some Sulphites and Flavour Enhancers. I began to notice 635 coming up in many of the foods - and even most of the dinners.

By about 3 weeks into the food I woke feeling really bad with the old symptoms - including a feeling of pressure in my chest (which had been vaguely there the night before) and blood pressure that measured 217/114. As it did not reduce after a short while of sitting up (my usual method of allowing my bp to lower) I went to the local hospital. They did an ECG and gave me 1/2 Anginine and O2 which eased the symptoms. When the doctor found that my mother had Angina he suggested a Thallium Stress Test. This has been completed and the results are normal.

I have often since '95 suffered from a slight 'pain' in the chest - once definitely after eating a very tasty bowl of Chinese soup. I lived in Singapore for almost 12 years - from 91, but it was not until 95 when I was home for a short while and working on a camp site - eating mass

produced food that these symptoms started to occur regularly...hence the visits to many doctors and specialists - always with a negative result for whatever they tested for. Food additives simply did not occur to me.

A few days after my recent visit to hospital, I thought - how dumb can I be?! ...it's the food! I stopped the weight loss products and within 36 hours began to feel well again. When did they begin to put 635 in food? It keeps being called a 'newer' FE and I wonder if it appeared roughly in the mid nineties. I believe it may be a combination of 627 and 631. Some of the JC foods have these two listed together and some has 635 listed. Many of the foods also contain the hidden MSGs such as HVP.

I now have a letter from my doctor to say that there is evidence that I am highly sensitive to vaso-active food additives to request a refund. This has been an 'interesting' exercise that may finally give me the answer to my very labile BP and all the odd symptoms that seem to go with it.- Ros, by email (Yes, 635 appeared in the mid-nineties and is a combination of 627 and 631 - Sue)

[542] Palpitations and MSG (January 2007)

Having suffered panic attacks and palpitations on-and-off for years I started seriously looking at the foods and additives I was stuffing into my system. I can now tell you that the prime trouble maker for me is flavour enhancers. As others have done before me I visited doctors and hospitals after bad attacks only to be sent home with a 'nothing wrong with you' report. Then one day, I had taken a double dose (flavoured corn chips and kebabs) which well-and-truly landed me in hospital. The interesting point to this story is the specific effect the MSG had. While I was on the heart monitor (for about 12 hours) the doctors and I could see what my heart was doing and we were able to determine the safety of the situation.

The sinus node (the electrical trigger) was firing and was firing regularly. This was a good thing! The troublesome aspect was the MSG was somehow interfering with the distribution of the signal around the heart. This meant that although the heart was beating/pumping, it was doing so at a reduced flow rate. That is, the contractions weren't as strong as they should have been. Although it was pumping enough blood to keep me lucid/conscious, a beat could not be felt by me in my chest, nor could a pulse be felt at my wrist. NOTE: it felt as if my heart had stopped but in fact was just beating weakly. I tried to convince the doctors this was MSG-induced, but they just closed their ears, their eyes glazed over, and told me they couldn't understand why my heart was behaving the way it was.

Now I know what my heart is doing, I no longer have panic attacks triggered by a few 'missed beats'. The difference is knowing that the ectopic beats aren't going to kill me, and even though I can't feel the beats, I reason that if I'm still alive and not suffering chest pain etc then I'm just having another 'episode'.- by email

[116] 282: Fast heart beat (tachycardia) (August 2001)

I have suffered for years from episodes of fast heart beat. It can be very strong and disturbing, and I have ended up in hospital but it goes away after a few hours and they could never find anything wrong. For a while I was getting it every afternoon. Eventually I worked out it happened on the days I ate bread. A friend suggested it might be the preservative in bread. When I eat Brumbys' bread I have no problems, but when I ate some preserved bread without thinking at my mother's place, I had another episode. - NT

[117] 635: Irregular pulse and atrial fibrillation (August 2001)

I react to MSG, flavour enhancer 635, metabisulphite preservatives, and yellow colour in cordial. I also have food intolerance to salicylates. From MSG, 635 flavour enhancer and metabisulphite preservatives I get very irregular pulse and atrial fibrillation. The atrial fibrillation settles down after 12-20 hrs depending on how much offending additive I have

eaten (in a restaurant it is difficult to tell) - and my pulse settles down faster if I drink lots of water every hour to flush the toxins out of my system. I've learned to read the labels and carry a reminder in my purse of the numbers to which I react when shopping. I have learned which brands or types of foods are a problem and steer clear of those. - Mary, Qld

[197] 282: the bread preservative and heart rhythm (September 2002)

Thanks for interesting article on the effects of bread preservative. I went to my heart specialist a couple of weeks ago and told him I that when I eat bread, it makes the rhythm of my heart go absolutely crazy. It misses one beat in four and makes me feel quite unwell. He told me that was absolute nonsense, but he would get me to wear a 24 hour heart monitor. So I did that and when they analysed the data, sure enough, 35 minutes after I ate four slices of bread, the graph went wild. But he still doesn't believe that it was caused by bread. So I'm going to look for another heart specialist who will listen to me.. - by email

[711] Heart symptoms from benzoates, bread preservative and sulphites (December 2008)

My 14 year old son has Aspergers syndrome. He experiences arrhythmia and severe heart palpitations every time he consumes any additives 211, 282, 220 etc. If he has been free from these additives for over two weeks then he will get away with the first exposure and then it accumulates and gets worse. We saw a heart specialist and he found no problems, just blaming it on anxiety. He also gets more aggressive and violent once it accumulates... like Jekyll and Hyde. Sadly it is so hard to convince and be believed by doctors and his psychiatrist that these additives affect him. – Therese, by email

[694] 220: Ventricular arrhythmia and sulphites (2) (November 2008)

In reply to reader story [640] ventricular arrhythmia from sulphites, those are the exact same symptoms I get when having any sulphites. If I have too many I also get tongue swelling. This reaction happened out of the blue a few years ago at the age of 42. Wine and beer affect me the most and I avoid sulphites in any foods I eat – although I can have sips of wine and small bites of sausages etc with no ill effects, once I have the equivalent of about 3/4 glass of wine with sulphites, I suffer. I always wake up about two hours into sleep, with a temperature and my heart going crazy – then I get stomach cramps, nausea and a strong urge to use my bowels. The next day I feel lousy and my heart feels like it's got an extra beat for a couple of weeks. I'm happy to have preservative free wine, beer and sausages in my life but 220 and 223 are in way too many products – and for no use at all – my preservative-free sausages last for 4 days beautifully in the fridge. MSG doesn't affect me (I had a challenge of it in hospital) and I don't know if the other flavour enhancers bother me, I avoid them and haven't had them for three years. Although nothing is ever quoted in the medical literature, my immunologist is very familiar with these types of reactions. We have been conned by the manufacturers into believing food requires additives for our benefit but I agree with Michiko, ventricular arrhythmia is a terrible and frightening experience! – Corrine, by email

[693] Arrhythmia from MSG and sulphites (November 2008)

I suffer from mild arrhythmia (I had a hole in my heart since birth and had an operation when I was 21) which is well controlled by medication. I am not a drinker, but do occasionally have one or two drinks and have noticed that the arrhythmia is worse and now I know why. I know that MSG aggravates the condition and don't touch the stuff. – Julie, South Africa

[692] Heart palpitations felt like a washing machine out of balance (November 2008)

Although I knew I was allergic to medications containing sulphur, I never realised to avoid foods containing sulphites and other additives. During the 1990s I used to eat fruit mince pies and dried fruits (because I thought they were healthy) and many other things that are now out of bounds. I also started to experience sudden uncontrollable coughing fits at the most

embarrassing times, so always carried a packet of Fisherman's Lozenges to pop in my mouth on these occasions. I noticed that I started having heart palpitations which would last a short time, but got scared at times when they became stronger or lasted longer (I likened the feeling to my heart being like a washing machine out of balance). The Doctor told me to go to hospital when it happened so I could be put on an ECG machine, but with no transport I knew it was impossible to get to hospital before the palpitations stopped. I got a taxi to the hospital one time, but of course it was over by the time they got the machine hooked up. Eventually I linked these palpitations to the Fisherman's Lozenges and I haven't had any more palpitations since ceasing to take them. Now I am a lot wiser about the foods I eat and I am certainly a lot better for it. – Gladys, by email [Fisherman's Friend lozenges are made from all natural ingredients and do not contain preservatives. However, they do contain licorice, menthol, eucalyptus oil and capsicum tincture all of which are very high in natural salicylates – it seems that Gladys' palpitations may be associated with salicylates in the lozenges she took to overcome the coughing caused by sulphites.]

[691] 220: Racing heart (tachycardia) and asthma from sulphites (November 2008)

In response to your newsletter regarding 220 effects to the heart, I first had a reaction to wine a couple of years ago. I woke in the middle of the night with my heart absolutely racing - I paced the floor, drank plenty of water and tried to relax. Eventually I was able to go back to sleep. This has happened regularly since and loving wine I have found it difficult to control. Fortunately we have a cellar of aged wine and over the time I have found that I am able to tolerate aged red wine and better quality white wines without effect. A single glass of some white wines, however, will give me palpitations and wake me through the night with my heart racing.

Recently I have also been able to link my reaction to episodes of asthma. The first at the age of 30, and the second at 35. On the second occasion I had been drinking 2-3 glasses of white wine every day during a two week holiday. Whilst I was able to select wines that didn't affect my heart at that level, by the end of the second week I experienced my second ever bout of asthma. Recently I also ate some cheese and suffered palpitations. Checking the label showed that it had sulphites listed. – Amanda, by email [cheese does not normally contain sulphites unless flavoured, e.g. Mersey Valley sweet chili contains two sulphites: 223 listed as preservative and 221 listed as antioxidant.]

[458] 635: Irregular heart beat - "thought I was dying" (September 2006)

I had suffered from a slight temporary problem now and again which seemed like an extra beat of my heart but couldn't pin it down to anything so put it down to probable after-effects of a cold or flu but one morning after enjoying a very large multi-course Chinese meal while on a works outing dinner the night before, I felt terrible and quite ill! I could sense an irregular heartbeat that seemed to be every second or third beat, I was going dizzy and feeling faint now and again, had a funny tingling feeling going up my neck into my head and scalp and felt very weak. I honestly thought I was dying. It was so bad I even wrote a quick note to the wife and kids. Obviously I sought medical treatment, had various tests and an ECG which all showed up normal...the irregular beats were intermittent now and I got to feeling a little better, the doctor said everyone suffers from irregular beats now and again, it's a benign condition and no problem!

Anyway I decided it may have been to do with the amount of alcohol I had drunk at this works dinner and gradually the beats got back to normal and I put this down to my now 'sensible drinking'a few weeks later my wife and I arranged to meet up with a couple of friends and have a Chinese takeaway at their house...you guessed it ... in the night and next morning the same feelings came back and the irregular beats ... I now dismissed the alcohol connection and thought it could be something I had eaten, so being a bit computer literate I looked up on a search engine the phrase 'heart problems after eating Chinese food'. I was amazed at the search results, that so many people suffered from this and that largely doctors were ignorant of this! One web site even referred to it as Chinese restaurant syndrome!.....so knowing the problem and after extensive research on the net I know if I can avoid MSG as much as

possible I do not get these heart flutters!...even a packet of hula hoops (potato snacks) can give me slight heart irregularities.

Two years later: I still get irregular beats even after a packet of corn snack type crisps. I find that the irregularities with MSG kick in after about 12 hours and around 24 hours after eating 635, and that the 635 tends to hang on longer than MSG. With me the effects of MSG last usually a day sometimes two, and with 635 it's usually two days sometimes three. – from the UK.

[456] Heart palpitations and buzzing sensation (September 2006)

Some time ago I found some corn chips (Viva brand) that advertised having no MSG. I bought them a few times before connecting with them a very uncomfortable feeling of restlessness, agitation and panic, heart palpitations, hot flushes and a "buzzing" sensation; I thought I was having a panic attack. Since recognising the link I bought the chips once more to test the idea that this was the cause; after about 5 chips I started to feel the 'buzzing' and threw the rest of the packet away. - Kathy from Adelaide.

[658] Tachycardias, falling blood pressure, red nose (September 2008)

For many years I have had tachycardias, a feeling of being 'unplugged' (as if my heart had stopped, blood pressure rapidly falling and I was going 'out') and inexplicable cold in my hands and feet like ice even in the summer. And the same thing on my nose. It turns bright red at times for no reason as if the capillaries dilated and it remains that way for a long time - it burns as if it has been held on the stove. Since changing my diet, my nose is normally coloured, I am nice and warm all over and no one has been 'pulling my plug'. It seems that food chemicals affect my vascular system and blood flow. – by email

[339] 635: Palpitations from 'Meals on wheels disease' (Sept 2004)

Six months ago, I was rushed off to hospital after waking in the middle of the night feeling edgy and hot with swelling of my face, heart palpitations and welts of hives all over my body. Afterwards, I questioned was it something I ate - the wine, the peanuts?

These awful experiences went on for a period of about four months until my brother saw a segment on A Current Affair about reactions to flavour enhancer 635 (also 627 and 631, ribonucleotides). I had missed the show but immediately got onto the website and as soon as I started reading I knew that was exactly what I had. This information is provided by Sue Dengate at <http://www.fedupwithfoodadditives.info/> on the factsheet called "Ribo Rash".

I read everything I purchase, I do not eat anything if I do not know exactly what is in it, and before I go to a function I speak with the chef or caterers. When dining I choose a meal and then request that the chef can assure me that there is no 635 added. I went through my pantry and discarded any foods with 635 in the ingredients and have not had a reaction of any kind for about two months which is a wonderful breakthrough for me, after experiencing reactions 3-4 times a week.

I request that you please take the time to read the attached information, as my parents are both experiencing similar reactions. My stepfather has a chronic rash and my mother gets hives at least one night a week. They receive "Meals on Wheels" and my stepfather says it is usually after rissoles, stew or soup. Therefore I request that you read the ingredients that you are adding for flavour to these meals. Purchased chickens from Woolworths have the additive in the stuffing, Coles marinated fresh chickens contain 635, Red Rooster have in on the outside, some chicken salt has it as well as some stocks, tinned and packet sauces and soups and it is even in some butter blends. Potato chips, CC's and other flavour enhanced foods are all to be avoided but there are plenty of substitutes, it just means being more vigilant as to what is served.

The elderly in aged care facilities and even patients in hospitals are experiencing these reactions due to flavour enhancer 635. There are plenty of natural herbs and spices that can be added to food for flavour instead of an additive which is causing a lot of suffering and possibly even death. – open letter from Queensland

[690] Chocolate not so healthy for this heart (tachycardia) (November 2008)

For years I have been trying to figure out what causes my rapid heart beats after eating sometimes. Three weeks ago I ended up being taken to hospital by ambulance with a heart rate of 150 bpm. I had eaten a cheese and tomato sandwich for lunch. I know for a fact the bread has no preservatives in it. I spent a few hours in ER but they were unable to tell me why this happened, heart rate went down and I went home. It has happened with various types of food, never the same thing. This has happened a lot over the years and answers I get from doctors is something like this - "If you eat a spicy meal it can increase your heart rate". That makes me feel like screaming 'Listen stupid I did not eat a spicy meal'. The other symptom I get is increased ectopic beats. From now on I am going to keep a diary of food eaten and symptoms ...

Three months later ... I had two more trips to hospital with major irregular heartbeats, even the ambos were concerned. No joy from any of the docs as to what caused it all. I went to see my GP who I think has hit the nail on the head. He mentioned that coffee and chocolate could be responsible for causing both rapid and irregular beats. Chocolate seems to be my cause. He explained that it's not just the caffeine in chocolate but the chemical that kills dogs if they eat chocolate. I told him that I had recently changed to dark chocolate because it was promoted as being heart healthy. He replied "that's the worse of all". I did not think of chocolate because I would have no problems until 3 or 4 hours after eating it and I'm not talking about eating huge amounts, just 2 or 3 squares. I have since stayed away from anything chocolate and seem to be fine. My GP also told me that caffeine could raise blood pressure which in turn causes rapid heartbeats. If I do feel like a coffee I drink decaf. Not one person that I have told knew that chocolate could cause major irregular heartbeats. – Sally, by email (Biogenic amines in cheese, tomato and chocolate among others are a common culprit in food intolerance reactions – S)

[942] 621: Supraventricular Tachycardia (October 2010)

Over the past 15 years I have suffered from numerous things - CFS, IBS, Supraventricular Tachycardia, rosacea and itchiness. Post 2000, things were going along fairly okay CFS wise but I developed the SVT after the birth of my son in 2003. I had this corrected in 2007 (very long diagnosis!) but still continued to suffer the odd palpitation here and there. My IBS started in 1999 and I would swing from constipation to diarrhoea. My rosacea had been with me since 1997 and nothing would take it away. The itchiness started in 2008 and so did the headaches.

To cut a long story short, in January of last year I decided it was time to start looking into diet seeing no-one could work out what was wrong with me. So I went totally preservative, colour and sulphite free and purchased your book. Basically followed everything on the list of things to avoid. I did the same for my children. My rosacea disappeared! I also stopped itching and started to have less headaches and heart palpitations. I identified that sulphites affect my breathing, MSG affects my heart, something gives me headaches and 160b makes me itch. However, my diarrhoea and fatigue still remained. Eventually I looked more into salicylates (despite what the dietician thought!) and that was the final piece of the puzzle. - Rachel, NSW

[941] 627: Chest pains from flavour enhancer (October 2010)

I am very food sensitive. Last week-end when I was entertaining I ate one 'plain' rice cracker. It was Fantastic brand and had Flavour Enhancer 627. After realising this I threw them out! But never thought about them again. That night I awoke at 2 am with mild chest pains which I had off and on through until 5 am - the pains were mild but enough to cause me grief and stop

me from sleeping - I stayed up most of the night. I have no doubt the Flavour Enhancer in the biscuit caused my problem. - Di, Vic

[940] 621: Fast and very irregular heart beats after Chinese meal (October 2010)

From time to time I notice an ectopic heart beat, Dr. tells me nothing unusual, most people get them. However last night after a couple of weeks eating really good and healthy natural foods we went out to a Chinese Restaurant. I like going there, but have not been there for a year or so I'd say. About an hour after I went to bed it began, I think you'd call it Tachycardia, a fast (100) and very irregular heartbeat. Some big strong thumping ones and then some feeble and fast ones. I got up, sat up for another 2 hours. Blood pressure had risen incredibly, and over the 2 hours settled down but the feeling on panic stayed. It's still here this morning actually and I didn't feel I could drive, so had to ask for a lift. Needless to say I am not having any of the left overs for lunch. Back to the straight and narrow. – Joy, NSW

[939] 635: Tachycardia (October 2010)

If I have 635 I get Tachycardia, feel weak and dizzy, and come down with flu like symptoms that last for around 2 to 3 days. Peter, by email

[938] 220: Lying awake my heart pounding for hours (October 2010)

I was just reading your article about the link between sulphites and ventricular arrhythmia in the latest newsletter. I could relate to many of the symptoms experienced by Michiko. On several occasions (usually after a dinner party or night out at a restaurant), I've had a similar experience, lying awake that night unable to sleep and my heart pounding for hours. Just like Michiko I felt like I was 'buzzing' as though I'd had some hype-inducing drug. Sometimes I would also feel breathless and I noticed this often happened after drinking white wine or champagne. I'd never heard of anyone else having this experience and wondered what could be causing it. Thanks to this article I now have a good explanation, and will avoid preservative 220. - Michelle, by email

[564] 635: "An attack of 635": anxiety, racing heart, headaches, rash (May 2007)

I was suffering with what the doctor said was normal for my age 39, higher blood pressure, heart palpitations, not able to sleep on my left hand side, rash around my groin and armpits that I couldn't get rid of, weekly headaches and to top it of waking up at 2-3am every morning with a anxiety attack.

I was attending an anxiety meeting every week and seeing a psychologist but the problem was that I couldn't identify with any of the other people that came to the anxiety meeting. It seemed all of their complaints of the 100 or so different people that came to the meeting related to cyclic thought process that brought on the anxiety and kept them in that loop. I on the other hand felt a little on edge but was very relaxed about life. I delved into unresolved tensions with my psychologist but still no relief. Yoga and relaxation exercises seemed to help but what it truly did was let me watch my body go through the symptoms while I watched it happen in the third person. Because my symptoms didn't fit the norm I refused to take any form of medication. I felt it was stupid to compound the problem until I knew what was causing it.

Then I had another anxiety attack. This time it was unbearable and my heart went over the 199 bpm that my machine could measure. I tried everything to relax but my system went into overdrive. My mother came around and my wife was there to help. I am amazingly good at relaxing my body but nothing seemed to help. I called nurse on call and they called an ambulance immediately upon hearing my symptoms. The ambulance arrived and went through the routine of checking me over and in the time they were there my body stabilised to around 100bpm. They gave me the option of going to hospital and waiting in the waiting room for 4-6 hours or stay at home and try and get over it. I took the wait at home option. The

interesting thing from all of that is the male ambulance officer who leaned against the door frame for the whole time they were there said “gee you look like my wife does when she has an attack of 635” I thought he was full of it and ignored him at the time. I felt like I had run a marathon.

The following day I looked up 635 on the internet and noticed the rash and the headaches that I had were the same but nothing else rang a bell. Having nothing else to go on I looked into what had 635 in it as an ingredient. I was amazed to find my pies, pasties from the local bakery had beef booster and hence 635 + 621 that was Monday nights explained then a lot of chips + crackers that I had for lunch - even ones from the health food section of my local supermarket that state quite clearly on the packaging that 635 is not 621 and therefore is not bad for you. What a laugh. I must stress I had no belief that 635 was the cause of anything but my rash and headaches. I have not changed my lifestyle in any way except for removing 635 + 621 from my diet and only very recently removed 282. But a key interesting note is the 12 hour delay from eating the food to the full blown symptoms. I still eat selected junk food, I still exercise the same amount, I have even more pressure at work and I still get broken sleep from my now 2 year old.

When I would go to my doctor her face would drop in that “not you again look” she would listen to me with bored expression and write in her notes: 'anxiety related'. Please also note that my doctor that since then acknowledged she has absolutely no knowledge of food intolerance re 635 – 621 and their symptoms. How are you expected to be helped if they are blind to these issues? The way I wish to truly express myself as to how I feel re their mainstream blindness is limited by my overriding desire to keep this letter polite. I have not read anywhere a person with my exact same experiences but I know it is simple. I have stopped eating 635 + 621 and I am back to how I remember the way I used to be.

From that week I feel like a new man ... my multiple rashes of many years cleared up completely, not one single headache, I have not had a single heart palpitation, not one single anxiety attack, no hand or body tremors, no racing heart, no feeling of tension! The only exception to this was when I went to a mothers group party and ate some salt and vinegar chips laced with 621 + 635. I had a bad night's sleep that night. I checked the chips at the supermarket the following day and found the suspect ingredients. Now I will not eat any food unless I can check the ingredients. It is interesting that some of the big fast food restaurants will not return my calls to tell me which foods contain 635. - Wayne, by email

See more reader reports at <http://www.fedupwithfoodadditives.info/stories/storyindex.htm>. If you have a similar report, we'd love to hear it: suedengate@ozemail.com.au.

Scientific references

See abstracts at www.pubmed.com

1. Burkhart CG. 'Lone' atrial fibrillation precipitated by monosodium glutamate and aspartame. *Int J Cardiol.* 2009;137(3):307-8. http://www.mpwhi.com/ijc_atrial_fibrillation.pdf.

Over a period of months, a healthy 57-year old physician experienced sudden violent attacks of atrial fibrillation as confirmed by outpatient monitoring. When he eliminated monosodium glutamate and all artificial sweeteners from his diet, the arrhythmias stopped. Challenges with Chinese food (with MSG) and three glasses of an aspartame-containing drink resulted in development of atrial fibrillation within a few hours. The AFIB Report found that of patients with atrial fibrillation, 10% listed MSG and 4% listed aspartame as triggers for their attacks.

2. Gann D. Ventricular tachycardia in a patient with the "Chinese restaurant syndrome". *South Med J* 1977;70(7):879-81.

A 36-year-old otherwise healthy man developed a burning and tight sensation in his chest face and neck about 30 minutes after eating severe weakness, heart palpitations and

sweating about 30 minutes after eating wonton soup in a Chinese restaurant. He began sweating and felt weak. A friend who had eaten with him developed some milder weakness and tingling in the arms. Soon after driving home, the patient developed chest pain and pressure with the pain radiating to both shoulders and upper arms. The chest pressure improved after half an hour but the weakness remained. When the man was admitted to hospital, an ECG showed potentially lethal ventricular tachycardia. He was given medication (lidocaine) intravenously and the rhythm converted to normal with the three minutes. His physicians commented that MSG might produce potentially serious arrhythmias in susceptible persons.

3. Goldberg LH. Supraventricular tachyarrhythmia in association with the Chinese restaurant syndrome. *Ann Emerg Med.* 1982;11(6):333.

In a case similar to the above, an otherwise healthy woman developed potentially fatal arrhythmia and other symptoms of Chinese Restaurant Syndrome including tingling and burning sensation in the head, chest and arms after eating wonton soup.

4. Schaumburg HH, Byck R, Gerstl R, Mashman JH. Monosodium L-glutamate: its pharmacology and role in the Chinese restaurant syndrome. *Science* 1969;163(869):826-8.

In this study of the Chinese Restaurant Syndrome, researchers described the possible effects of MSG: 'a sensation of pressure over the precordium or substernal area, occasionally radiating to the axillae or neck. This sensation, referred to as the "chest pressure" followed the burning ... This sensation can be very alarming: in the past, one of our susceptible physician subjects requested an electrocardiogram after a Chinese Meal.'

5. MI or MSG? *Emergency Medical Services.* May 1986;14(4) in George R Schwartz MD, In *Bad Taste: the MSG Syndrome.* Signet, New York, 1990, p33.

Emergency medical technicians were warned to consider whether they were dealing with MI (myocardial infarction, the medical name for heart attack) or MSG when the patient's symptoms include sweating, numbness around the face and neck, chest pressure and burning sensations, palpitations, nausea and vomiting.

6. Bhan AK, Brody C. Propionic acidemia: a rare cause of cardiomyopathy. *Congest Heart Fail* 2001;7(4):218-219

Propionates used as an additive in a number of foods especially in bread are also found naturally in small doses in the human body. However, when propionates build up in the human body - in a condition called propionic acidemia due to an enzyme deficiency - a number of severe symptoms can occur. These symptoms are similar to the milder effects of cumulative doses of propionate preservatives. Cardiomyopathy or heart problems are considered to be a rare complication of propionic acidemia. In this paper, the authors describe a case of adult-onset cardiomyopathy in a 23-year-old female with propionic acidemia diagnosed in early childhood.

7. Mukerji V, Alpert MA, Flaker GC, Beach CL, Weber RD. Cardiac conduction abnormalities and atrial arrhythmias associated with salicylate toxicity. *Pharmacotherapy* 1986;6(1):41-3.

In the 1970s, Dr Ben Feingold proposed that salicylates in foods could affect susceptible patients in the same ways as salicylates in drugs such as aspirin. Although not common, pulmonary edema, ventricular ectopic activity and cardiopulmonary arrest have been reported in patients with high toxic serum salicylate concentration due to salicylates in drugs. This report concerns a patient who developed a variety of sinus and atrioventricular nodal conduction disturbances and atrial arrhythmias with a relatively low toxic serum salicylate concentration. The cardiac rhythm returned to normal as the serum salicylate concentration decreased.

8. Kent K and others Non-fatal ventricular dysrhythmias associated with severe salicylate toxicity. Clin Toxicol (Phila). 2008;46(4):297-9.
9. Wong C, Sanders P. Increasing trend in hospital admissions due to atrial fibrillation, presented at the European Society of Cardiology's Scientific Congress in Stockholm, Sweden, 2010, Royal Adelaide Hospital <http://www.adelaide.edu.au/news/news41021.html>
10. Sommer R. Yeast extracts: Production, properties and components, Paper presented at the 9th International Symposium on Yeasts, Sydney, 1996.
11. Giles J. Exposing the links between doctors and Big Pharma. New Scientist 2009 2696: 26-27
12. MSG Technical Report, Food Standards Australia New Zealand (FSANZ) 2003
Including information from the 1995 Federation of American Societies for Experimental Biology (FASEB) review of reported adverse reactions to MSG which was commissioned by the United States Food and Drug Administration (FDA).
<http://www.foodstandards.gov.au/srcfiles/msg%20technical%20report.pdf>
13. Samuels A, The toxicity/safety of processed free glutamic acid (MSG): a study in suppression of information, Accountability in Research, 1999;6(4):259-310, <http://www.truthinlabeling.org/l-manuscript.html>;
14. Nichols PG, Jones SM. Monosodium glutamate in Western Australian foods. Chemistry in Australia. 1991 58:556-558 in MSG Technical Report (REF)
15. Yamaguchi S, Ninomiya K. What is Umami? Food Rev Int 1998;14:123-138 in MSG technical report (REF).
16. Yoshida Y. Umami taste and traditional seasonings. Food Rev Int 1998;14:213-246 in MSG technical report (REF).

How to recognise MSG and other flavour enhancers

Most people say 'I thought MSG wasn't used any more' or 'we don't eat MSG'.

Unless you are very careful and knowledgeable, you will be eating MSG in its myriad disguises at home - in products such as stock cubes, gravy mixes or packet soups - and when eating out e.g: MacDonald's Australian website lists Seared Chicken Caesar Salad with hydrolysed vegetable protein and two flavour enhancers 627 and 631. The new flavour enhancers are used to boost the effects of MSG in hydrolysed vegetable protein (HVP).

Glutamates occur naturally in small amounts many foods and also in the human body. When concentrated by food processing, some products can contain levels of free glutamates that are similar to MSG – and it all adds up. The more you eat, the more likely you are to be affected. A proposal to require 'contains glutamates' as part of the name of autolyzed yeast extract and certain hydrolysed proteins was withdrawn in 1996 in the face of opposition from the food industry ('would mislead consumers ... as to the safety of hydrolysed protein').
(http://www.fda.gov/ohrms/dockets/dailys/03/jul03/072803/02N-0434_emc-000004-01.PDF).

Look on food ingredients panels for:

- 621 - MSG
- 627 - disodium guanylate
- 631 - disodium inosinate
- 635 - ribonucleotides

and all other 600 number flavour enhancers

Can also be listed as:

HVP (hydrolysed vegetable protein)

HPP (hydrolysed plant protein)

and any variations on

- hydrolyzed, autolyzed, formulated
- vegetable, wheat, gluten, soy, maize, plant
- protein

or as

- yeast (except in baked products like bread)
- yeast extracts (including Vegemite, Marmite, Promite, Natex savoury spread and similar foods such as Vegespread and Vecon)
- nutritional yeast flakes and powders

Can also be included in added flavours in savoury foods:

- flavour
- flavours
- natural flavour/s
- seasoning
- spices
- broth

Can also be added as:

- vegetable powder, tomato powder, etc
- soy sauce - even without any additives, this is naturally very high in glutamates
- other sauces and seasonings e.g. BBQ sauce, Worcester sauce, and any sauce that tastes delicious, even if it says that it is not fermented, or made from soybeans and water only
- all stocks and stock cubes

MSG and free glutamates

As with any food intolerance, reactions are related to dose - the more you eat the more likely you are to react. The tiny amounts in milk, eggs and meat are not enough to affect anyone but the doses in processed foods like soy sauce and Vegemite are like eating MSG.

Free glutamates in foods (in mg per 100g)

| | |
|-----------|-----|
| cows milk | 2 |
| salmon | 20 |
| eggs | 23 |
| beef | 33 |
| carrots | 33 |
| chicken | 44 |
| corn | 130 |
| tomato | 140 |
| peas | 200 |

From Yamaguchi and Ninomiya 1998¹⁵

| | |
|-----------------|-----------------------------|
| soy sauce | 782 (Japan) 1264 (Korea) |
| oyster sauce | 900 |
| Parmesan cheese | 1200 |
| Vegemite | 1431 |
| Marmite | 1960 |

From Nichols and Jones 1991¹⁴

| | |
|---------------------------|---------|
| Italian restaurant meals | 10-230 |
| Condensed soups | 0-480 |
| Western restaurant meals | 10-710 |
| Chinese restaurant meals | 10-1500 |
| sauces, mixes, seasonings | 20-1900 |

From Yoshida 1998¹⁶

COMPARE: 1 tsp MSG powder = 5000 mg

More information

- Introduction to Food Intolerance:
<http://www.fedupwithfoodadditives.info/factsheets/Factintroduction.htm>
- Fed Up by Sue Dengate, Random House, 2008 available from
www.fedup.com.au
- MSG, flavour enhancers and natural glutamates FACTSHEET:
<http://www.fedupwithfoodadditives.info/factsheets/FactMSG.htm>
- RIBO RASH FACTSHEET:
<http://www.fedupwithfoodadditives.info/factsheets/635/RIBO1.htm>
- SULPHITES FACTSHEET:
<http://www.fedupwithfoodadditives.info/factsheets/Factsulphites.htm>
- SALICYLATES FACTSHEET:
<http://www.fedupwithfoodadditives.info/factsheets/Factsalicylates2.htm>

www.fedup.com.au

The information given is not intended as medical advice. Always consult with your doctor for underlying illness. Before beginning dietary investigation, consult a dietician with an interest in food intolerance. You can write for our list of supportive dietitians confoodnet@ozemail.com.au.

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