

Useful Background Information

At the Michael E. DeBakey Institute for Comparative Cardiovascular Science and Biomedical Devices, cardiovascular scientists, engineers, and clinicians from Texas A&M University, Baylor College of Medicine and the UT Medical School in Houston have joined forces to fight cardiovascular disease in both human and veterinary patients. Administratively housed in the Texas A&M University College of Veterinary Medicine, the Institute has unique access to naturally-occurring cardiovascular disease in animals. Because novel cardiovascular devices and pharmaceuticals for use in humans are always tested first in animals, the institute plays a pivotal role in improving the quality of life of all species. The DeBakey Institute is named for the world's most renowned cardiothoracic surgeon and cardiovascular researcher, and is dedicated to relentlessly pursuing scientific and technological advances to save lives.



for Comparative Cardiovascular Science and Biomedical Devices

The Veterinary Black Bag Program

Project Goals:

- Develop Veterinarian's Black Bags (VBBs) of instructional items and pamphlets for middle school teachers to support classroom visits by local veterinarians.
- Provide professional development for veterinarians and teachers on how to use items in the VBBs
- Promote inquiry-based thinking about health-related subjects while emphasizing the value of biomedical research and promoting careers in science.



PEER

**PARTNERSHIP FOR ENVIRONMENTAL
EDUCATION AND RURAL HEALTH**

Dr. Larry Johnson
Principal Investigator, PEER
979-845-9279
ljohnson@cvm.tamu.edu

Dr. William Klemm
Director, Peer
979-845-4201
wklemm@cvm.tamu.edu

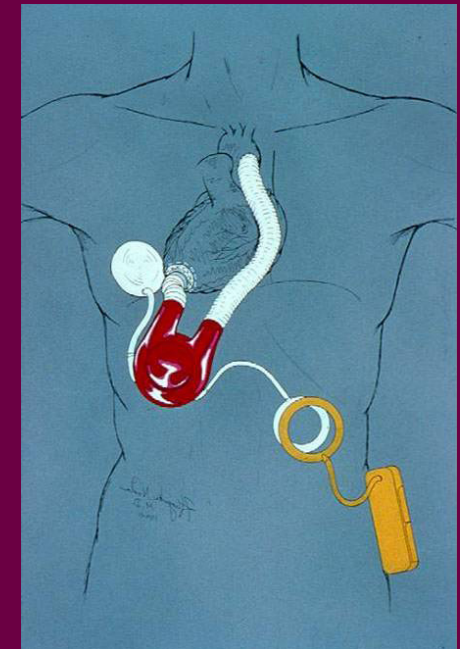
Department of Veterinary Integrative Biosciences
College of Veterinary Medicine & Biomedical Sciences
Texas A&M University, College Station, Tx 77843
MS#4458



<http://peer.tamu.edu/VBB/Summary.asp>

Heart Research

Follow Up Lesson



The instruction in this module includes:

Presentation on *Heart Disease*

Follow-up lessons on:

Human Heart Function

Heart Research

Heart Function Inquiry

Summary of Lesson Content

Objectives

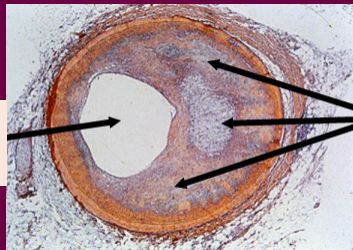
1. Explain three common types of heart disease and their causes
2. List the steps a researcher often goes through to receive a grant to study heart disease
3. Explain what an oxygen electrode is used for
4. Explain what a heart-lung machine has to accomplish
5. Explain what angioplasty is
6. Explain what cholesterol and LDL have to do with heart disease and what “statins” are

This lesson begins with a PowerPoint that explains many of the major treatment innovations over the last 50 years or so. A worksheet is used to reinforce the instruction. We then recommend some active learning exercises associated with the role of government, industry, and universities in research. While not explicitly covered in the PowerPoint, these roles can be inferred and deduced from the instruction.

Questions to Ask

1. Who should pay for heart research? Defend your answer.
2. Should animals be used in heart research? Why or why not?
3. People are living longer because of medicines and treatments for heart disease. What are the social and economic consequences of that?

Cholesterol accumulates in walls of arteries and reduces blood flow.



Narrowed opening

Plaque



DeBakey VAD System

