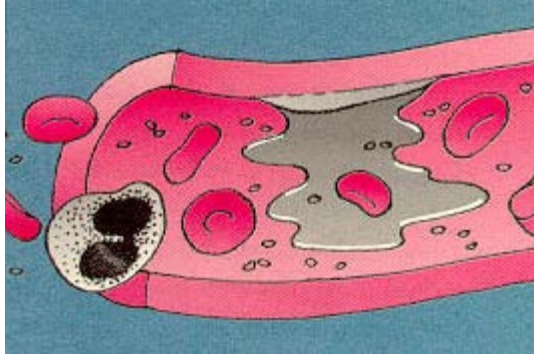


## Cryptic Masons Medical Research Foundation Vascular Biology Research



### Leaders in Support

For more than a decade, the Cryptic Masons Medical Research Foundation has supported cardiovascular research at the Indiana University School of Medicine, a national leader in the study of cardiovascular disease.

To ensure that there is a permanent source of support for research efforts, the Cryptic Masons Medical Research Foundation has contributed more than \$ 1 million dollars to establish the Cryptic Masons Research Chair at the Indiana University School of Medicine. The holder of this chair serves as the Director of the Indiana Center for Vascular Biology & Medicine. Dr. Keith L. March, M.D., Ph.D., a cardiologist and biochemist, holds the titles of Cryptic Masons Medical Research Foundation Chair and Director, Indiana Center for Vascular Biology & Medicine.

This Chair is an endowed fund that is permanently invested. A portion of the interest income supports vascular research. The remaining amount increases future annual disbursements.

The Indiana Center for Vascular Biology & Medicine is a multi-disciplinary institution that integrates and links the strong cardiovascular research of the Krannert Institute of Cardiology with the efforts of faculty conducting vascular research from the perspectives of diverse fields such as ophthalmology, cancer, nephrology and endocrinology amongst many others.

### *Cardiovascular Disease Progression*



#### *Stage 1*

The inner layer of a normal artery is gradually injured by high blood pressure, circulating cholesterol, and oxidizing substances that are increased by smoking.



### *Stage 2*

**A gradual thickening of the artery wall occurs as cholesterol accumulates and smooth muscle cells grow.**



### *Stage 3*

**The thickened wall's mechanical instability causes it to crack without warning.**



### *Stage 4*

**The irregular wall is now a potent stimulus for clot formation (thrombosis). The formation of such a clot may often prove to be the final step in blockage of an artery leading to heart attack or stroke.**

## **Research Efforts**

**Under the direction of Dr. Keith March, The Indiana Center for Vascular Biology & Medicine includes more than 30 faculty investigators from a broad range of disciplines. These faculty, along with their staff and students, work as a team to further the primary mission of developing and then applying new research in vascular biology, with an emphasis upon researching patients as quickly as possible.**

A recent example of how research at our Center can directly benefit patients was the invention and patenting by Dr. March and his colleagues of a device called a "[Closer](#)", a blood vessel stitching device that is used to close the femoral artery in a patient's groin following a heart catheterization. This reduces the risk of bleeding and maximizes the comfort of the patient. The "Closer" approach is now used in about 500,000 patients worldwide annually.

By mid 2004, The Indiana Center for Vascular Biology & Medicine will begin initial trial testing the infusion of therapeutic cells into the coronary vessels of patients who need to grow new arteries to provide blood supply to their heart. These are cells derived from the patient's own fat tissue, which can be easily harvested by liposuction. Initial research has shown that these cells not only develop into blood vessels, but also produce factors that help grow new blood vessels.

Our Future looks promising.....

## Caring for Yourself

Cardiovascular disease touches everyone directly or indirectly causing more deaths than the next seven leading causes combined in the United States. In addition to causing a tragic loss of human life, cardiovascular disease also has a severe economic impact. The American Heart Association estimates the cost of Cardiovascular disease and stroke to our society will be more than \$ 300 billion in 2003.

Even the most health conscious person may not be able to defy factors such as male gender, heredity, structural heart problems or advancing age, but there are ways you can minimize your risk of cardiovascular disease.

- Get regular exercise, daily walking is a good idea
- Eat a diet low in animal fat and cholesterol and high in fruits vegetables and grains
- Avoid cigarette or cigar smoking
- Keep your body weight within a healthy range for your height
- Keep your blood pressure and blood sugar under control if you have high blood pressure or diabetes

## Warning Signs

Some people have used the phrase, "It's like having an elephant sit on your chest" to describe the feelings of a heart attack. But there are other warning signs of a heart attack. Although this is not a comprehensive list, some symptoms include:

- Pressure, squeezing, or feeling of heaviness in your chest, even if it is not severe
- Pain or pressure in your jaw, neck, back or arm
- Heavy Sweating
- Paleness, breaking out in a cold sweat or feeling thudding, quick or irregular heart beats
- A feeling of not being able to catch your breath
- Nausea or queasiness
- Lightheadedness or fainting
- Feeling weak and tired for no reason

If you think that you or someone near you is having a heart attack, CALL 9-1-1

The American college of Cardiology recommends chewing one uncoated aspirin while waiting for help unless a health professional has instructed you not to do so.