Heart Sound Recorder

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Edited and Arranged by Bethany Lafferty, Lynn Mayer, and Monica Corrado

Using 21st century technology, the Heart Sound Recorder is the progeny of science invented in the 1930s.

In most healing modalities, the stethoscope is used to assist the practitioner in the science of observation. The Heart Sound Recorder assists the practitioner in visualizing what they are hearing when they are observing the sounds of the heart. The practitioner is able to acquire, display, record, and save heart sounds.

THE PRINCIPLES OF THE HEART SOUND RECORDER

- Certain types of heart stress can be monitored by visualizing the rate, rhythm, and tone of the heart cycle.
- As a result, the heart's reaction to certain stressors (i.e. chemical, nutritional, and emotional) can be observed using this type of device.
- The response to external stimuli, such as ingesting vitamins, sugar, caffeine, or alcohol, can be monitored by observing changes in frequency, ratio, amplitude, and other characteristics of the heart's waveform.
- Comparison graphs can help determine the effectiveness of actions taken to improve quality of life.

“From our experience since 1930, acting as a clearing house for nutritional information regarding the heart, we can say that we find no condition, either directly or indirectly, so responsive to nutritional therapy as that which is reflected in heart conditions.”

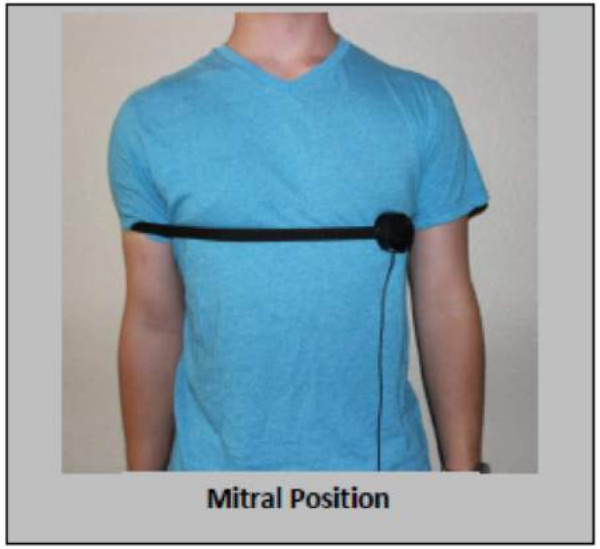
Dr. Royal Lee

Heart Sound Recorder

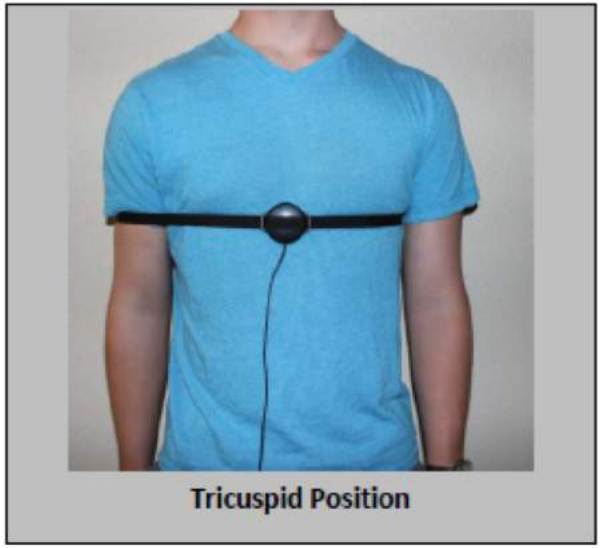
SENSOR PLACEMENT (microphone)

Heart Sound Recorder

Average male



Mitral Position



Tricuspid Position

Aortic Position

Pulmonary Position

SENSOR PLACEMENT (microphone)

* Full-figured women & large-chested men

Heart Sound Recorder

Mitral Position

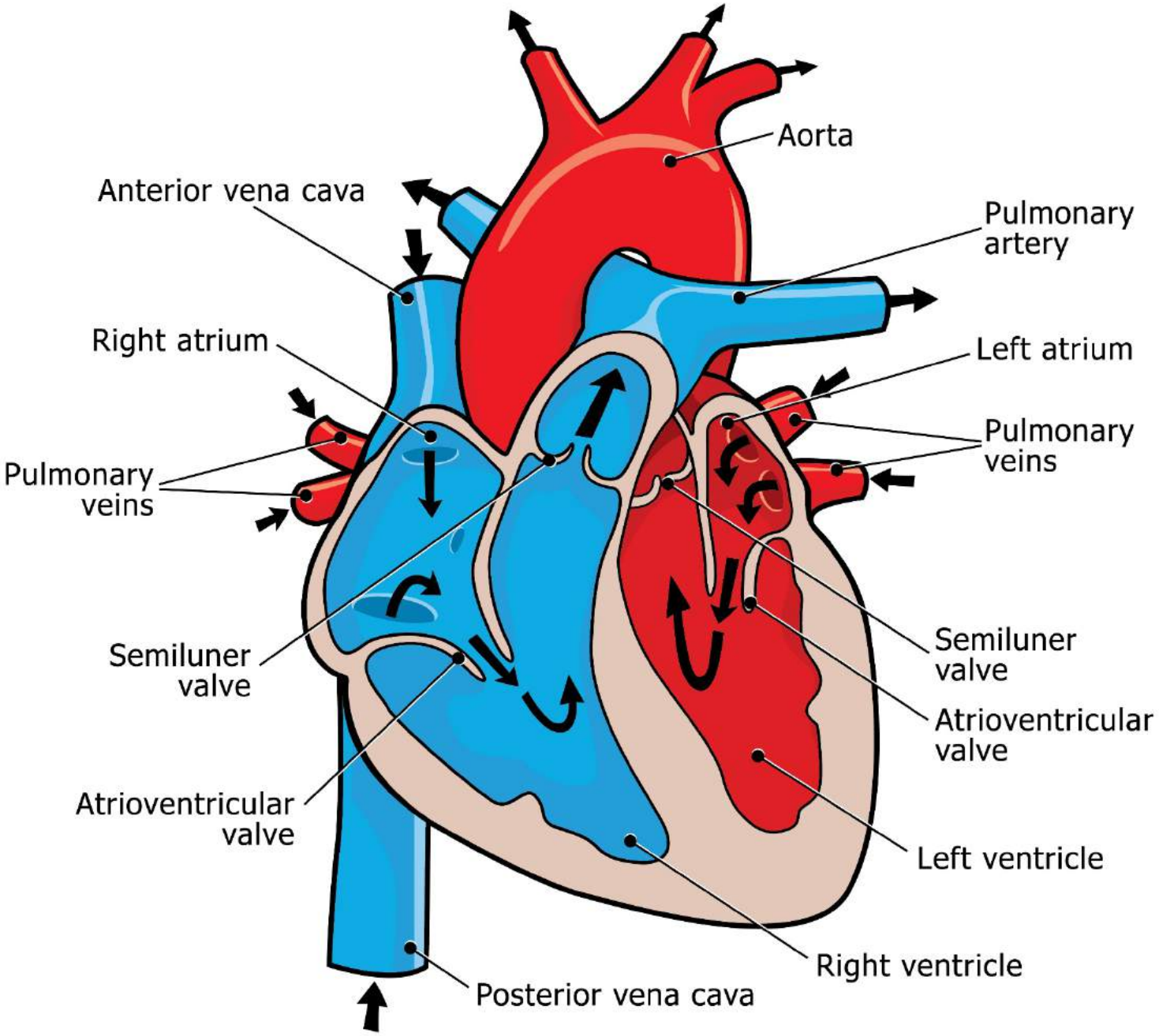
*Alternative Mitral Position

Aortic Position

Tricuspid Position

*Alternative Tricuspid Position

Pulmonary Position

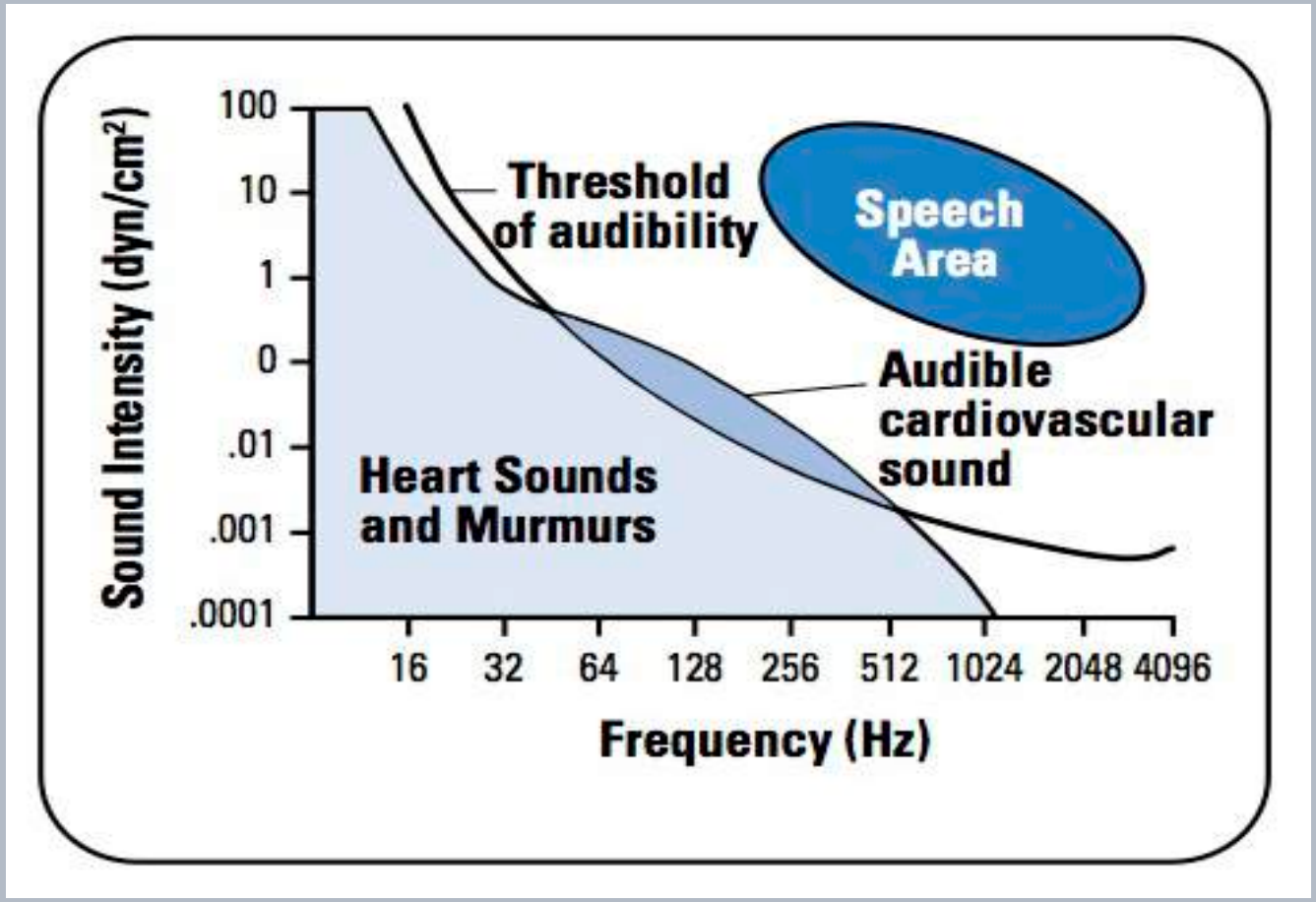

Aorta
Anterior vena cava
Pulmonary artery
Right atrium
Left atrium
Pulmonary veins
Pulmonary veins
Semiluner valve
Semiluner valve
Atrioventricular valve
Atrioventricular valve
Left ventricle
Right ventricle
Posterior vena cava

Heart Sound Recorder

The HSR allows clinicians to see what they cannot hear. Many of the sounds of the heart are below the audible range or too subtle to hear. This device is unique because it is tuned to only hear the sounds generated by the heart and no other sounds from throughout the body.

The HSR meets the FDA classification of a **Low-Risk General Wellness** device and has the ETL Certification of product safety.

Relationship between the range of sounds produced in the heart and the threshold of audibility of the human ear.



Modern Concepts of Cardiovascular Health: The Practical Value of Phonocardiography

Published by:
The American Heart Association

The ear is sensitive to vibrations between 20 and 20,000 cycles per second. The heart's vibrations are between 5 and 800 per second (soft murmurs rarely reach 1,000). Therefore, many cardiac vibrations are in the range of infrasounds (non-audible sounds) while others are heard only if very loud or by trained observers.

Nutritional Efficiency of the Heart

Your heart is the most important muscle in the body.

Every day it beats 100,000 times, sending 2,000 gallons of blood through 60,000 miles of blood vessels.

It is the first muscle that responds to nutrition.

To function optimally, it is vital that the heart have the proper nutrients to maintain its correct rate, rhythm, and tone.

The **HEART SOUND RECORDER** is a general wellness cardiac stress monitor with a specialized microphone strategically positioned to hear the sounds of the four heart valves.

RATE (Speed): The “Autonomic Nervous System” controls the rate at which the heart beats.

There are two sides to the nervous system. The first side is the Sympathetic nervous system, which is like the accelerator of your car (your “fight or flight” response).

The second side is the Parasympathetic nervous system. This is like the brakes of your car (your rest and digest response). Some bodily functions are directed by the autonomic nervous system such as digestion, heart rate and blood pressure.

These are influenced by diet, vitamins, minerals and other factors.

RHYTHM (Beat): This is the “lub dub” of the heart, which should have a specific work to rest ratio.

The heart should be resting twice as long as it is working. The HSR allows us to look at these sounds and the balance between the work and rest ratio. The rhythm can be supported with nutrition that will help balance a heart that is working too long or not resting long enough.

Although everyone’s work to rest ratio varies, there are certain guidelines that they should fall within.

TONE (Strength): This includes the opening and closing of the heart chambers.

On the HSR graph, the tone of the heart can be observed by the height and the width of the two sounds made by the heart's "lub dub" sound. The first sound, "lub", should be 2-3 times the height of the second sound, "dub".

To get a better understanding of why the two sounds should be significantly different, "lub" pushes the blood throughout your body, whereas "dub" allows the heart to refill and prepare for the next cardiac cycle.

Normal Graph

Rate (speed):

- Average heart rate is 72 beats per minute (bpm) with a healthy range of 60-80 bpm.

Rhythm (beat):

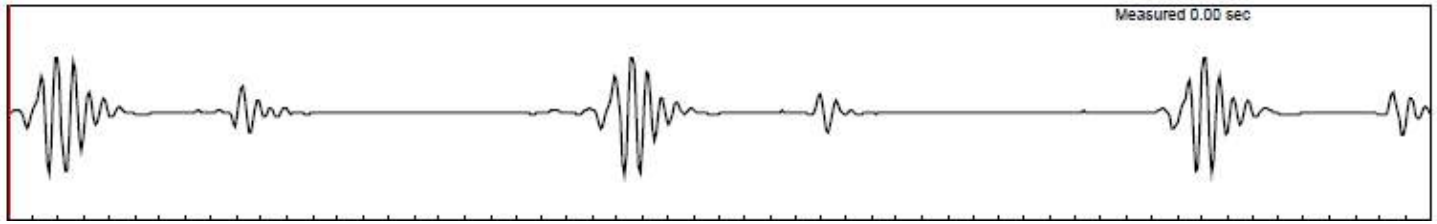
- The Systolic Interval (work period) is half as long as the Diastolic Interval (rest period).

Tone (strength):

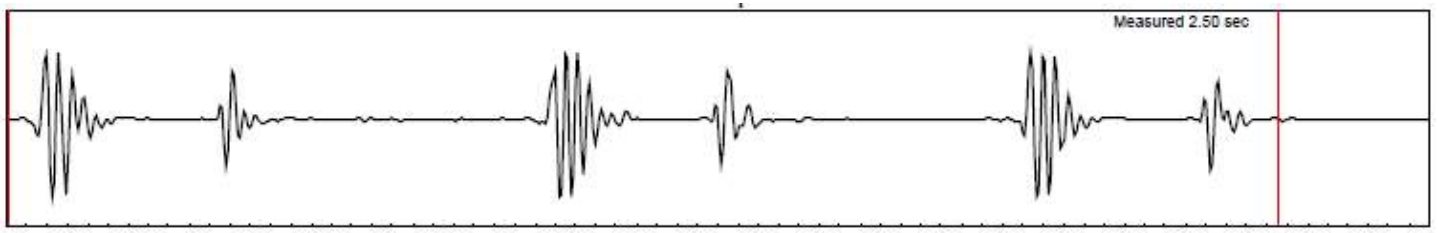
- The first sound (S1) has a larger size and shape.
- The second sound (S2) has a smaller size and shape.

Ideal Graph for all Four Valves of the Heart

Mitral

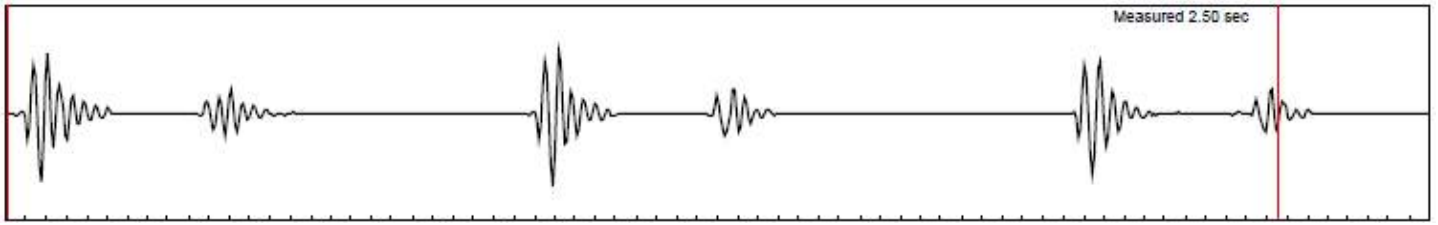


Tricuspid



Aortic

Pulmonic



Cataplex B: Before and After

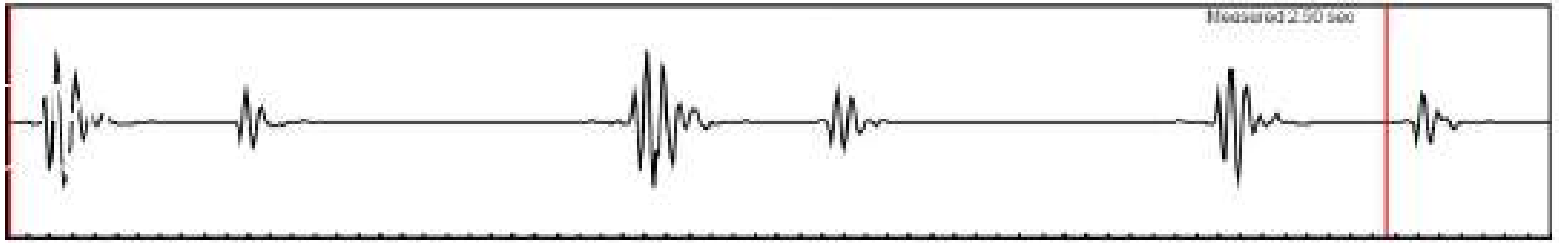
Normal Graph

3:30pm

Mitral

5:30pm after 3 doses of Cataplex B

Mitral



The B Vitamin You Really Need

Many people today are taking either a multivitamin or some kind of B vitamin, which are two of the most common supplements to be consumed on a daily basis. The “Vitamin B Complex” is sold in a variety of forms, claiming to help boost energy, increase muscle tone, and fortify the nervous system, and so on. However, do not be fooled by vitamin labels that show a long list of synthetic B vitamins - they are most likely missing the important foods that are rich in the whole vitamin B complex.

Our bodies were designed to assimilate real foods for growth and repair of organs and tissues… not synthetic chemicals.

Cataplex B is a vitamin complex that is in a base of organically grown whole foods which are rich in many B vitamins.

Most people have heard of B1, B2 and B6, but there is also a lesser known B4 in the family of B vitamins. The Merck Manual, 10th edition, describes vitamin B4 as “widespread throughout plant and animal tissues”.

Vitamin B4 promotes the efficient nerve conductivity of the heart and helps maintain the rhythm of the heart.

The B Vitamin You Really Need

Many people today are taking either a multi-vitamin or some kind of B vitamin, which are two of the most common supplements consumed on a daily basis. The "Vitamin B Complex" is sold in a variety of forms claiming to help boost energy, increase muscle tone, and fortify the nervous system, and so on. However, do not be fooled by vitamin labels that show a long list of synthetic B vitamins – they are most likely missing the important foods that are rich in the whole vitamin B complex. Our bodies were designed to assimilate real foods for growth and repair of organs and tissues… not synthetic chemicals. Therefore, vitamins are best derived from real food. Vitamins, unlike drugs, are living complexes and it is critical to get these in a form that includes all of the enzymes, co-enzymes, and minerals that make up a naturally occurring vitamin complex. The other benefit of deriving vitamins from real food and whole food supplements is that you always get more than what is on the label. Most labels list vitamins like B1 Thiamine, B2 Riboflavin or B3 Niacin, but what is missing are the foods that contain all these B vitamins and more. These synthetic ingredients are much cheaper and easier to produce in a laboratory rather than sourcing all the different foods that naturally contain these vitamins. However, our bodies were designed to utilize them in the natural form, so make sure you are selecting a high quality whole food supplement.

Cataplex® B is a vitamin complex that is in a base of organically grown whole foods which are rich in many B vitamins. Most people have heard of B1, B2 and B6, but there is also a lesser known B4 in the family of B vitamins. The Merck Manual, 10th edition, describes vitamin B4 as *"widespread throughout plant and animal tissues."* Vitamin B4 promotes the efficient nerve conductivity of the heart and helps maintain the rhythm of the heart.

Unless you derive your B vitamins from whole food sources, vitamin B4 would not be included because it cannot be synthesized. Therefore, most off-the-shelf vitamins do not contain this important factor of the B vitamin complex. Whole B vitamin complexes are only found in foods such as nutritional yeast, liver, and wheat germ, which contain natural vitamin complexes that support many body systems including your heart muscle, your central nervous system, energy production, and more.

There are many Standard Process® products that contain these foods which are a rich source of B vitamins, such as Cataplex® B, Cataplex® G, Ligaplex® II, Catalyn®, Livaplex®, Drenamin®, Vasculin®, and Cardio-Plus®. Ask your health care practitioner which products are right for you!

Enlarged heart biggest cause of sudden death in young athletes; experts want more screening

Posted 11/6/2007 2:41 PM | Comment | Recommend

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By Stephanie Nano, Associated Press Writer

NEW YORK — An enlarged heart is the biggest cause of sudden death among young athletes, deaths that could be prevented with more and better screening, experts said after the weekend death of a marathon runner.

Too often, heart problems that can cause an irregular heartbeat and sudden death are missed because there isn't enough uniform screening of athletes, said Dr. Lori Mosca, director of preventive cardiology at New York-Presbyterian Hospital.

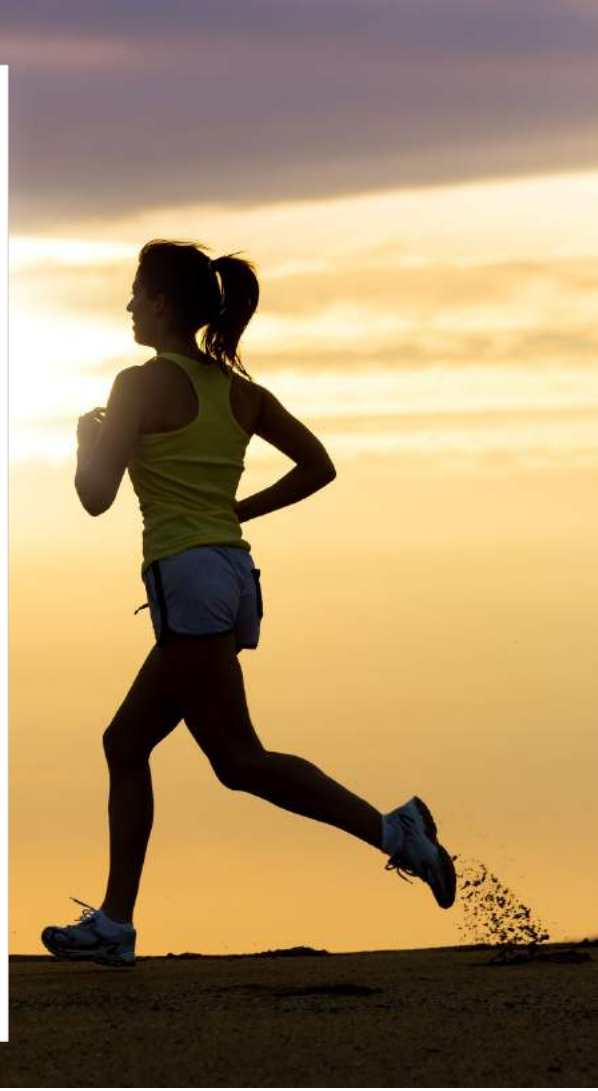
Mosca spoke from an American Heart Association meeting in Florida where cardiologists have been talking about the death of Ryan Shay. The 28-year-old runner was competing in New York in the men's marathon Olympic trials when he died suddenly on Saturday.

According to his father, Shay had an enlarged heart that was first diagnosed when he was 14. But whether that contributed to his death isn't known. Autopsy results are expected later.

"It's hard on all of us when something like this happens to a person who is doing all the right things as far as we can tell," said Mosca, a marathon runner herself. "We have to use this as an example to try to prevent future problems."

About 125 athletes under 35 involved in organized sports die of sudden death in the United States each year, said Dr. Barry J. Maron of the Minneapolis Heart Institute Foundation. The institute tracks such deaths in a national registry.

An analysis of 387 cases from the registry showed the vast majority were cardiac-related. About a quarter involved a condition called hypertrophic cardiomyopathy, which causes an enlarged heart. About 20 percent were from a blow to the chest, such as being hit by a bat or ball.



A growing epidemic. . .

In 2007 about 125 young athletes

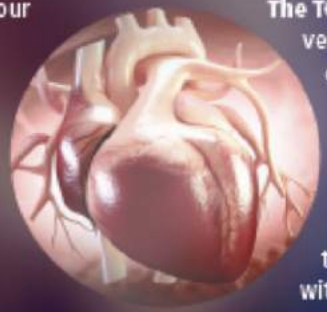
died from an enlarged heart

A normal HSR graph

Rate, Rhythm, Tone

Three Key Indicators of Heart Health and Function

Your nervous system controls the RATE at which your heart beats. The rate of your heart is how fast or slow your heart beats. The optimal resting heart rate is 60-80 beats per minute. One side of your nervous system (sympathetic) manages your "fight or flight" response and can accelerate your heart rate. The other side (parasympathetic) manages your "rest and digest" response and can slow your heart rate. You need a healthy balance between the two.



The RHYTHM of your heart pertains to how regular your heart beats. There are two heartbeat sounds, "lub"(S1) and "dub"(S2), which should beat in a steady, consistent rhythm. The rhythm of your heart should show a specific work-to-rest ratio on the graph. Your heart should be resting twice as long as it is working. Observations are made to see if your heart is working too hard, or not working hard enough.

The TONE of your heart refers to the strength of the ventricle contractions. The height and the width of the "lub dub" sound on the graph shows how efficiently your ventricles are ejecting during systole.

As with any wellness device, recommendations for lifestyle changes implied by using this technology should be undertaken only with the guidance of a licensed physician, therapist, or holistic healthcare practitioner. The findings from this device can be used to support, but should not be used in place of, sound medical therapies and recommendations.

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THANK YOU

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This device and products are not intended to diagnose, treat, cure, or prevent any disease.