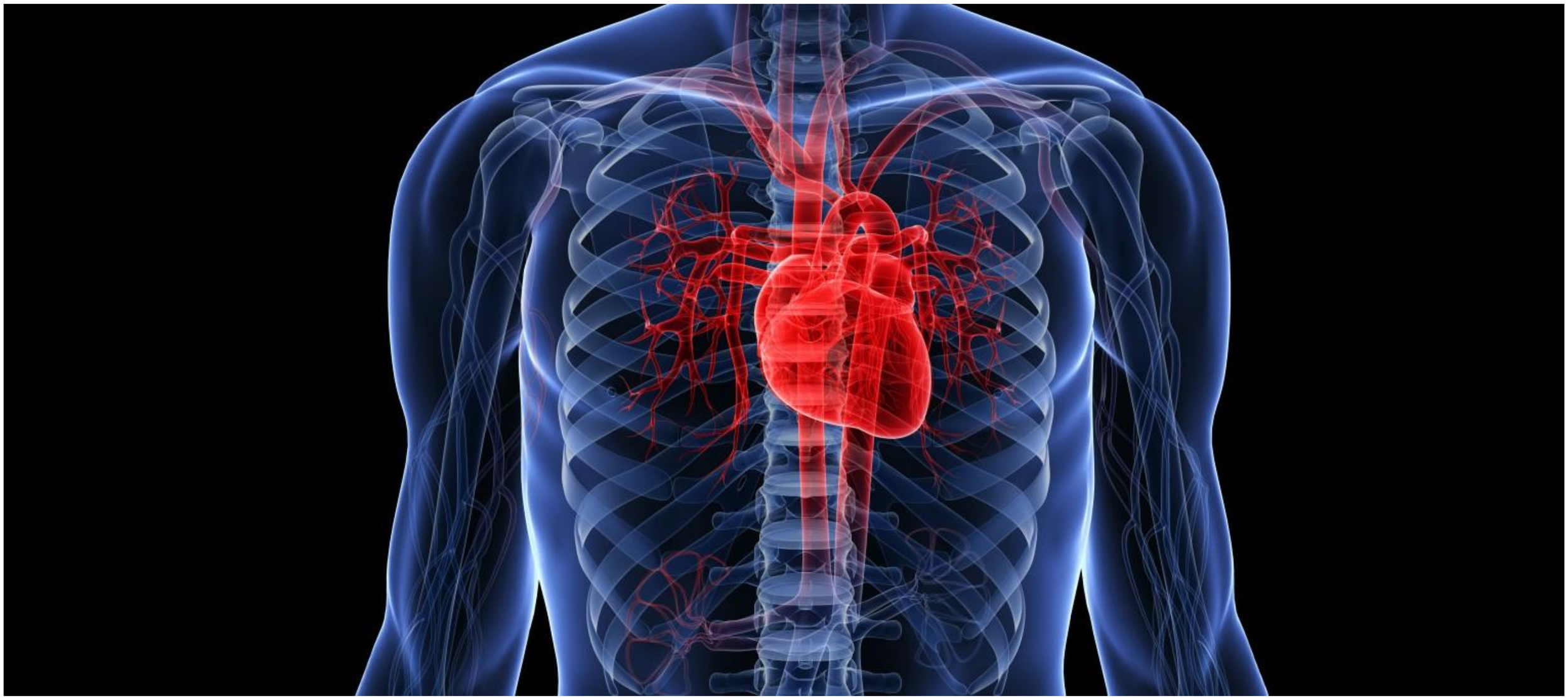
The Heart of the Matter



There is something very unusual about the heart.

The heart BEATS.

Not for the lack of something better to do.

No other muscle, tissue, gland, or organ does it.

Who really believes that drugs and surgery can make this possible?

Your heart beats about 100,000 times in one day and about 35 million times in a year.

During an average lifetime, the human heart will beat more than 2.5 billion times.

Pumps about 800 million pints of blood or about 1 million barrels - enough to fill more than one oil supertanker.

Blood takes about 20 seconds to circulate throughout the entire vascular system.

The adult heart pumps about 5 quarts of blood each minute - approximately 2,000 gallons of blood each day - throughout the body.

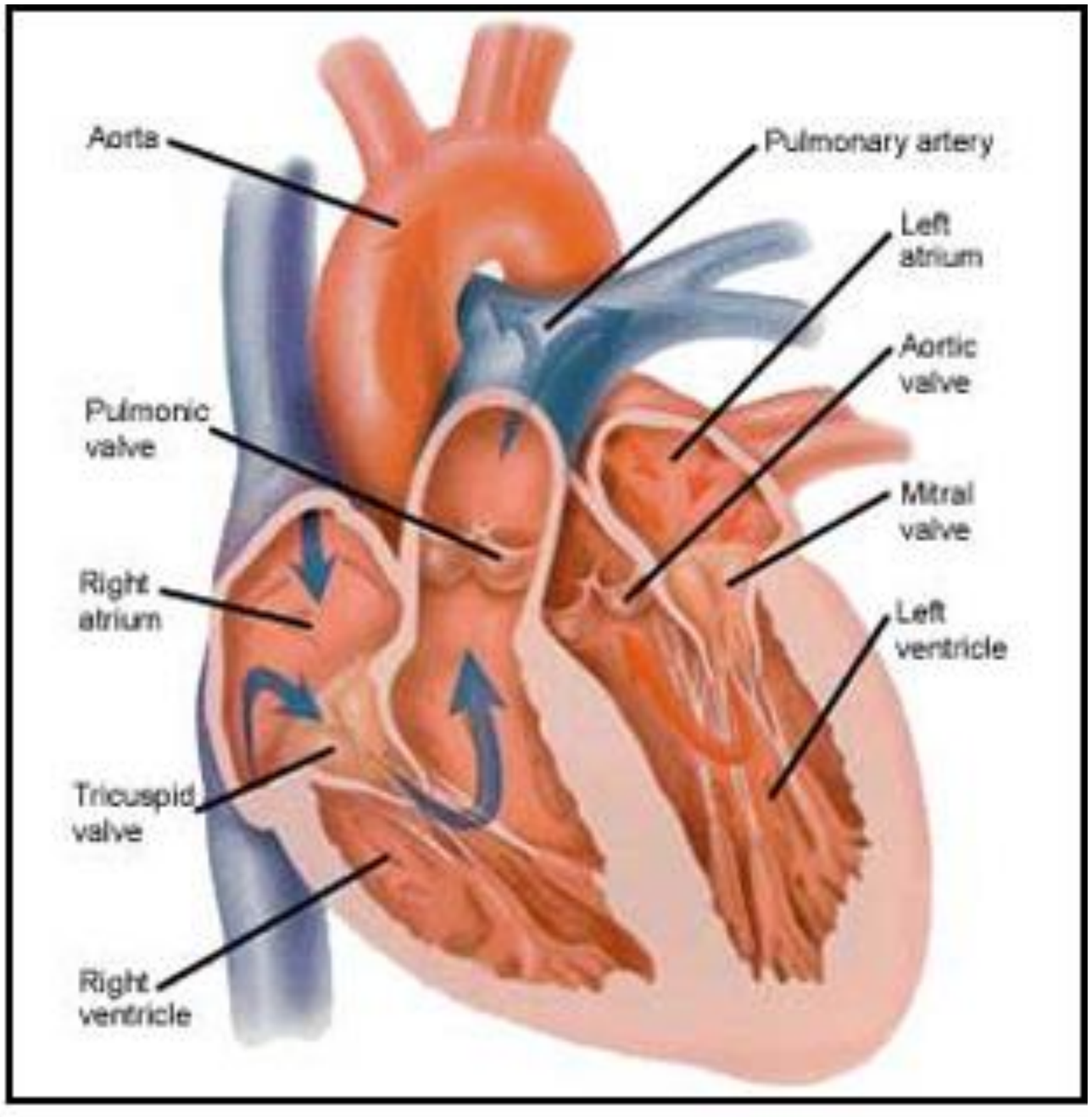
A typical athlete's heart churns out up to 8 gallons of blood per minute.

Hold out your hand and make a fist. If you're a kid, your heart is about the same size as your fist, and if you're an adult, it's about the same size as two fists.

About 5.6 liters (6 quarts) of blood circulates through the body three times every minute. In one day, the blood travels a total of 12,000 miles - roughly four times the distance across the U.S. from coast to coast.

Source: The Cleveland Clinic Heart Book (2000)

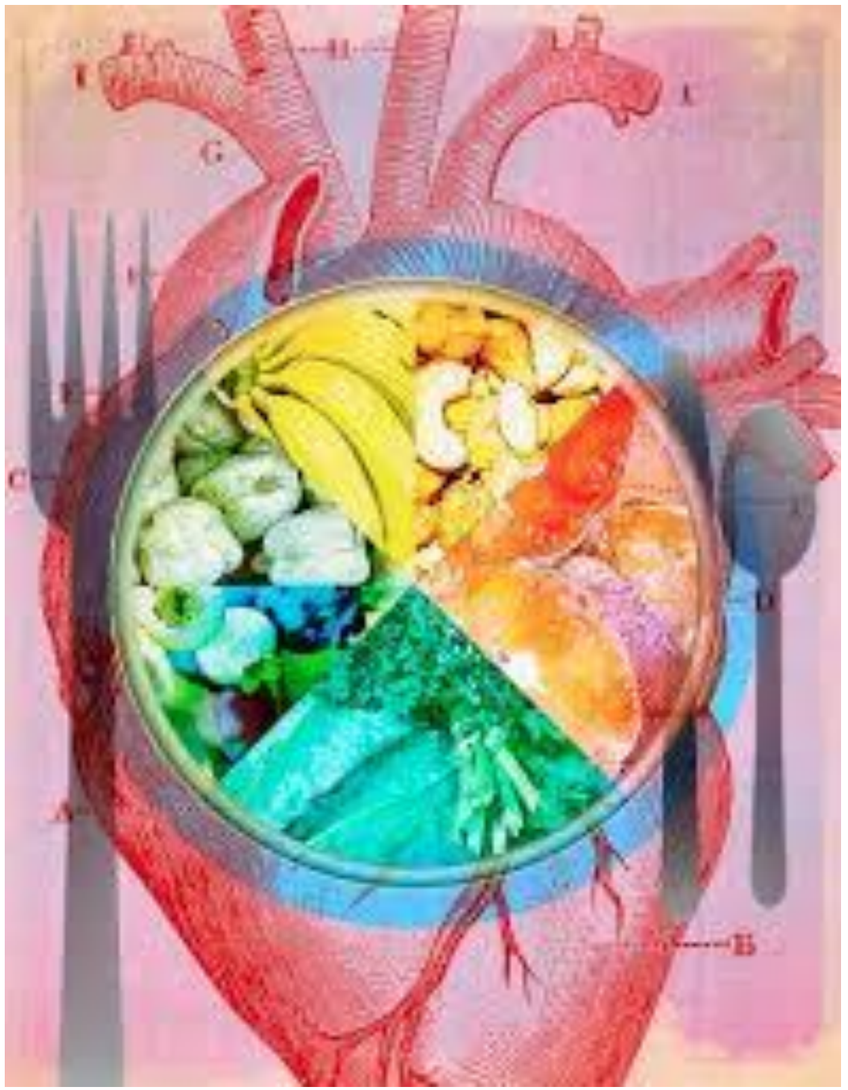
Anatomy Review



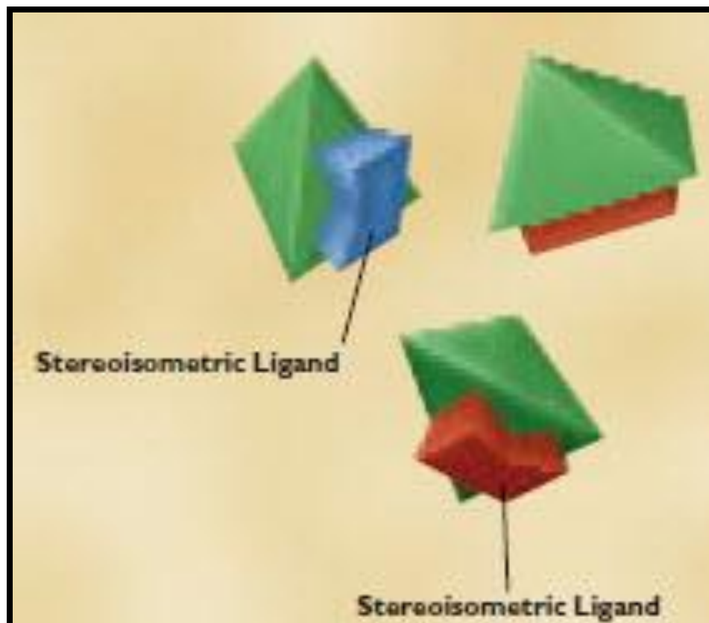
Nutrients that Feed the Heart

- ✓ Vitamin B Complex
- ✓ Calcium and magnesium
- ✓ Essential fatty acids (Vitamin F)
- ✓ Phosphorus
- ✓ Organic minerals (ie: Potassium)
- ✓ Vitamin E Complex
- ✓ Vitamin C Complex

and many more!

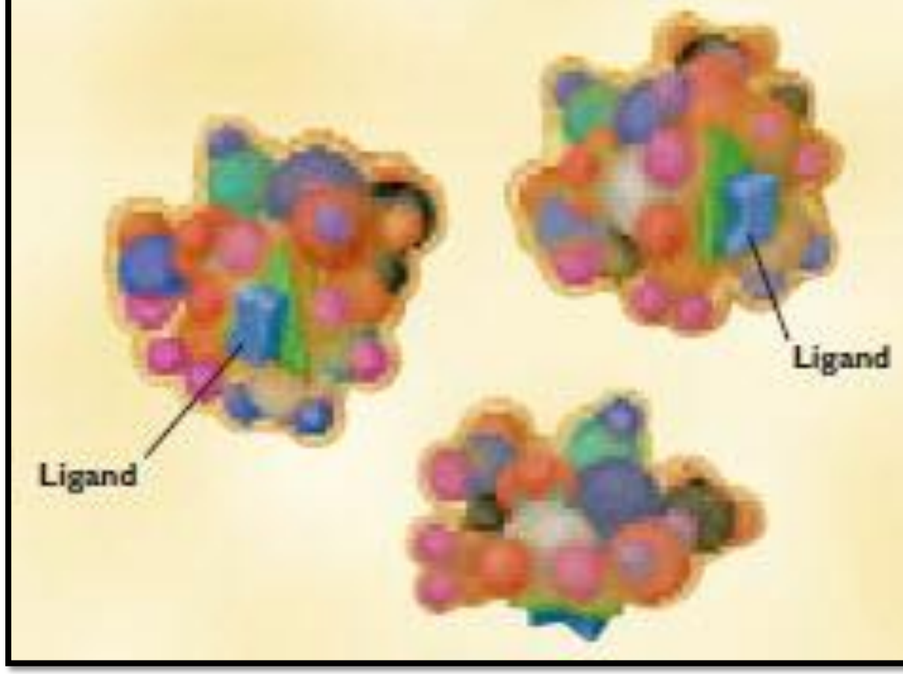


Why the “Complex”?



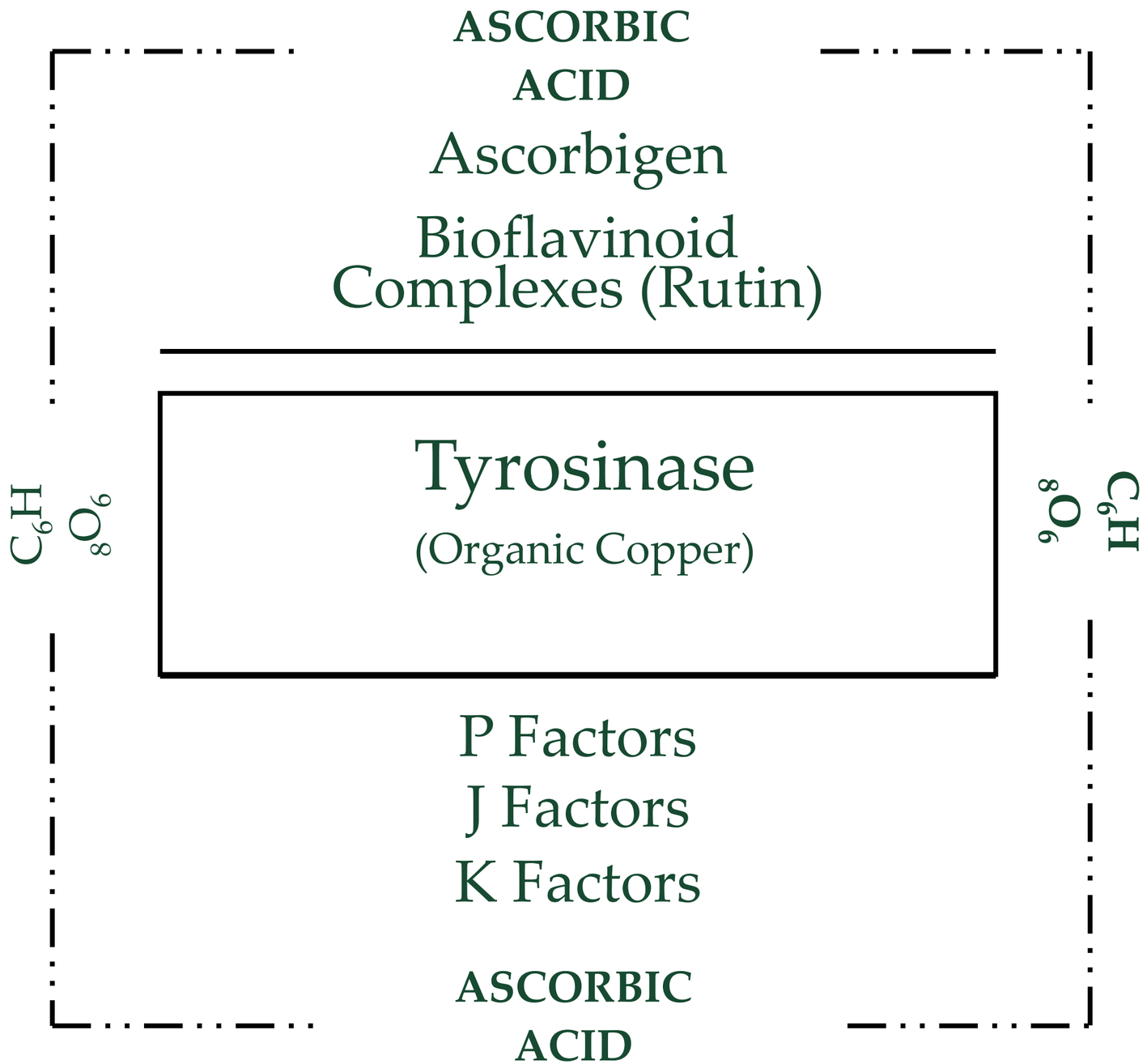
1. Synthetic Vitamin

This is a graphic depiction of a synthetic vitamin showing the vitamin structure and two possible stereoisomer ligands that have the same structural formula, but different confirmations. Note that the ligands are mirror images and that there is a lack of accompanying cofactors. This depiction shows the simplicity of the vitamin structure, which contrasts strikingly with the complexity of the whole vitamin complex found in food.

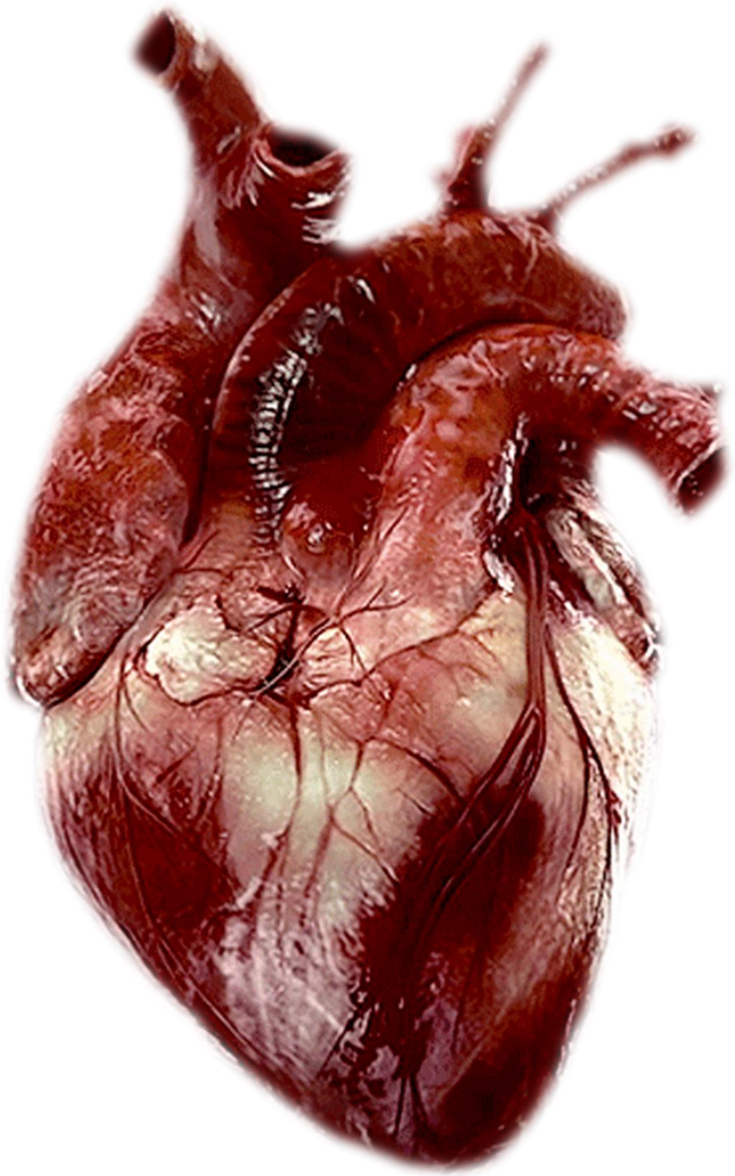


1. Whole Vitamin Complex

This is a graphic depiction of a whole vitamin complex. Note the complexity of structures representing the vitamin and associated cofactors including enzymes, coenzymes, and mineral activators in a protein matrix. This complexity should be contrasted with the relative simplicity of a synthetic vitamin. The ligand (the portion that binds to the cell receptor), as illustrated here, has only one configuration for this vitamin. This specificity facilitates physiological utilization of the vitamin complex.



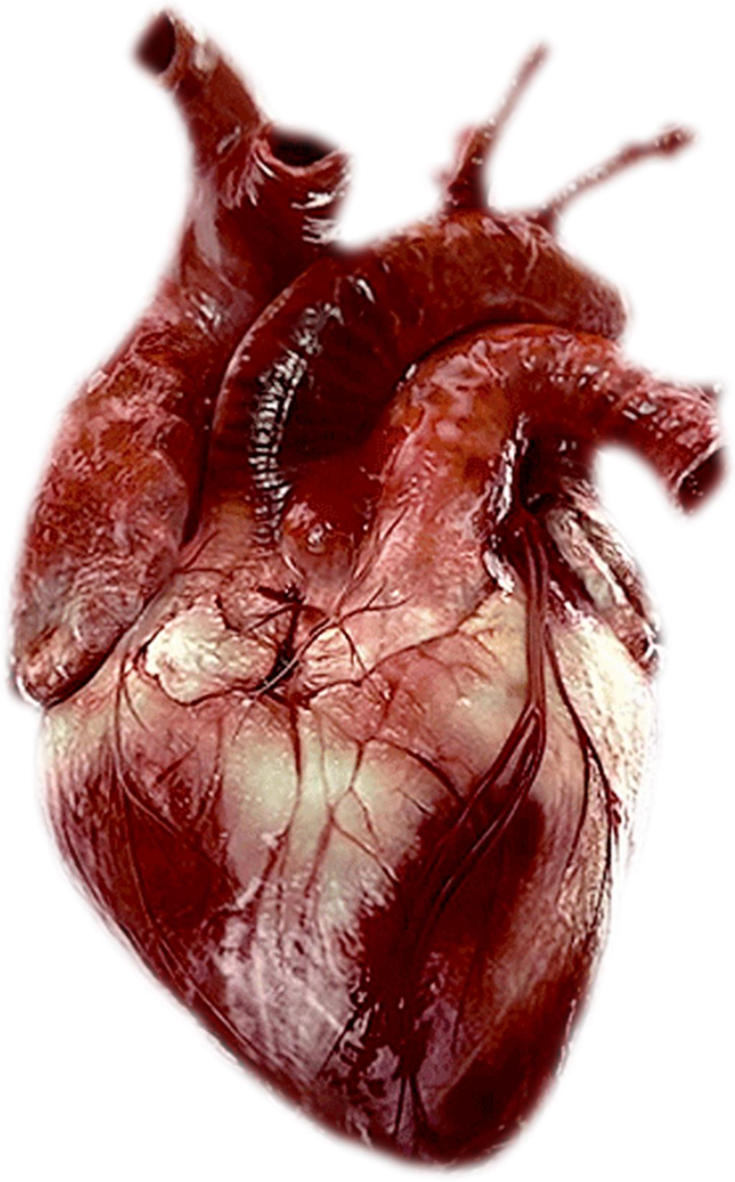
The Functional Architecture of Vitamin C Complex



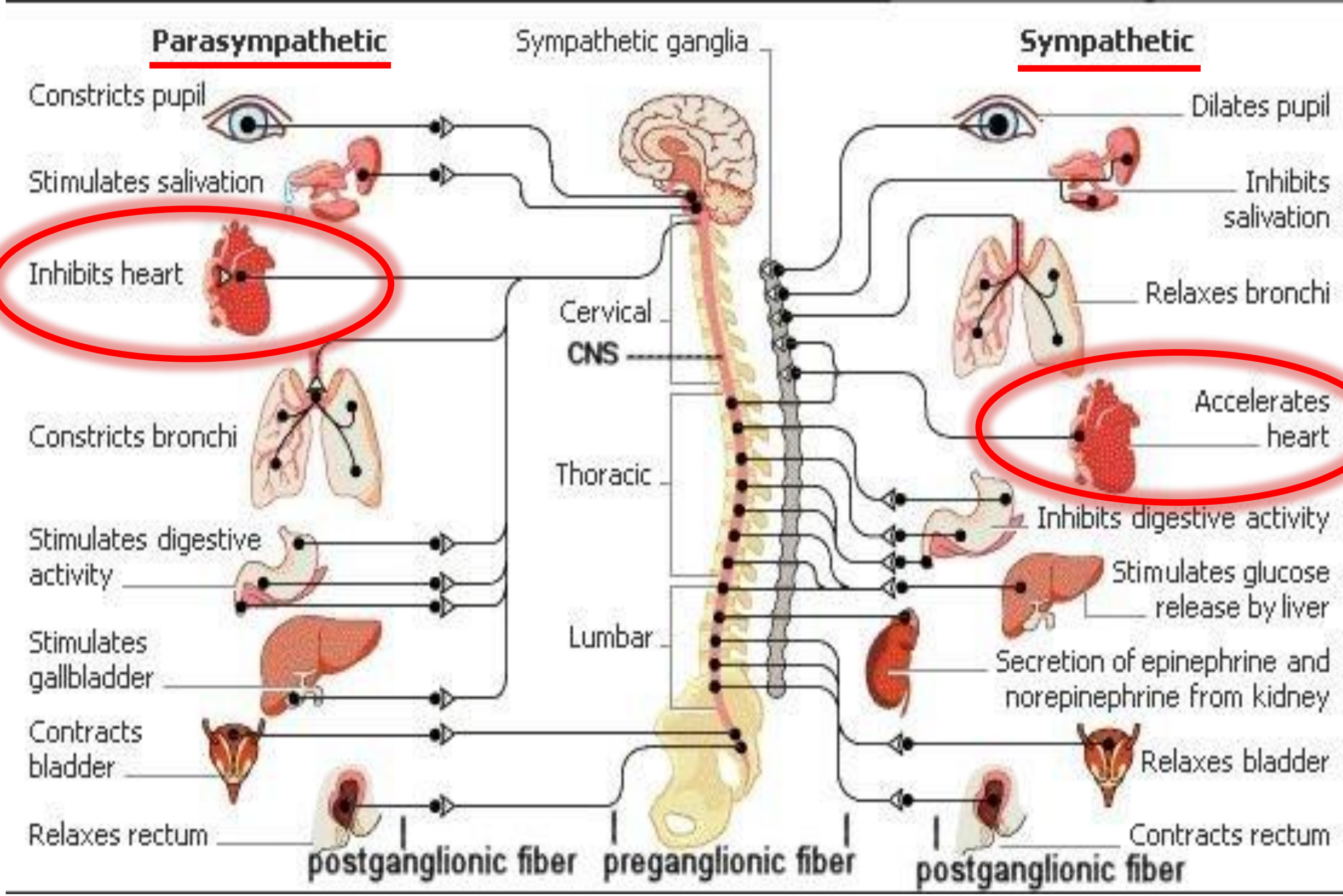
RATE

RHYTHM

TONE



RATE

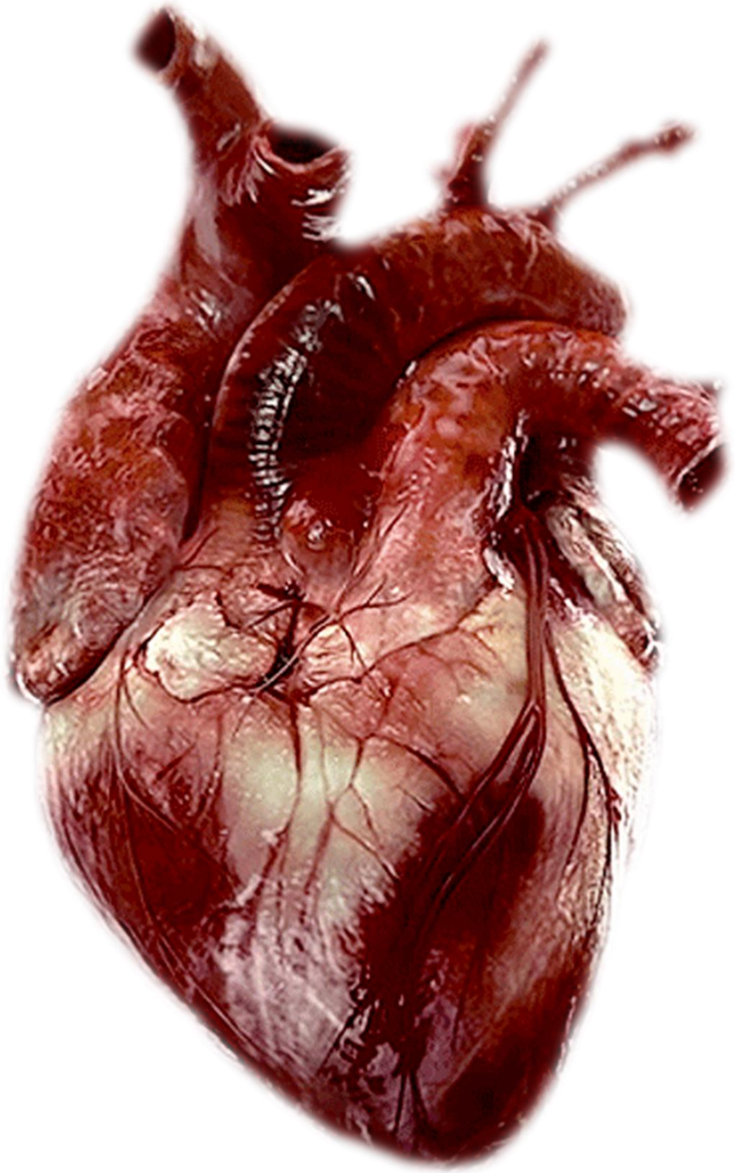

Parasympathetic
Sympathetic ganglia
Sympathetic
Constricts pupil
Dilates pupil
Stimulates salivation
Inhibits salivation
Inhibits heart
Relaxes bronchi
Cervical
CNS
Accelerates heart
Constricts bronchi
Thoracic
Inhibits digestive activity
Stimulates digestive activity
Stimulates glucose release by liver
Lumbar
Stimulates gallbladder
Secretion of epinephrine and norepinephrine from kidney
Contracts bladder
Relaxes bladder
Relaxes rectum
Contracts rectum
postganglionic fiber
preganglionic fiber
postganglionic fiber

Potassium, Tachycardia and Carbohydrates

Excerpt from Lectures of Dr. Royal Lee, Vol. II.
Selene River Press, Inc.

I'll give you a tip on that potassium thing, too. If you're deficient in potassium your heart tends to run away; to race. Paroxysmal Tachycardia is a specific example you can correct that right now with alfalfa tea or alfalfa tablets or mineral extracts of alfalfa or kelp. A patient can have congestive heart failure from potassium deficiency. Where there was no other cause. Paroxysmal Tachycardia often comes on after a heavy meal. Why? Because you eat a lot of carbohydrate and ice cream and sugar, pie, cake: That sugar has to be stowed away in the liver and muscles and it requires potassium to go along with it. When the potassium is all used up and there's some

sugar left maybe, that's when you're really in trouble, that's when the 'ole' heart starts popping off. The patient goes to bed after a heavy meal and wakes up with a heart pounding. That's potassium deficiency. He should cut down his carbohydrates, unless he wants to die; and get more potassium. That's a good thing to ask every patient. Did they ever have their heart obvious to them? The heart is laboring away at night. It shouldn't be, you shouldn't know you've got a heart, never feel it. If you do, you better do something about it. Number one, cut down the carbohydrate and number two, get more potassium. That will clear it right up.

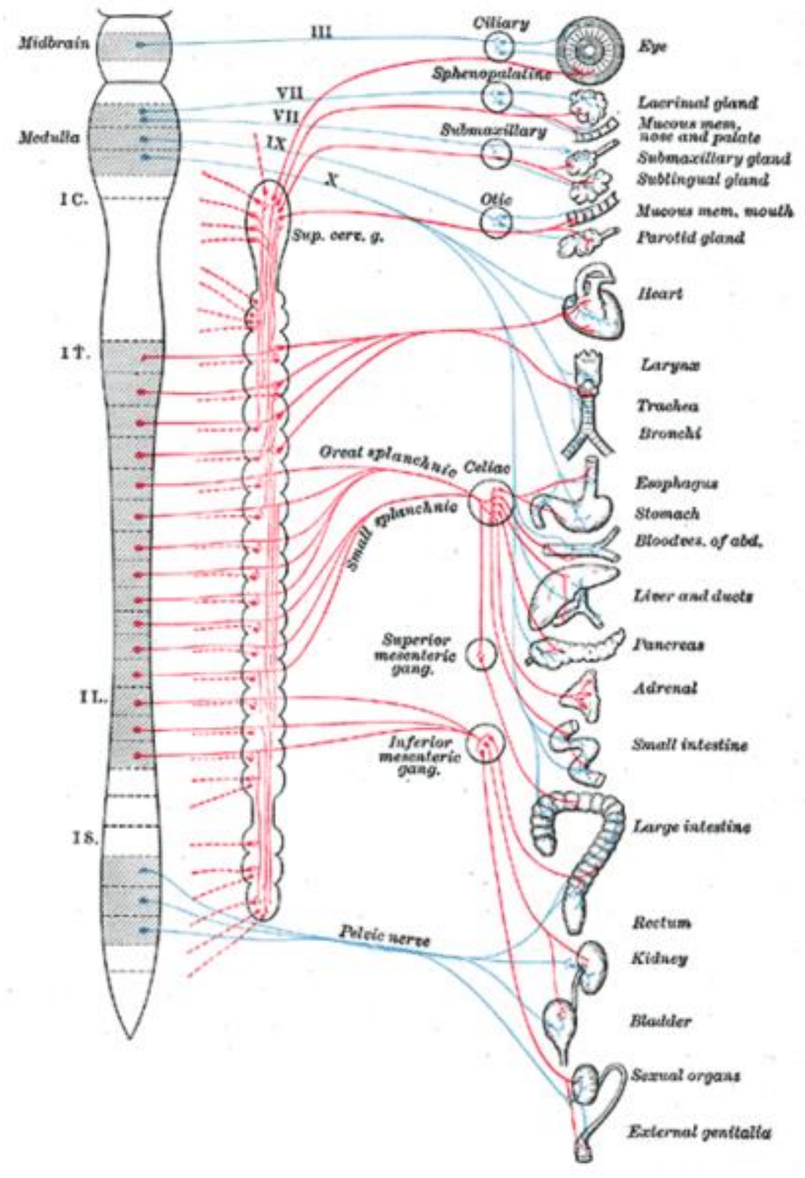


RHYTHM

This intrinsic rhythm is strongly influenced by *autonomic nerves, with the vagus nerve being dominant over* sympathetic influences at rest. This "vagal tone" brings the resting heart rate down to 60-80 beats/minute.

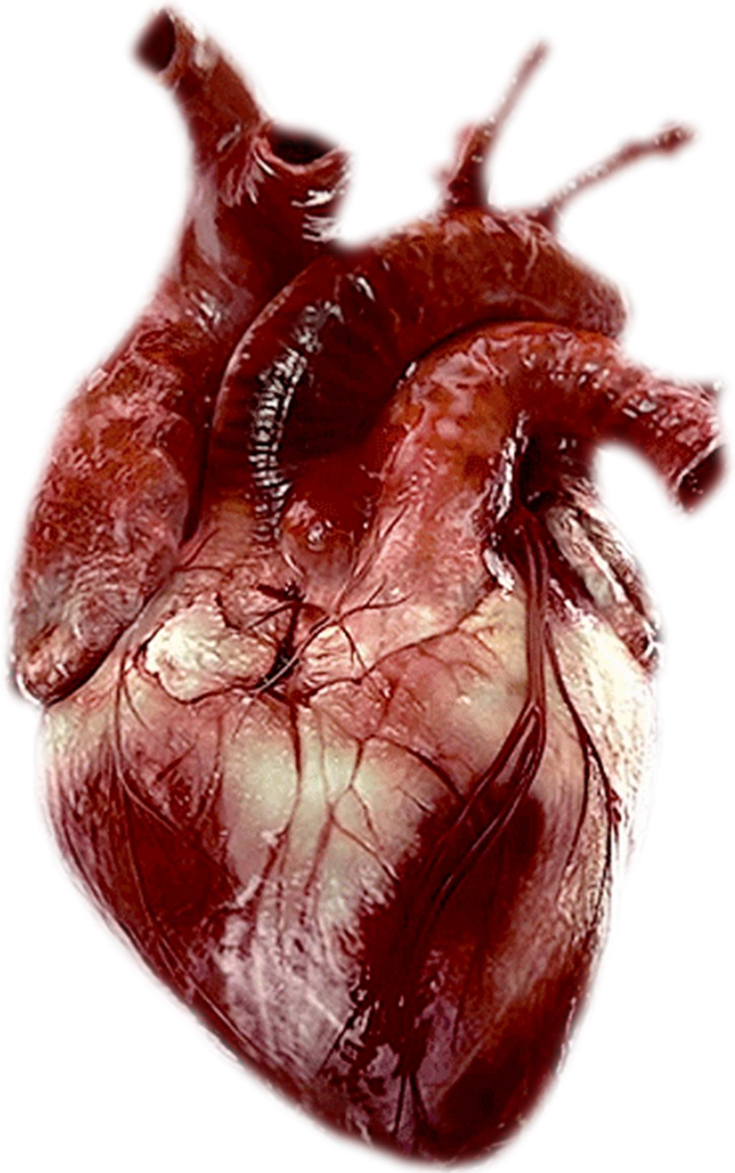
Which direction will you go?

Nutritional support with whole food supplements



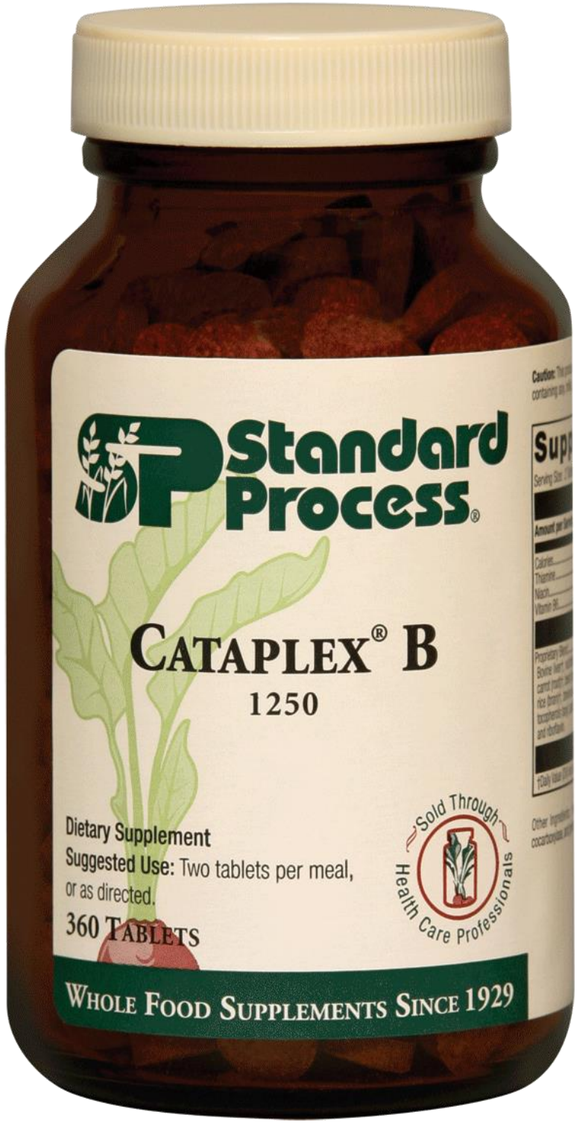
Traditional Heart Rhythm Disorders Treatments:

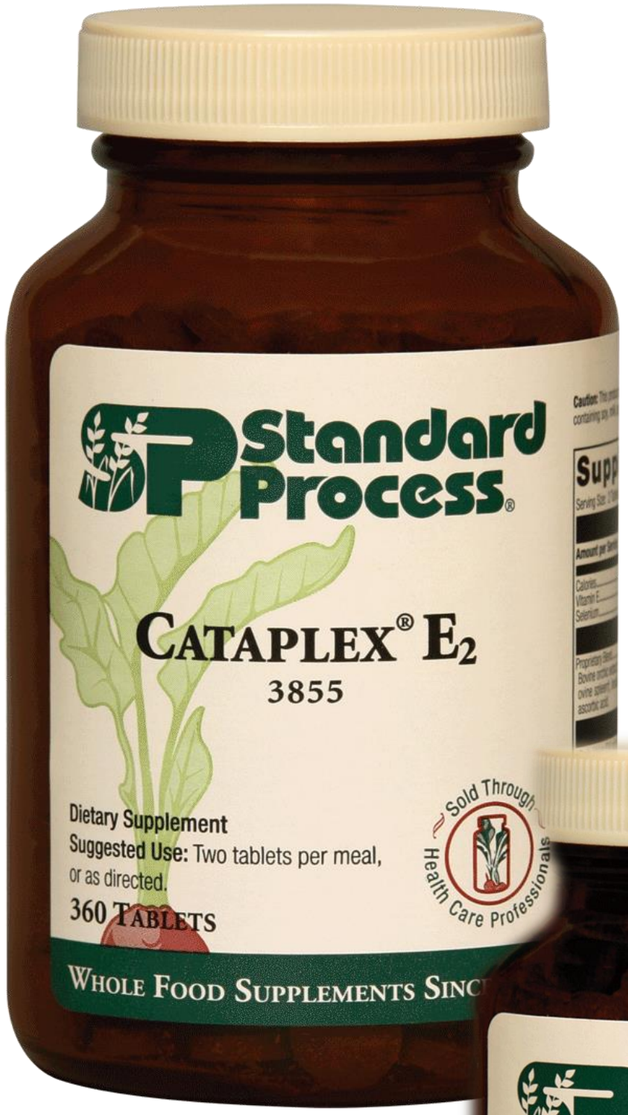
Atrial Fibrillation Treatments
Cardioversion
Catheter Ablation
Coumadin
Implantable Cardioverter Defibrillator
Pacemaker

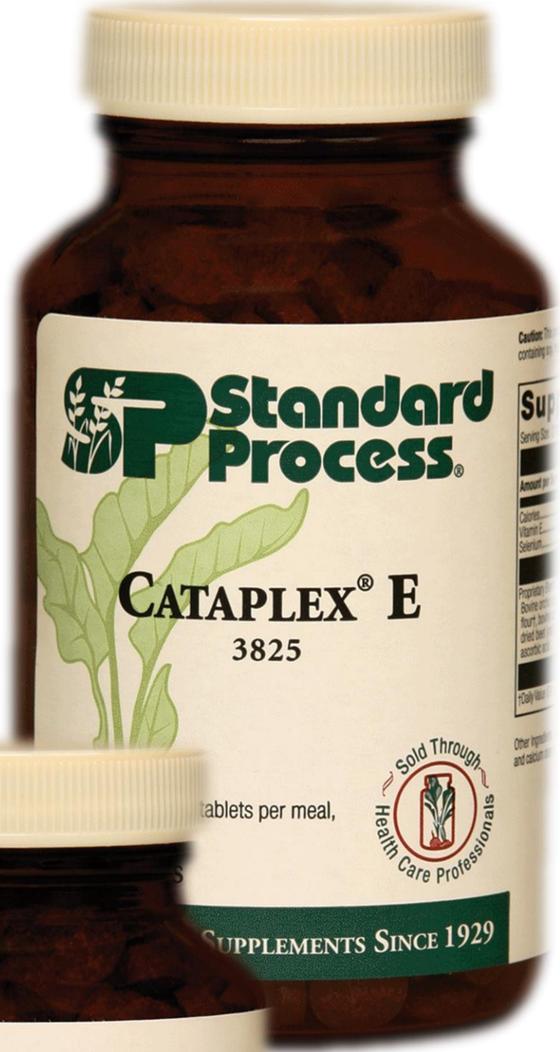


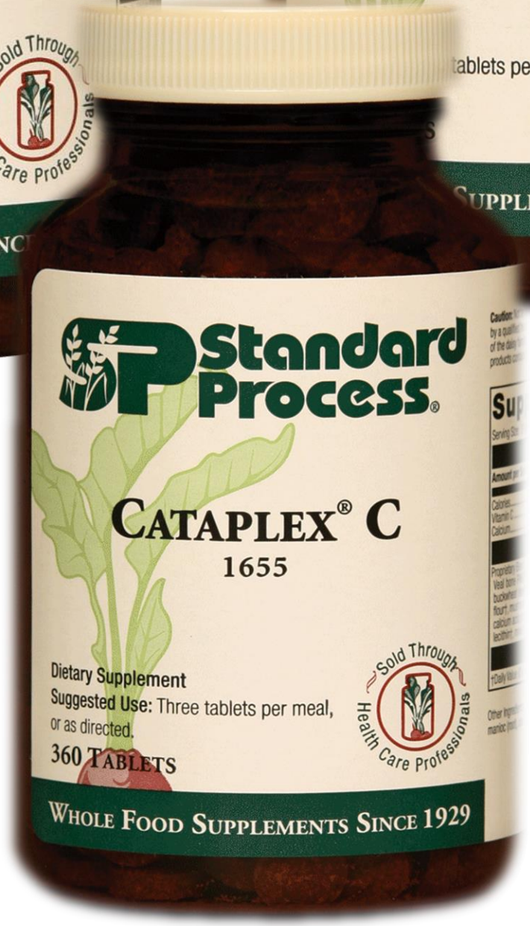
TONE


Standard Process
CARDIOTROPHIN PMG®
Dietary Supplement
Suggested Use: One tablet per meal, or as directed.
90 TABLETS
2125
Sold Through Health Care Professionals
WHOLE FOOD SUPPLEMENTS SINCE 1929

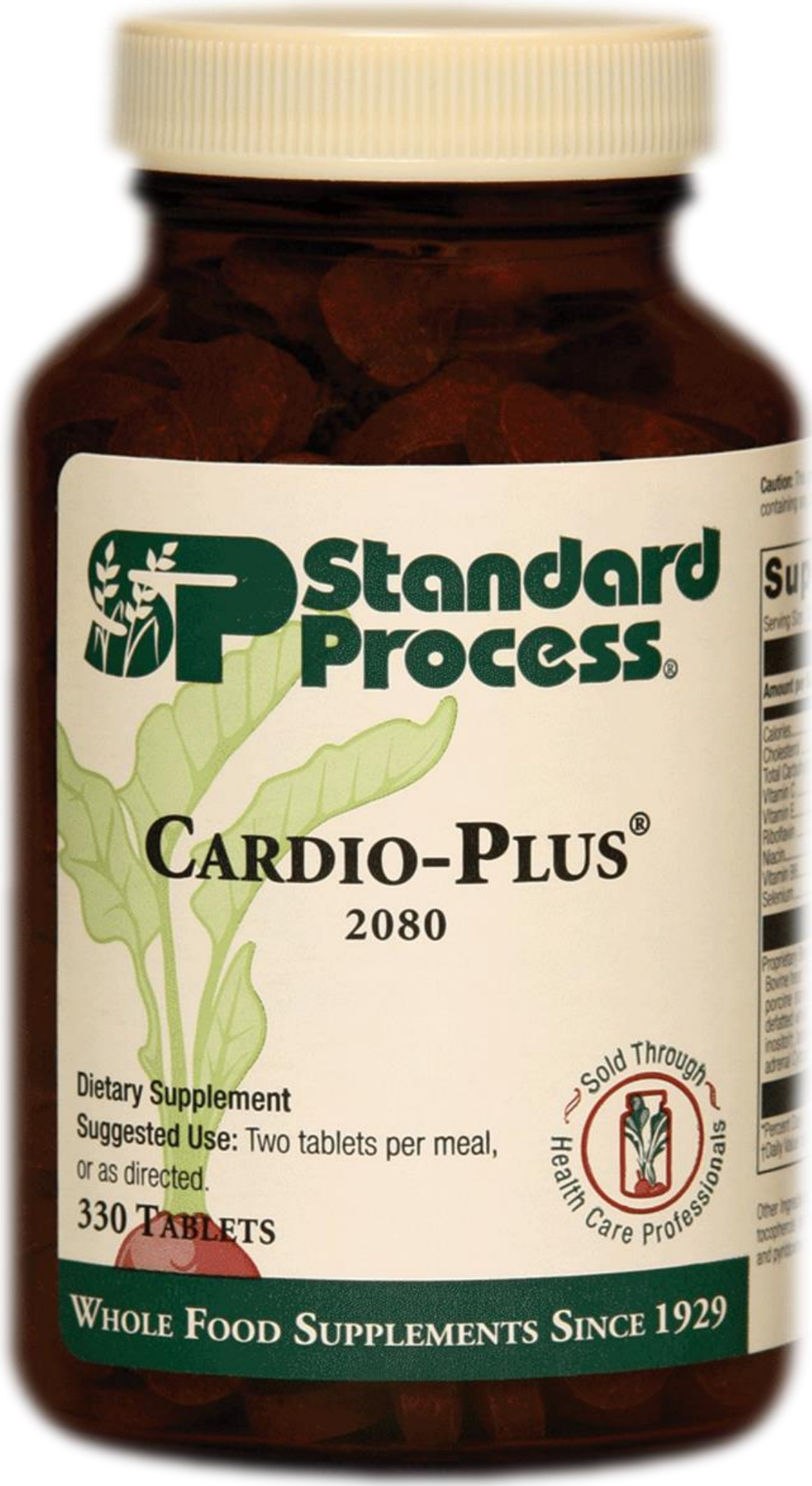

Standard Process
CATAPLEX® B
1250
Dietary Supplement
Suggested Use: Two tablets per meal, or as directed.
360 TABLETS
Sold Through Health Care Professionals
WHOLE FOOD SUPPLEMENTS SINCE 1929


Standard Process
CATAPLEX® E2
3855
Dietary Supplement
Suggested Use: Two tablets per meal, or as directed.
360 TABLETS
Sold Through Health Care Professionals
WHOLE FOOD SUPPLEMENTS SINC


Standard Process
CATAPLEX® E
3825
tablets per meal,
Sold Through Health Care Professionals
UPPLEMENTS SINCE 1929


Standard Process
CATAPLEX® C
1655
Dietary Supplement
Suggested Use: Three tablets per meal, or as directed.
360 TABLETS
Sold Through Health Care Professionals
WHOLE FOOD SUPPLEMENTS SINCE 1929

TONE



Cardiotrophin PMG

- Heart tone autoimmune support

Cataplex E2

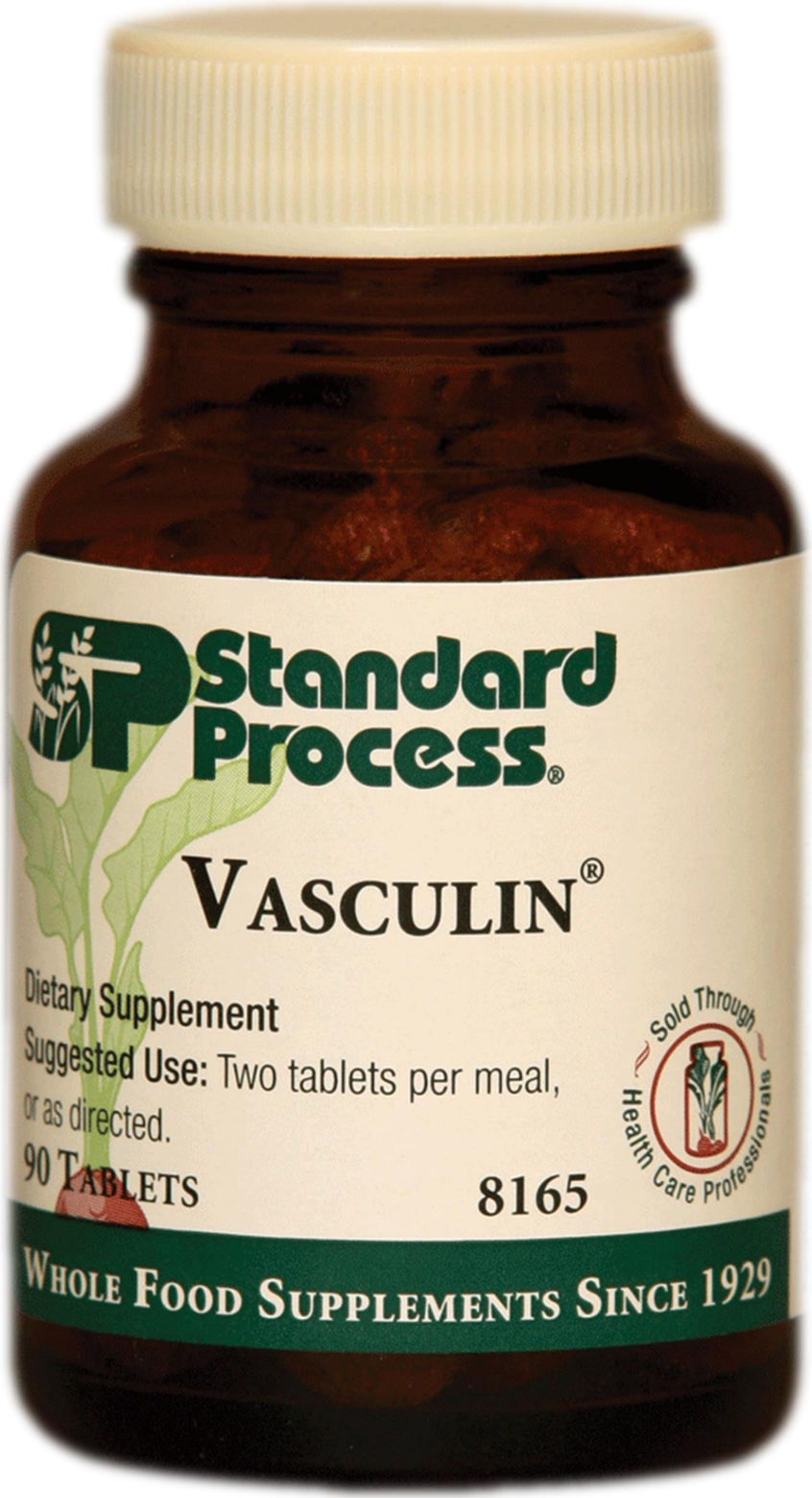
- O_2 conserving factor of the blood

Cataplex G

- Vasodilating & nerve relaxing B vitamins

Cataplex C

- Increase O_2 to heart for strength



Cardiotrophin PMG

- Heart tone autoimmune support

Cataplex B

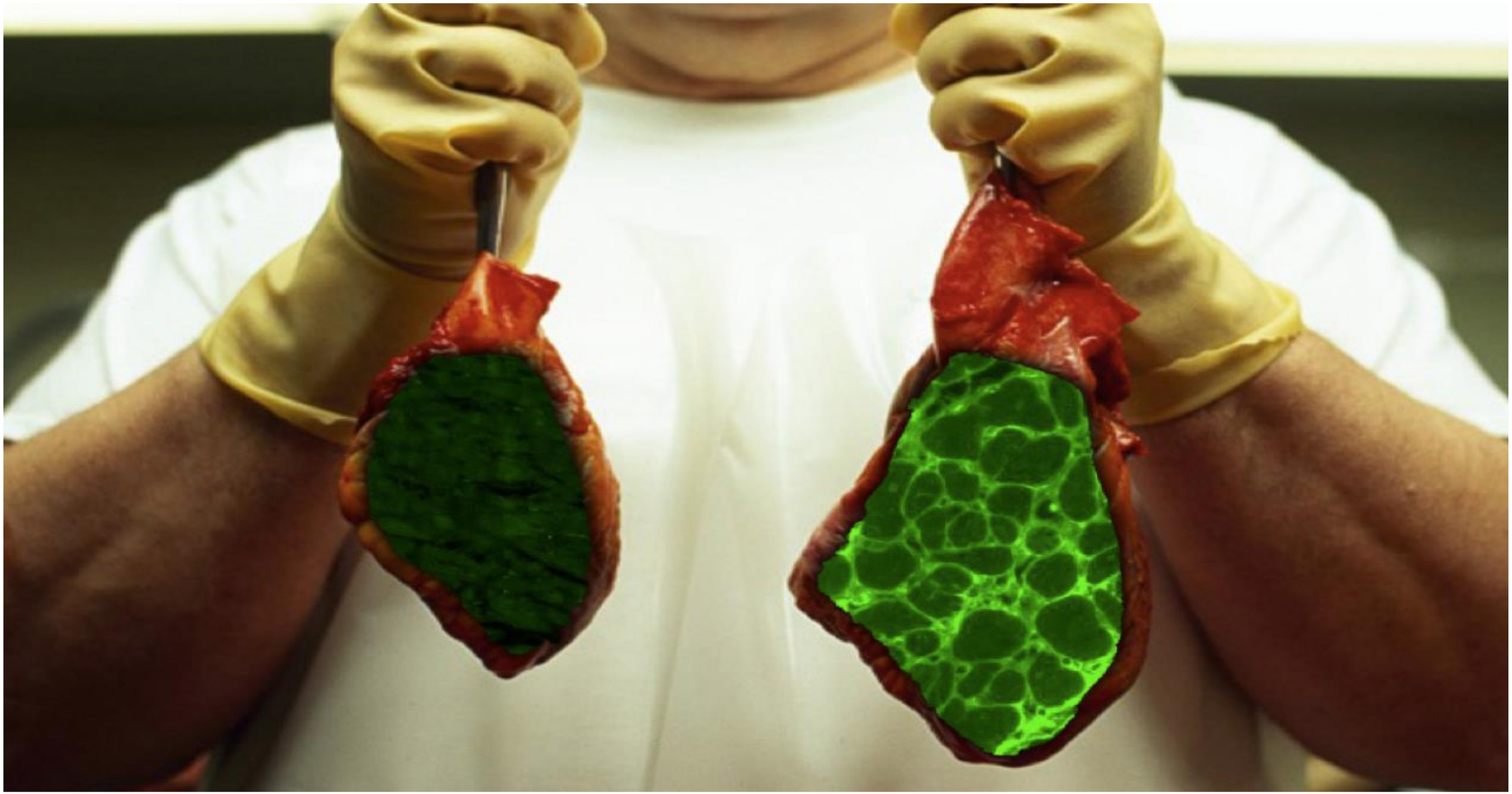
- Nerve motor conductivity - Rhythm

Cataplex E

- Muscle repair and tone

Cataplex C

- Increase O_2 to heart for strength



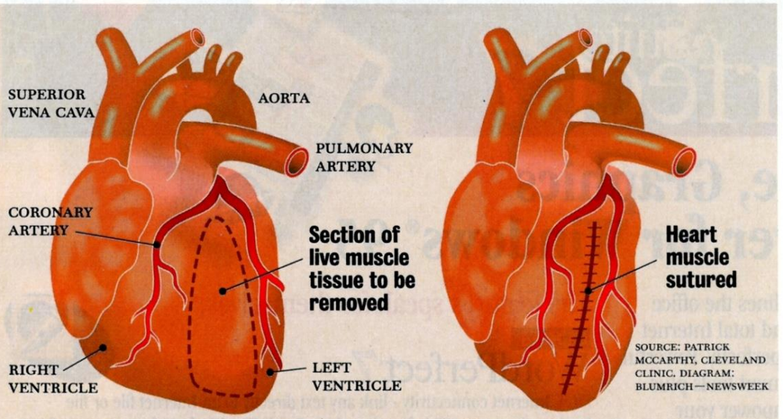
Why should you be interested in evaluating heart health?

You can find the enlarged heart and the signature of the regurgitation murmur.

From 2001 to 2011, the death rate from heart disease has fallen about 39 percent – but the burden and risk factors remain alarmingly high. Heart disease strikes someone in the U.S. about once every 43 seconds.

Heart disease is **the No. 1 cause of death** in the United States, killing over 375,000 people a year.

AHA 12/17/14



In 'ventricular remodeling' a triangular piece of enlarged heart is removed

The smaller heart has tauter walls and beats more strongly, pumping more blood

MEDICINE

Take a Piece of My Heart

How safe is a radical new form of surgery?

THE ANNALS OF HEART DISEASE ARE full of failed treatments and faddish operations that gave desperate patients lots of hope but little help: the Jarvik-7 artificial heart, baboon-heart transplants. A new operation devised by a heart surgeon in rural Brazil seems to have just the credentials to join that dubious-achievement list. It flouts a central tenet of cardiology. Mainstream medical groups have regarded Dr. Randas Viela Batista's claims as too unbelievable to merit time at their meetings. Some 40 percent of the 300 patients Batista has operated on since 1994 have died. Most notably, news of the unusual surgery has come not from a medical journal but from a glowing segment last week on ABC's "20/20." All of which should make it easy to dismiss the procedure as cardiology's cold fusion. Except for one thing. Almost a dozen American physicians have trekked to Brazil to observe Batista's work, and they have been sufficiently impressed that four leading hospitals are now performing the experimental surgery.

Called ventricular remodeling, the operation is meant for patients with enlarged hearts due to end-stage congestive heart failure, which directly or indirectly kills almost 300,000 Americans each year. To do the remodeling, the surgeon cuts away a section of the heart wall (diagram). Although excising living tissue has long been a cardiological no-no, Batista's operation seems to provide the cardiac equivalent of a face-lift: it makes the heart tauter. That gives it greater pumping power, which means more blood and oxygen for the body.

But this is no miracle cure. Of 17 U.S. patients, six died. Of the survivors, two show no improvement. But the hearts of nine now pump more than twice as much blood as before. James Absalom of Youngstown, Ohio, is one of the lucky ones. He was languishing on the transplant list at the Cleveland Clinic when his doctors told him about the experimental procedure and suggested he talk it over with his family. "I didn't want to talk it over," says Absalom. "I just wanted to do it!" Good call. Ten days after his surgery on May 23 Absalom was home and "feeling like a million dollars."

This surgery "could offer a viable and less expensive alternative to heart transplantation or mechanical assist devices for some patients," says Dr. Patrick McCarthy of the Cleveland Clinic. "But not for all." He suspects the procedure will benefit only patients whose hearts have been damaged not by a heart attack but by a virus. One reason for optimism is numbers: 70,000 Americans need heart transplants every year, but only 2,300 get them. Even so, a clear verdict on the operation is no sure bet. Unlike drugs, procedures do not have to be approved by the Food and Drug Administration. Cardiac patients will have to decide for themselves whether to let their surgeon take a little piece of their heart out.

SHARON BEGLEY *and* ADAM ROGERS

HEART-REDUCTION SURGERY

Congestive heart failure is the result of the inability of an enlarged heart to pump blood properly

In Batista's operation, part of the heart's expanded muscle tissue is cut out. This reduces stress on the heart and allows the remaining muscle to pump more efficiently

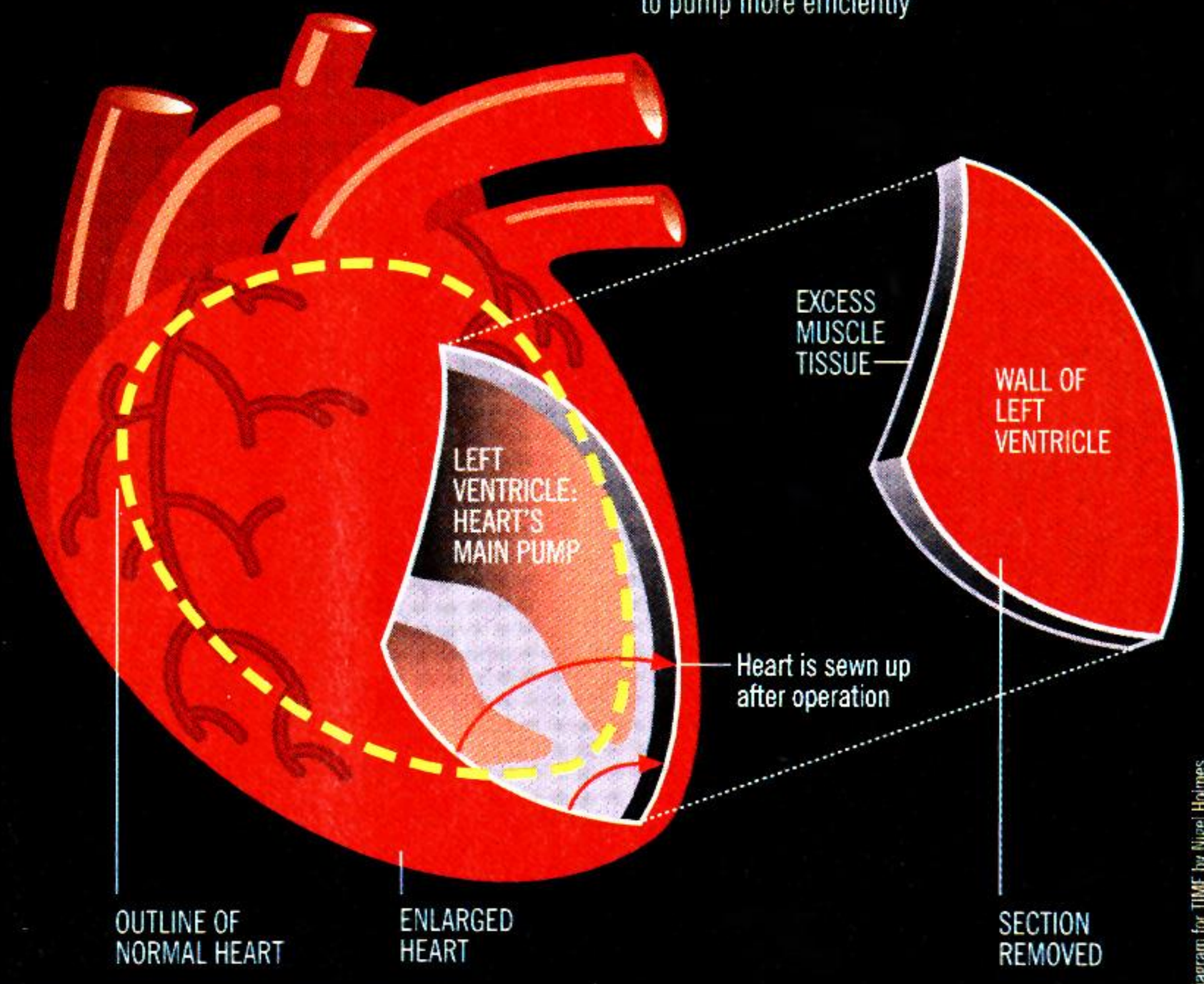


Diagram for TIME by Nigel Holmes

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

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

E-mail | Print | RSS

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.

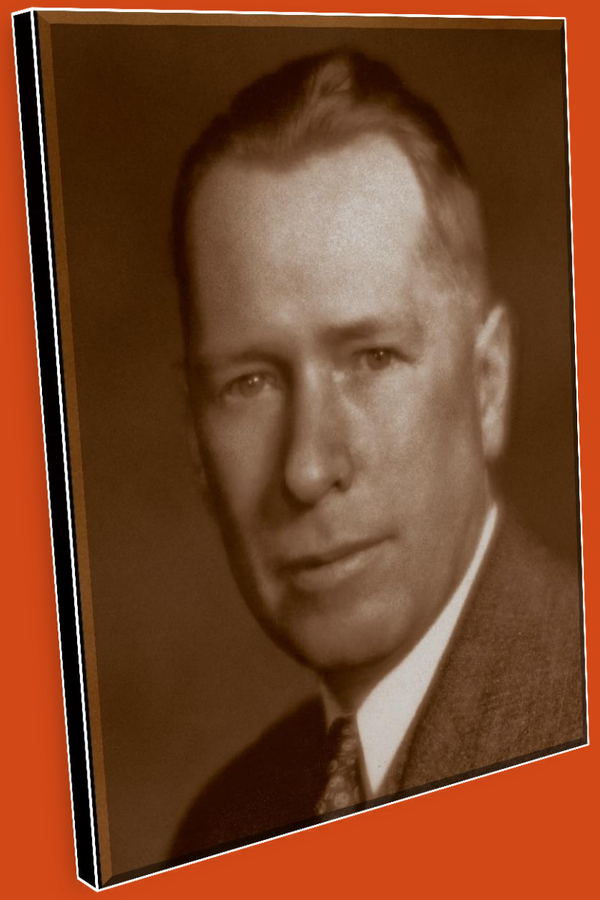
"It's hard on all of us when something like this happens to a person who is doing all the right things as far as we can tell," said Mosca, a marathon runner herself. "We have to use this as an example to try to prevent future problems."

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 of our time . . .

in 2007 about 125 young athletes died from an enlarged heart



Vitamin B4 deficiency and Enlarged Heart

Excerpt from Lectures of Dr. Royal Lee, Vol. II.

Selene River Press, Inc.

The patient with heart disease, or with these reactions, and I'd say that ninety percent of the people in this room have some of them, they all disappear when you get the right food. So it's not a serious thing. Of course if the patient drops dead before he learns about it then it is serious. I mean that's the end. There's no hope. We can't revive dead people. But I have seen several people that have had their death certificate made out by the doctor who were revived with vitamins and who lived many years afterward. And that just goes to show how close to death we can be from starvation and still come back.

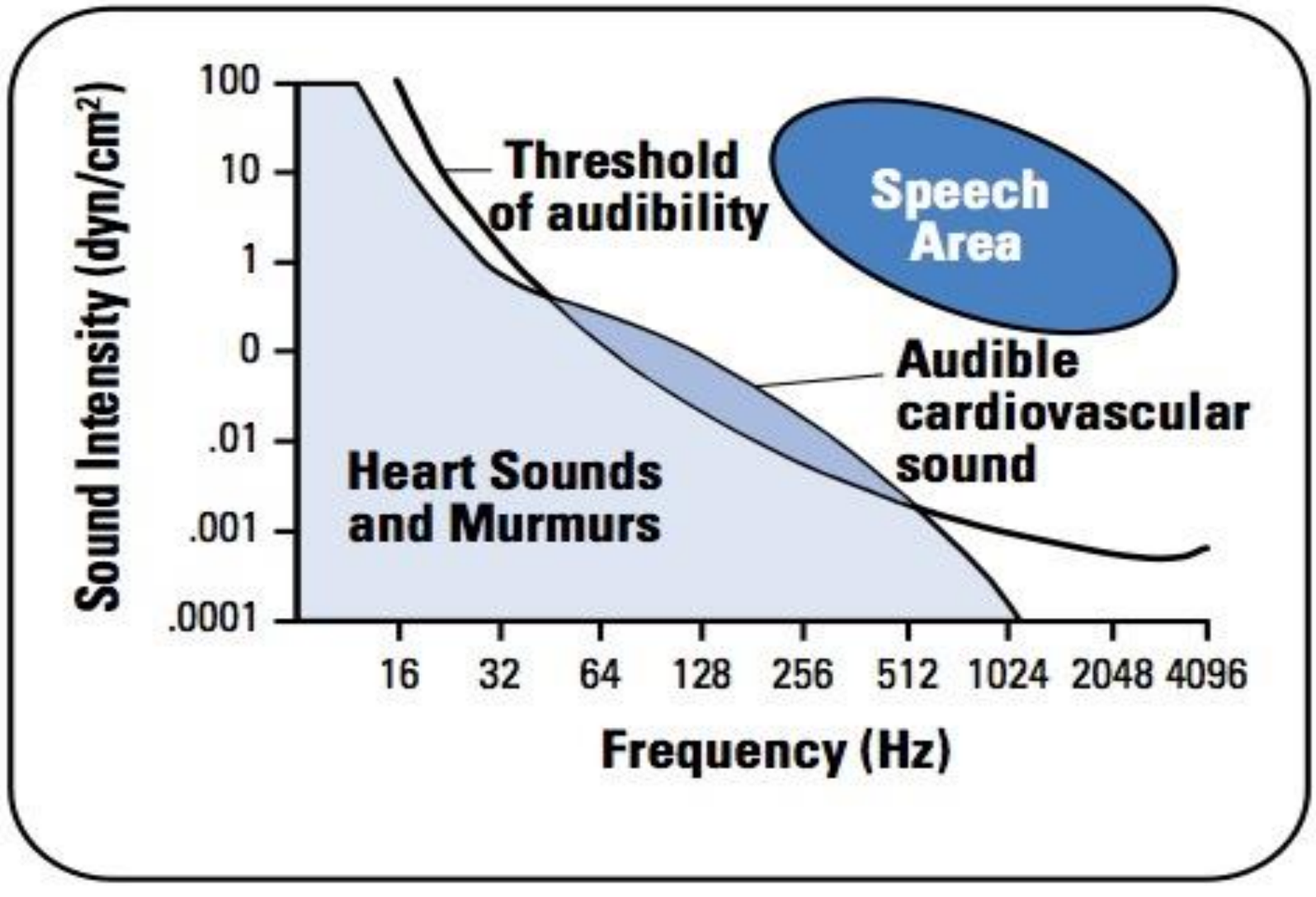
One of these factors in this Vitamin B group maintains muscle tone. And there's a complete relaxation without it. The doctor listens to your heart and tells you that you have an enlarged heart when you have this acute deficiency. He'll probably also tell you that you've got some murmurs due to valve leakage.

Well when the heart enlarges, the valves are made of cartilage, they don't enlarge, so that the opening enlarges along with the heart and there's bound to be leakage from the enlargement. It's that simple. You supply some of this Vitamin B [B4] which promotes the muscle tone, the heart will contract to normal size, usually inside of ten minutes. The valve leakage disappears. So there's another easily corrected thing that was formerly considered pretty serious. Most people would feel that if they had valve leakage in their heart they'd feel, in fact they would be told, that it's something they should watch. The average doctor will tell them that it never will be normal again and that if they take care of that heart and don't overload it, they'll be able to live a normal life. They don't even know that you can clear it up with a few vitamins. And I'll tell you why they don't know. It's because these conspirators who sell us these synthetic foods don't permit the doctor to know it. They actually censor all the medical literature. I challenge you to find any item in any medical book telling you the things I'm telling you here.

Radio Frequency Microphone

Threshold of Audibility

Figure 3. Relationship between the range of sounds produced in the heart and the threshold of audibility of the human ear.



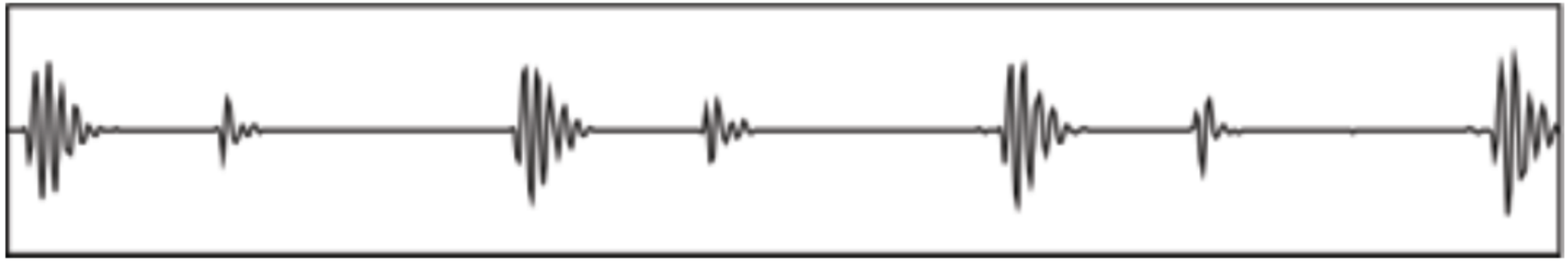
Heart Sound Recorder

HSR Software

Simple and intuitive

- Ability to compare graphs from visit to visit
- Ability to email and save graphs in a PDF

Normal Graph



- The first sound is approximately .12 second in duration
- The Systolic rest period is ½ as long as the Diastolic rest period
- The systolic interval is measured from the end of the first sound to the start of the second sound. This average length should be a two to one ratio to the diastolic rest period at a 72 pulse.
- The amplitude of the 2nd sound is 1/3 the 1st sound
- The 1st sound is comprised of two parts, the first part of the 1st sound is the valvular (mitral & tricuspid) component. The second part of the sound is the muscular component
- The second sound measures .06 to .08 of a second in duration and separates the shorter systolic period from the longer diastolic period. This sound complex is due mainly to the closure of the semilunar valves (aortic and pulmonary).
- The diastolic interval is measured from the end of the second sound to the start of the first sound. This averages is twice as long as the systolic rest period in duration at an average normal pulse rate of 72.