

# THE AFIB REPORT

*Your Premier Information Resource for Lone Atrial Fibrillation!*

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## **Editorial**

*In this issue we list some personal advice from fellow afibbers to a question posed in our initial survey; then we will continue with the evaluation of the data gathered in the original and the follow-up surveys. We also discuss the surgical options for LAF and begin an evaluation of supplements that may be useful for afibbers.*

*Yours in health,  
Hans Larsen*

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## **Do you have any advice to give to fellow afibbers?**

- I know this is hard but learn to live with it. Try not to become too apprehensive during episodes. You know they will eventually pass.
- Yes, the answer will come from OUR PRESSURE. I would URGE everyone who has regular, predictable sessions accompanied with the BIG PEE SYNDROME, to try their utmost to get their I know this is hard but learn to live with it. Try not to become too apprehensive during episodes. You doctors to cooperate in a testing program through the cycle. Testing changing levels of electrolytes in blood and effluent, changing ECG, etc., as one GOES THROUGH THE CYCLE FROM THE BEGINNING OF AF TO WHERE SINUS

IS RESTORED. Something is happening. The answer is to be found in the changes that are taking place. But the stumbling block is the total unwillingness of the medical people to listen to patients. They trust their pharmaceutical approach, and nothing else is to be even considered.

- Try flecainide, 50 mg twice a day...nothing else.
- Although quite frightening sometimes I believe it to be not too serious a condition.
- Read everything you can, avoid known triggers, consider the maze surgery if medications are failing (none of them do any good to the rest of your system).
- Presently, I do not know any – but if I did, it would be to first relax; it is not (at least in my case) a life-threatening disease and there are hundreds, if not thousands, of worse problems a person could have. Every time I have to go to the emergency room I thank God that I have only afib! Next, try to get to understand your system(s) and what circumstances initiate your own afib episodes. Try to understand its pattern(s) and what is happening inside your body to cause

these changes. I like to use the following metaphor: for some reason my nervous system is wired with #14 wire and the breaker fuse is 15 amps. While this meets code and can withstand "normal" day-to-day loads it will break when more load is put on this circuit. My "breaker" surfaces in the sinus node where it is diagnosed as afib. I believe the same type of "overloading" occurs in other people with a low tolerance wiring system, but they are diagnosed as having migraine headaches, etc. It is hard for some people to understand our low tolerance system because their system is wired with #12 wire (with a 20-amp fuse!). We all have also met individuals who have 100-amp systems – but I won't go into that!!! Learn to recognize what is plugged into your system – that raises the amperage - and learn to unplug things before adding more!!

Knowing yourself is so very important; e.g. if you are a type A blood type your natural wiring system is already running a few amps – with nothing plugged in!!! There are so many cultural, social, external, factors, as well as some, which we may not even be consciously aware of, that can and will "load the system". The list of these factors is almost unending. I believe that each individual only has to listen to his or her system and most of these factors will be obvious.

Last and probably the most important is how you deal with present situations. And that you really understand how each – no matter how little or big the situation – can affect your nervous system. They do (at least in my case) have an accumulative effect. I try to keep in touch with myself and to sense when my "bank" deposits are getting low – but this is recognizably very hard, especially when the individual (as I find myself) is very creative and intense and tends at times to get involved "in the process". I find the best thing I can do is to have an "automatic" investment plan – yoga, meditation, a good diet, etc.

To me, afib is basically an internal imbalance of energy; when I exceed the edge I have afib and in my case (at least the last few time) only an equal surge of energy – cardioversion – can get it back into balance.

- Find the most experienced electrophysiologist familiar with LAF and if your heart is otherwise structurally normal get it done (ablation).
- Remember it is not life threatening; keep notes and try to identify triggers; keep up the electrolyte supplements -- magnesium, calcium, potassium.
- Maybe there's more to this mind and body thing than we thought.... try not to get obsessive about it (I'm working hard to ignore my heartbeat!).... Keep it in perspective.... don't let it rule your life!
- Have mercury testing done. I found mine to be high. Maybe there is a connection. I am having my amalgams removed and plan to detoxify.
- Keep a positive outlook and MEDITATE - find a spiritual path.
- The antiarrhythmic medication I am taking has some potentially dangerous side effects. Given the opportunity again, I am not so sure I would rely on these dangerous medications to control the LAF.
- Get rid of mercury under the strictest of protocols. Control anxiety with yoga/chi gong. Hang in there!
- Be prepared to do whatever you have to to get rid of this terrible condition. Know your own body and respond to its demands. If you feel you need to get fixed and you can't wait and don't want to wait then thank The Lord there is the maze procedure. If you want to give the ablation a shot then go to the best in the country where they are doing dozens of them every week and they have the latest technology and mapping equipment. I will take the offensive if things get worse.

- (1) Take antioxidants, (2) Do not eat meat but eat fish instead, (3) Eat vegetables, fruits, soy products and avoid dairy products, (4) read the following: The Antioxidant Miracle by Lester Packer, PhD (John Wiley & Sons, Inc.); The Total Guide to a Healthy Heart by Seth J Baum M.D. (Kensington Publishing Corp. 1999); Heart Healthy Magnesium by James B. Pierce, PhD (1994 Avery Publishing Group).
- Learn as much you can, learn your triggers by keeping notes, avoid triggers by changing lifestyle, do not panic and run to the emergency room at first sign (not a medical opinion), share your condition with others in the AF Forum. Seek second opinion from another doctor about any procedure or drugs.
- Remain calm, pray to God and do anything at all that is reasonable such as talk to friends, etc. in order to take your mind off the AF. I ONLY revert during the time my mind has been deflected from myself and the anxiety of being in AF. Remain hopeful that a non-maze cure for AF is not far away (possibly one of the new ablation procedures). By the way, I am skeptical of the evidence so far advanced that purports to show that removal of amalgams will cure AF.
- Avoid digoxin as long as condition is LONE AFib and intermittent!
- Investigate the latest forms of RF ablation.
- Make a log of your episodes - the time of day, the activity, and the length. Next time you see your cardiologist hand it in - he'll be delighted. Try to stay as healthy and as fit as you can. Try to not let it rule your life.
- Provided it is "lone" AF, you probably have some greater latitude to try alternative methods of treatment and avoid reliance on drugs that seem to be the medical profession's first but not necessarily the only choice.
- Try to remain calm and relax.
- Watch the drug flecainide - while it kept my episodes to 1-4 per year, the severity of those episodes was intense - pain and discomfort, lightheadedness, and complete incapacitation; always required cardio-conversion at the hospital. Since stopping this drug the episodes are daily but I am able to function (somewhat) and do not experience any pain.
- Relax and do not worry as the more you worry the more AF episodes you will get. After 14 years of AF I finally decided to go to hospital and my AF episode got worse!!!! I have had an afib episode in the middle of the Rockies in Canada more that 3000 meters up with just a friend and I. I lay down for 1 hour, ate as much food and drink as I could, and it went away. Then I carried on down the mountain on my bike at 40 km per hour. AF is a worrying condition, but it should not stop you from doing what you want as long as you do not have another more serious heart/medical condition.
- Personally, I believe my life is in the hands of God so I pray about my situation and the situation of others on this list. I would also say that to let this condition get you down ultimately results in cheating yourself out of many pleasures of life. Find someone you can talk to!
- If you can identify triggers, pay a lot of attention to avoiding them. If a rapid heartbeat is your trigger, consider carrying a beta-blocker with you and using it as needed.
- Take the stress out of your life, keep your weight down, do deep breathing exercises, hike, swim, ski, etc. without overdoing it, eat a good varied diet, and see if you can get off medications.

## **Survey Results – Part V**

### **Analysis of Correlations**

We now have full or partial data from 75 respondents. Sixteen of these have chronic LAF, 27 have the vagal variety, 20 the adrenergic variety, and the remaining 12 have a mixture of vagal and adrenergic LAF. Although not a large sample, we are able to draw some conclusions from the data and we will be sharing these in this and future issues.

One thing is quite obvious. There is a very large variability in the severity of the LAF between respondents; this, unfortunately, makes it difficult to reach conclusions that are valid in strict statistical terms, but we certainly can spot trends.

We have gathered data on 3 measures of severity of the condition: the number of episodes within the last 6 months, the average duration of these episodes, and the total time spent in fibrillation over the past 6 months.

### **Severity of Episodes**

Probably the most useful expression of severity is the total time spent in fibrillation over the past 6 months. The average for all respondents with paroxysmal (intermittent) LAF is 143 hours with a minimum of 0 hours and a maximum of 936 hours. In comparison, an afibber with chronic LAF would have spent 4320 hours in fibrillation over the 6-month period. Vagal afibbers had the easiest time with an average of 97 hours spent in afib (range: 0-576 hrs). Mixed afibbers were next with an average of 173 hours (range: 0-750 hrs) followed by the adrenergic group at 197 hours (range: 0-936 hrs).

There is a strong, statistically significant correlation between time spent in afib and the number of episodes experienced over a 6-month period ( $r=0.5924$   $p=0.0001$ ). Adrenergic afibbers had an average of 14 episodes in 6 months (range: 0-90), vagal afibbers 17 episodes (range: 0-150), and those with the mixed variety 24 episodes (range: 0-125).

The correlation between the average duration of the episodes and total time spent in fibrillation is much less pronounced. There is a slight upward trend, but it is not statistically significant. The average episode lasted 11 hours for the mixed group (range: 0-37 hrs), 15 hours for the vagal group (range: 0-168 hrs), and 20 hours for the adrenergic group (range: 0-72 hrs).

### **Effect of Age**

There is a statistically non-significant trend ( $r=0.2234$   $p=0.089$ ) for the time spent in fibrillation to increase with age. Thus, according to the trend line, the average time spent in fibrillation was about 50 hours (over 6 months) at age 30 years and about 125 hours at age 50 years. There were no significant correlations between age and the number of episodes experienced in 6 months nor between age and the average duration of those episodes. The average age of vagal afibbers was 48 years, adrenergic 55 years, mixed 56 years, and chronic 57 years. The age difference between vagal and chronic afibbers was statistically significant ( $p=0.0247$ ); the difference between vagal and adrenergic was not significant ( $p=0.0797$ ) nor was the difference between vagal and mixed afibbers ( $p=0.1206$ ). Thus it would appear that the vagal variety is associated with a younger age while the chronic variety is associated with an older age.

### **Effect of Gender**

There were only 10 women in our sample (65 men) so conclusions regarding the effect of gender should be treated with some caution. Nevertheless, there were some interesting observations.

Only 1 woman had the vagal variety of LAF with the remaining 9 being evenly split between adrenergic, mixed, and chronic. Women with LAF (at least those that responded to the survey) were significantly older than men with LAF. The average age for the women was 66.3 years while that of the men was 51.2 years. This difference was statistically significant ( $p=0.0002$ ). Women spent less time in fibrillation (over a 6-month period) than did men (43 hours versus 156 hours on the average). They also had fewer episodes (8 versus 18) and the average duration of their episodes was less than those of men (4 hours versus 17 hours). It was not possible to establish the statistical significance of these differences due to the small size of the group of

women with paroxysmal LAF. There was no significant difference in the percentage of women and men who were taking antiarrhythmics (71% versus 62%).

### **Effect of Years of LAF**

There was no correlation between the number of years a respondent had had LAF and the time spent in fibrillation (over a 6-month period). There was a slight, but statistically non-significant ( $r=0.1966$   $p=0.1355$ ) increase in the number of episodes with increasing years of LAF, but no increase in the duration of episodes. The average number of years of LAF was 6 years for both vagal and adrenergic afibbers, 7 years for mixed, and 5 years for chronic. The figure for chronic afibbers may be a bit misleading though in that many may have had the condition (without symptoms) for several years prior to being diagnosed through a routine electrocardiogram. Nevertheless, the data does not support the idea that vagal, adrenergic or mixed LAF tends to progress to the chronic version with time.

*That is all for this edition of the survey. In the next issue we will take a look at the correlation between episode severity and the use of pharmaceutical drugs (antiarrhythmics). Stay tuned!*

## **The Surgical Options for LAF**

Lone atrial fibrillation, by definition, is not a heart disease as such, but rather a combination of an imbalance in the autonomic nervous system and the presence of easily excitable heart tissue. Because the symptoms of LAF involve the heart the disorder is usually treated by cardiologists or electrophysiologists and little attention is paid to correcting the autonomic nervous system imbalance.

The current treatment options for LAF are therefore almost exclusively directed towards “numbing” the excitable heart tissue with pharmaceutical drugs (antiarrhythmics), eradicating the offending heart tissue with radio frequency ablation, or carving intricate channels of scar tissue on the surface of the heart to direct electrical impulses along a specific path (maze procedure).

The use of beta-blockers and antiarrhythmics with beta-blocking properties (propafenone, amiodarone and sotalol) is an attempt to address the autonomic system imbalance. This approach blocks the heart's receptors for norepinephrine. While sometimes beneficial for afibbers with the adrenergic variety, this treatment is precisely wrong for people with the vagal variety.

### **The mechanism of atrial fibrillation**

The beating of the heart is controlled by a finely tuned interaction between the autonomic nervous system and the heart's natural pacemaker, the SA or sinoatrial node. Impulses from the SA node spread across the atrium and cause it to contract and relax at a rate of about 70-75 contractions per minute. The impulses eventually reach the AV or atrioventricular node, which controls the contraction and relaxation of the ventricles, the heart's main pumping chambers[1].

As long as it is only the impulses originating in the SA node that reach the AV node everything is fine. It is when extraneous impulses are generated in the atrium that trouble (fibrillation) can occur. Extraneous impulses can be generated by an overactive sympathetic nervous system (adrenergic), an overactive parasympathetic system (vagal) or simply by an agglomeration of “rogue” heart cells that decide to start a beat of their own (ectopic beats). A combination of rogue cells and an imbalanced autonomic nervous system is another possibility.

The aim of ablation or surgery (maze procedure) is to ensure that only the impulses from the SA node reach the AV node or, in the case of AV node ablation, to completely block any signals originating from the SA node or elsewhere and replace them with signals from an artificial pacemaker. The first step on the road to ablation is the electrophysiology study.

### **The electrophysiology study (EPS)**

An EPS is an invasive test designed to map the electrical activity of the heart during fibrillation. Small tubes (catheters) are inserted into the veins in the groin, arms, or neck or under the collarbone and then directed

into the heart. Once the measuring electrodes are in place fibrillation is induced and the electrophysiologist is then able to pinpoint the areas where the rogue beats originate. As mentioned previously, these areas are often found at the junction between the left atrium and the pulmonary vein[1].

The study can be somewhat uncomfortable and can last from one to three hours. At the end of it the electrophysiologist may report “nothing to ablate” if he has not located any foci of rogue cells or he may go directly to the next step and ablate the active area(s).

### **Radio frequency (RF) ablation**

RF ablation is an invasive procedure, which utilizes radio frequency energy to heat the tip of a special catheter inserted through one of the tubes used in the EPS. The cardiologist or electrophysiologist places the catheter next to the area initiating the fibrillation and then “zaps” this area. This produces a scar, which destroys the offending area or prevents impulses originating in it from going anywhere.

The ablation procedure is generally fairly painless (except for the \$30,000 US cost) and lasts four hours or less. Its success rate for atrial fibrillation is currently around 80%, but with improved mapping and ablation techniques this is bound to improve[2,3]. There are potential adverse events though[4]:

- Bleeding or infection can occur at the catheter insertion site.
- Heart and blood vessels can suffer damage.
- Blood clots can form.
- The heart’s normal electrical pathway can be damaged requiring the insertion of a permanent pacemaker.

As with any invasive procedure, the key to success is an experienced surgeon with lots of successful procedures to his credit.

### **AV node ablation**

Another approach to eliminating the effects of the fibrillation of the atrium is to isolate the AV node (the ventricular beat controller) from any extraneous impulses and feed it its marching orders from an implanted pacemaker. This procedure has two very major drawbacks[4]:

- It does nothing to stop the fibrillation of the atria, which in itself can be quite uncomfortable and necessitates continuing anticoagulation (warfarin) therapy.
- It makes the patient entirely dependent on the pacemaker. If it malfunctions or the batteries run out the patient dies.

AV node ablation is performed in much the same way as the RF ablation except that it is the area around the node that is ablated. A recent study found the procedure to be relatively safe for patients with lone atrial fibrillation[5].

### **The maze procedure**

This is open-heart surgery with a price tag of about \$60,000 US. After making a foot long incision and cracking open the ribs, scar tissues are created on the surface of the heart to create a new pathway through which signals travel directly from the SA node to the AV node. The procedure is performed under general anesthesia and takes about 3 hours. This is followed by a week in the hospital and 6 to 8 weeks recovering at home. It can take 3 months or more to return to full energy levels[6,7].

Nevertheless, if performed by a competent surgeon, the procedure is very effective in eliminating atrial fibrillation. Dr. James Cox at the Georgetown Cardiovascular Institute developed maze surgery. During the past 10 years Dr. Cox has operated on 346 patients with a 94% success rate[8]. Swedish surgeons recently reported that the quality of life of 48 patients (80% with lone AF) who had undergone maze surgery improved very significantly after the procedure to equal the level of a healthy Swedish population. Nevertheless, 12 patients had fairly serious complications. Two required a permanent pacemaker installed and three needed a temporary pacemaker. None of the patients died during one year of follow up[9].

In conclusion, the maze procedure, although very effective for lone atrial fibrillation, is very major surgery and probably best left alone unless you are really desperate and can find a surgeon who has performed many successful ones.

## **Supplements for Afibbers**

There are many supplements that may be useful for lone afibbers. The first order of business is to make sure that you have an adequate intake of the vitamins, antioxidants, and minerals required to promote overall health and well-being. Many physicians still believe you can get all the vitamins and minerals you need from a varied diet. This may be true if you eat only organic produce and meats "brought up" in a healthy soil replete with minerals, live in an unpolluted environment, drink pure spring water, and have little, if any, physical or psychological stress. For the rest of us a daily multivitamin is a must.

For basic support you require the following daily intake of vitamins and essential minerals:

### **Vitamins**

Vitamin A (retinol) – 5000 IU  
Beta-carotene – 5000-25,000 IU \*  
Vitamin D – 400-800 IU  
Vitamin B1 (thiamine) – 10-50 mg  
Vitamin B2 (riboflavin) – 10-50 mg  
Vitamin B3 (niacin) – 10-100 mg  
Vitamin B5 (pantothenic acid) 25-100 mg  
Vitamin B6 (pyridoxine) 25-100 mg  
Choline – 10-100 mg  
Inositol – 10-100 mg  
Biotin – 10-300 micrograms  
Folic acid – 400-800 micrograms  
Vitamin B12 – 400-800 micrograms  
Bioflavonoids – 500-1000 mg

### **Essential Minerals**

Calcium – 300-1000 mg  
Magnesium – 300-1000 mg  
Potassium – 200-500 mg  
Boron – 1-3 mg  
Copper – 1-2 mg  
Manganese – 10-15 mg  
Silica – 1-25 mg  
Zinc – 15-45 mg  
Chromium – 200-400 micrograms  
Iodine – 50-150 micrograms  
Molybdenum – 10-25 micrograms  
Selenium – 100-200 micrograms  
Vanadium – 50-100 micrograms  
Iron - \*\*

\* preferably together with other carotenes such as lycopene, alpha-carotene, and zeaxanthin

\*\* men and most postmenopausal women rarely need supplemental iron

In addition you need to make sure that your intake of the two major antioxidants, vitamins C and E, is adequate. Supplementation with the water-soluble vitamin C should be spread throughout the day (500 mg of ascorbic acid or calcium ascorbate with each meal is a common recommendation). Vitamin E can be taken just once a day (400-800 IU per day of natural vitamin E [d-alpha-tocopherol or d-alpha-tocopherol acetate or succinate] is a common recommendation).

*In the next issue of The AFIB Report we will tackle the other commonly used supplements like coenzyme Q10, hawthorn, etc.*

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