

# THE AFIB REPORT

*Your Premier Information Resource for Lone Atrial Fibrillation!*

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1<sup>st</sup> YEAR



## **Editorial**

*In this issue we continue the reporting of the results of the LAF survey. We also delve into the details of a possible connection between amalgam dental fillings and LAF and, as usual, report the latest news regarding atrial fibrillation in our AFIB News section. We have received quite a bit of additional input regarding the question on whether or not antiarrhythmic drugs are beneficial. I am in the process of analyzing this new data and will present a full report in the August issue. Until then, have a pleasant summer and may your episodes be few and short-lived!*

*Yours in health,  
Hans Larsen*

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### **Survey Results – Part IV**

Six out of 53 respondents (11%) had had either RF ablation or maze surgery to eliminate LAF. One maze procedure was deemed entirely successful with no further episodes for two years. Two RF ablations were deemed successful with no episodes for 2 and 16 months respectively after surgery. One RF ablation prevented episodes for 8-10 months and was then followed by maze surgery, but it is too early to say if this was successful. One RF procedure was definitely not successful and one was done very recently so it is too early to tell. So at this point it really is not clear whether surgery is worthwhile. The success rate is probably highly dependent on the skill of the surgeon and the location of the misfiring cells. However, surgical techniques, especially for ablation, are constantly developing so hopefully

the picture will become clearer within the next year or so.

Thirty per cent of the remaining respondents had considered surgery, but not proceeded with this option. Four had had an electrophysiology study (EPS) with the results that there was nothing to ablate. Only three of all respondents had considered implantation of a defibrillator and none had proceeded with this option.

Seventy-four per cent of all respondents had amalgam fillings in their teeth – an average of 10 fillings each. A preliminary look at the data shows that afibbers without amalgam fillings tended to have significantly fewer episodes than afibbers with amalgams (2 episodes versus 18 episodes over the past 6 months). This is indeed an intriguing clue that we will attempt to verify in phase 4 of the study.

Most respondents (70%) had not had their amalgams replaced; 10% had done so and 6% were in the process of doing so. The remaining 14% did not have any to replace. Of the 5 who had had their amalgams replaced 3 followed up with a proper detoxification program. Here are their comments:

**Question: Have you noticed any difference in the frequency of episodes?**

1. Yes, four to one improvement.
2. I would guess the frequency was reduced by about a third. So even though I know I am sensitive to mercury it was not the whole answer for me.
3. No, my real relief came with the removal of large varicose veins from my left leg that were affecting my circulation because of blood pooling in the leg.

Forty-six per cent of respondents had dissimilar metals in their mouth and 46% did not. The remaining 4% did not know. It is interesting that 4 out of the 5 respondents with chronic afib did have dissimilar metals in their mouth. There was no significant difference in episode frequency between respondents with dissimilar metals and those without.

Only 10% of respondents had had their intracellular magnesium level measured. All (100%) were found to have levels below the normal range. Seven respondents (14%) had had magnesium infusions. Three had felt a definite benefit, 3 some improvement, and only 1 reported no improvement; however, this person did not know if his magnesium level was low to begin with.

Twelve out of 50 respondents (24%) reported that they were doing yoga or other relaxation exercises. Ten (83%) felt a definite benefit while 2 were not sure if they benefited. Thirteen reported praying or meditating on a regular basis and 77% found it helpful while 15% found it somewhat helpful. Seven (14%) of respondents had tried Traditional Chinese Medicine and 5 had found it helpful or somewhat promising.

Thirty-six per cent of respondents jogged or ran daily, 31% walked daily, and 14% had a daily workout or engaged in swimming or golf on a regular basis. Only 7% did not exercise at all and 12% did very strenuous exercise on a regular basis. There was not a great deal of difference in the exercise pattern before and after the first LAF episode except that the proportion of strenuous exercisers dropped from 31% to 12%. Most (45%) considered themselves strongly athletic, 19% thought they were athletic, and 31% somewhat athletic. Only 5% considered themselves to be sedentary.

The average pulse rate among respondents was 61 bpm (range 45-92), the resting systolic pressure 132 mm Hg (range 98-146), and the resting diastolic pressure 76 mm Hg (range 62-89). Only 7% of all respondents were taking medications for hypertension.

Following are some selected comments on other questions asked:

**“What have you found is the best approach to limiting the frequency of LAF episodes?”:**

Adrenergic afibbers

- Haven't really found a way, except avoid known triggers.
- Avoiding emotional stress, late nights and strenuous physical activity, and of course, alcohol, coffee, chocolate, and sweets.

Vagal afibbers

- Maintain a background of flecainide - it has completely eliminated my attacks.
- Try to keep in touch with my emotions. Understand the flow of “energy” (overwork, getting too intense, diet, not eating when nervous, limiting my exposure to crowds, etc.) that I know occurs in my external and internal worlds that causes this thing.
- I mostly live my life as usual, merely avoiding hard alcohol and keeping up my supplements.
- Eat carefully, avoid constipation and practice relaxation.
- Meditation/diet/exercise/positive outlook.
- Removing amalgams under strictest protocol.

- Eat smaller meals, calm down and avoid caffeine and aspartame.
- Learn your triggers and avoid them.
- Not to drink alcohol and get overtired. Don't eat big meals and nothing after 5 pm.
- I take a beta-blocker (metropolol) before a known stressful event. I believe magnesium helps.
- Taking digestive enzymes.
- Taking verapamil and generally relaxing more.
- Stay calm, eat every 2-3 hours, don't get overtired.
- Deep breathing exercises and getting off digoxin.
- Trying to eliminate the production of gas in my chest.

#### Mixed afibbers

- Reducing stressful situations.
- I mainly rely on the medications (flecainide and atenolol) to limit the frequency of attacks as well as controlling the stress levels as much as possible. Food intake is another factor.
- If I work out only 3 out of every four weeks of the month it seemed to go away for 6 months. Prior to that it went away for a year.
- For me the key thing was having surgical removal of large varicose veins in my left leg. Only one episode since last July when I had the surgery, and it came when I over-exercised, stood too long, and ate too much - all in the same afternoon.

#### **“What have you found is the best approach to regaining normal sinus rhythm?”:**

- Lie down and try and relax.
- 200 mg of flecainide
- The most successful has been indulging in sex. This has worked almost every time except if I have just gone into an episode. Then, it seems nothing will work, but on the average sex will work 7 times out of 10. (Editor's note: Indulging in sex has also been found effective in terminating chronic hiccups).
- I only have one – wait it out!
- Prior to maze, taking atenolol every few hours until I converted.
- Most recently – shock!! I would prefer to find a different approach that would work. The shock returns normal rhythm, but since I have a very sensitive nervous system I am concerned about the overall effect.
- Exercising to my tolerance seems to help. Otherwise waiting it out.
- Taking things easy (exercise hasn't helped me), taking an extra verapamil (doctor said OK), taking epsom salt in water.
- I converted when I totally relaxed, gave up worrying about it - plus I think my body took over.
- I rely on the medications (flecainide and atenolol) to regain normal sinus rhythm.
- Atenolol
- Gentle exercise
- Staying on low-carbohydrate diet to minimize insulin resistance and adrenaline surge.
- Cardioversion is certainly the quickest, I prefer spontaneous but apparently can't always count on it.
- Go about with mundane tasks and put it out of your mind as much as you can.
- Trying to relax - stay in bed - the less active I am when in AF in general the shorter the episode will be.
- Exercise or Rythmol
- Shower, bowel movement, or just time. I have a good friend who is an E&P tech for a major medical institution and he is convinced that these are chaotic events. He believes in the "chaos" theory.
- I take a Xanax (anti-anxiety medication) and go to sleep.
- Possibly the deep breathing exercises.

*This completes phase 3 of the survey (compiling and distributing the raw data) except for the question “Do you have any advice to give to fellow afibbers?”. We will cover this in the August issue and will also begin phase 4 that aims at finding correlations between the different variables. For instance, does episode frequency increase with age or duration of LAF (how many years you have had it)? Is there really a correlation between amalgam fillings and episode frequency when age and other variables are factored in? This phase is, by far, the most complicated, but also the one that holds the most promise for a solution. So stay tuned!*

## **The Mercury Connection**

### **The Menace of Amalgam (Silver) Dental Fillings**

Mercury is the second most toxic material known to mankind exceeded only by plutonium. Mercury is also the only poison permanently implanted in the human body as the major component of amalgam (silver) fillings in teeth.

Mercury is a powerful neurotoxin and has been implicated in Alzheimer’s disease, Parkinson’s disease, multiple sclerosis, amyotrophic lateral sclerosis (ALS), heart attacks, manic depression (bipolar disorder), hearing loss, and depression and anxiety[1-9].

There is ample evidence that toxic mercury is released from amalgam fillings and readily enters the blood stream. It tends to accumulate in the brain and kidneys. A team of researchers at the University of Calgary did the original work in this area. They placed amalgam fillings in sheep and then measured how mercury levels built up in the various organs of the body. They found extremely high concentrations in the jawbones, gums, kidneys, stomach and liver[10]. More recently Saudi Arabian researchers reported that women with amalgam fillings had significantly higher mercury concentrations in their urine than did women with no amalgam fillings[11]. There is evidence that chewing and, to some extent, exposure to computer terminals and digital (cell) phones accelerate the release of mercury from amalgam fillings[1].

The World Health Organization (WHO) concluded in 1991 “The general population is primarily exposed to mercury through the diet and dental amalgams.”[12] Their estimates of the intake of mercury from various sources are:

- Dental amalgam – 3.0 to 17.0 mcg/day (mercury vapour)
- Fish and seafood – 2.3 mcg/day (methyl mercury)
- Other food – 0.3 mcg/day (inorganic mercury)
- Air and water – negligible traces.

These and other research findings have finally set off the alarm bells. Sweden and Austria have now completely banned amalgam fillings[1]. The New Zealand Ministry of Health is reviewing its policy on the use of mercury-containing amalgams for tooth fillings. This review comes hard on the heels of precautionary advice from the UK Department of Health, which warns pregnant women not to have amalgam fillings installed. Dr. Mike Godfrey, a leading environmental physician, points out that several major amalgam manufacturers have issued Material Safety Data Sheets and Directions for Use that clearly warn of the many dangers of amalgam fillings. Among the restrictions – amalgam fillings should not be used next to fillings or crowns containing other metals, they should not be used under crowns, they should not be used in patients with kidney disease, in pregnant women or in children aged 6 years or younger. The manufacturers also warn that mercury vapours from amalgam fillings can induce psychiatric symptoms in extremely low concentrations. Depression, mental deterioration, and irritability are among the symptoms listed[13].

The governments of the United States, Canada and the United Kingdom are dragging their feet on the issue. To admit that amalgam fillings are poisoning hundreds of millions of people every day would launch the biggest class action suit the world has ever seen – making the suits against the tobacco industry pale in comparison.

## **Amalgams and Lone Atrial Fibrillation**

So mercury is bad and amalgam fillings are a potent source of this toxin. But, do amalgam fillings actually cause lone atrial fibrillation? I have not come across any scientific papers that come right out and say this is indeed the case. However, there is ample evidence in the literature that amalgam fillings are associated with heart palpitations, irregular pulse, and rapid heart beat[1,14,15]. It is conceivable that the researchers who made these observations did not take the next step and actually identified the irregular pulse and rapid heart beat as atrial fibrillation.

My own feeling is that amalgam fillings can indeed be a major trigger to LAF in people who are sensitive to mercury toxicity. I recently made the observation that I had had a LAF episode within 2 days after each of my last 5 dental appointments to have amalgam fillings replaced. The LAF survey also pointed to a possible causative role of amalgams when it revealed that afibbers with amalgams in their mouth had nine times more episodes than afibbers with no amalgams (subject to verification in phase 4 of the survey). So if you are sensitive to mercury and have a high body burden of this toxic material, as revealed by hair analysis or urine test, what can you do?

## **Amalgam Removal**

It is very unlikely that you can get rid of a toxic build-up of mercury in your body without having your amalgam fillings replaced. Unfortunately, unless the removal is done under the strictest protocol and followed by effective detoxification it can actually make things worse. Holistic dentists have now pretty well agreed that the patient, as a minimum, should receive the following protective measures:

- a rubber dam (a rubber sheet placed over the relevant teeth isolating them from the throat and rest of the mouth);
- a nosepiece so that air is breathed in from a distant source;
- eye protection such as damp gauze or wrap-around goggles;
- suction to remove and filter air from around the mouth.

Some dentists also recommend an intravenous vitamin C drip during or immediately after the procedure and all stress the importance of ensuring an adequate intake of vitamins and minerals (particularly vitamins C, B-2 and selenium) prior to and after amalgam removal. Contrary to popular belief, amalgam fillings covered with a gold or porcelain crown are not any safer than an exposed filling – they may actually be worse. Dr. Jack Levenson, a holistic dentist in London, UK recommends that amalgams be removed from the teeth in the following order[1]:

- Root canal treated teeth with pins of non-precious metals;
- Teeth with metal crowns and amalgam cores;
- Amalgams in direct contact with gold (either in the same or an opposing tooth);
- Amalgam-filled teeth in direct contact with partial chromium-cobalt dentures or base metal crowns;
- Amalgam fillings in contact with gum tissue;
- All other amalgam fillings.

Having dissimilar metals (e.g. gold crowns and amalgam fillings) in the mouth can set up very powerful electrical currents that can directly affect the nervous system. A recent report from the Mayo Clinic relates the case of a woman with painful trigeminal neuralgia who was cured after removal of an amalgam filling situated next to a gold crown[16]. Closer to home, a LAF Forum contributor, Frank in Ireland, reported a complete elimination of ectopic (premature) heart beats within a couple of hours after removal of amalgam fillings in close proximity to a gold crown and bridge.

## **Detoxification**

Amalgam removal without subsequent thorough detoxification is a very bad idea. Even if your dentist takes all the recommended precautions, and most don't, release of a large quantity of mercury vapours is hard to avoid. These vapours head straight for the brain and also get into the blood stream creating all kinds of havoc.

Detoxification comes in 2 different flavours – drug-aided or natural:

DMPS (sodium dimercaptopropane sulfonate) and DMSA (dimercapto-succinic acid) are the two drugs of choice for mercury detoxification. They are not officially approved for this purpose, but are approved for the removal of lead, another heavy toxic metal. DMPS is usually administered via a slow intravenous injection while DMSA is taken orally. There is an on-going controversy as to which one is most effective. DMSA is claimed to be able to cross the blood brain barrier so theoretically should remove mercury from the brain. DMPS though may be quicker acting, but tougher on the system overall. Neither DMPS nor DMSA should be administered until **ALL** amalgams have been removed from the mouth. DMPS definitely and DMSA possibly get into the saliva and actually start dissolving the mercury from any remaining amalgams – not a good idea! Both DMPS and DMSA need to be administered by a physician or naturopath trained in their use. Close monitoring of mercury levels in the urine is a must.

Natural detoxification is based on the use of intravenous vitamin C infusions and various sulfur-containing compounds. Sulfhydryl groups (sulfur) bind very strongly to mercury and the resulting compounds are eliminated in the urine or feces. MSM (methyl sulfonyl methane) and alpha-lipoic acid (thioctic acid) are both good mercury binders. NAC (n-acetylcysteine) also works, but may tend to spread the mercury around before eliminating it[1]. Most natural detoxification programs also include chlorella or seaweed that also tend to mop up mercury.

Because the detoxification protocols all remove other metals it is essential that any regimens include supplementation with vitamins (especially B, C and E) and minerals (especially selenium, zinc and magnesium).

Effective detoxification is absolutely essential if an amalgam removal program is to be successful, but it is a bit complicated. So for this reason it is best carried out with the guidance of an experienced naturopath or holistic physician.

Should you have your amalgam fillings and dissimilar metals removed? If you can find a competent dentist and physician to work with you and you can afford the expense I would say "Go ahead". If you are not sure, start out by having your mercury level determined through a hair analysis or urine test. If it is high or you have other symptoms of mercury sensitivity I would seriously consider removal even if you have to stretch the process out over a couple of years.

## **AFIB News**

**Genetic component discovered in Wolff-Parkinson-White syndrome.** Researchers at the Baylor College of Medicine in Houston have discovered a genetic defect that may be responsible for Wolff-Parkinson-White (WPW) syndrome, a disorder somewhat similar to LAF. People with WPW are born with an extra pathway between the atrium and the ventricles, which sometimes carries electrical impulses that can cause atrial fibrillation. The abnormal pathway can be activated by stress, infection, caffeine, and alcohol. The researchers hope that the identification of the faulty gene will lead to new arrhythmia therapies. *New England Journal of Medicine, Vol. 344, June 14, 2001, pp. 1823-31*

**Sex-related differences in atrial fibrillation.** A team of Canadian researchers has released the results of a study aimed at discovering whether atrial fibrillation (not necessarily lone) affects men and women differently. They found that women tend to get their first episode later (age-wise) and have more subsequent episodes and higher heart rates during the episode than men. They also tend to be prescribed aspirin more often than warfarin for stroke prevention. This is probably a good thing as women were found to be 3 to 5 times more likely to experience major internal bleeding when on warfarin than were men. Digoxin was still the most prescribed drug for preventing future episodes (a no-no for lone afibbers), followed by antiarrhythmic drugs and beta-blockers. *Circulation, Vol. 103, May 15, 2001, pp. 2365-70*

**Echocardiography permits quicker cardioversion.** Researchers at the Cleveland Clinic Foundation report that the use of transesophageal echocardiography (TE) makes it possible to perform electrical cardioversion of atrial fibrillation patients much earlier than allowed by the current standard practice. Patients with AF of more than 2 days duration are now treated with warfarin (Coumadin) for 3 to 4 weeks before cardioversion is attempted. The researchers found that by checking the left atrium (appendage) for blood clots using TE they could safely convert AF patients (with no blood clots) in 3 days. The incidence of internal bleeding in the TE group was half of that in the warfarin group and the rate of successful conversion was 71.1% in the TE group versus 65.2% in the warfarin group. The mortality and proportion of patients who were still in sinus rhythm (55%) after 8 weeks were similar for the two groups. Patients with atrial flutter had a significantly higher conversion success rate than did people with AF and were also much more likely (77% versus 55%) to still be in sinus rhythm after 8 weeks.

*New England Journal of Medicine, Vol. 344, May 10, 2001, pp. 1411-20, 1468-70*

**Risk factors for atrial fibrillation.** Researchers at the Mayo Clinic in Rochester have just released a study concerning the risk factors for atrial fibrillation (AF). They followed 1655 AF-free men and women aged 65 years or older for 4 years. At the end of the follow-up period 189 (11.4%) had developed AF. The main risk factors were age, hypertension, valvular heart disease, prior heart attack, congestive heart failure, and an enlarged left atrium. Smoking (current, past or never) and elevated cholesterol levels did not increase the risk of developing AF.

*Mayo Clinic Proceedings, Vol. 76, May 2001, pp. 467-75*

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