



Lesson 4: Let's Treat It!

Name _____

Date _____

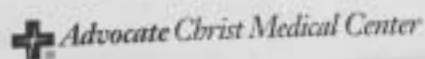
Note from the Cardiologist:

To: Junior Heart Doc
 From: Marc Silver, M.D.
 Re: Possible Treatments

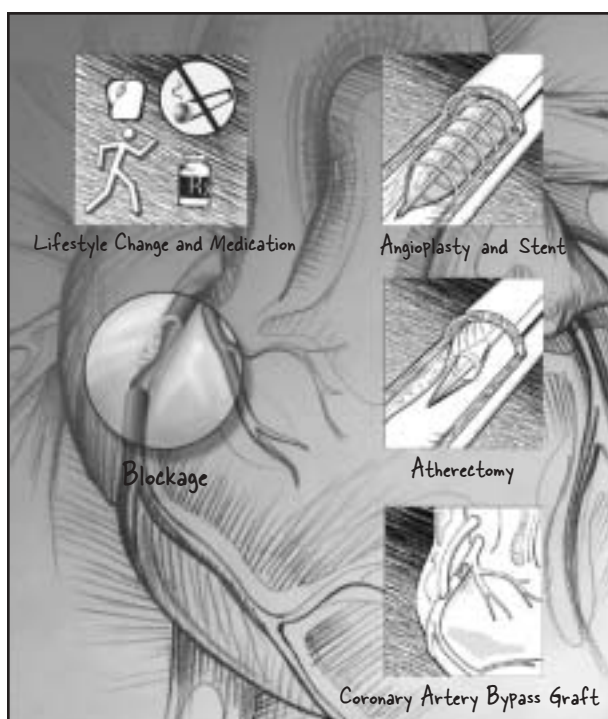
It is time to examine possible treatments for coronary artery disease. The following are four treatments that range from least invasive to most invasive: lifestyle change and medication, angioplasty and stent, atherectomy and coronary artery bypass surgery.

After analyzing the four options, you will recommend a treatment for Mr. Harvey. When recommending a treatment, be sure to present both the advantages and disadvantages of the treatment. Health professionals at Advocate Christ Medical Center continue to research and improve heart disease treatments. Part of your training will involve exploring current areas of research in treatment for heart disease and choosing an area that interests you for future study.

Dr. Marc Silver, Cardiologist



Notes:









Lesson 4: Let's Treat It!

Part A: Analyzing Treatments

Review the medical notes regarding different heart disease treatments.

Treatments for Coronary Artery Disease

Treatment	Patient Conditions	Description
Lifestyle change and medication 	Blood flow is temporarily blocked. Blockage is less than 70%. Patient has angina, or pain in the chest, that goes away after a few minutes.	Exercise three times a week, stop smoking and lower the amount of fat in the diet. Prescribe medications that open blood vessels, lower heart rate and blood pressure, decrease blood cholesterol, dissolve clots and prevent future clots from forming.
Angioplasty and stent 	Blockage is in a single vessel and can easily be reached. Patient has angina, or pain in the chest, that does not respond to medication.	A catheter, or flexible tube, is inserted into a narrowed artery. A tiny balloon at the tip of the catheter is inflated to widen the vessel. A stent, a wire-mesh tube, is then inserted. The stent, which remains in the artery permanently, prevents further closing or narrowing of the artery.
Atherectomy 	Blockage is very calcified, or hardened. Patient has already had coronary artery bypass surgery or has too many other severe illnesses to survive surgery.	A razor-like device or a high-speed drill attached to a catheter is used to shave plaque from the arterial wall, widening the passageway for blood.
Coronary artery bypass graft 	Blockage is greater than 90% in the left main artery, the vessel that supplies the most blood to the main section of the heart muscle. Blockages occur in three or more arteries. Patient has severe angina, or chest pain, that does not respond to medication. Patient has had repeated angioplasties, all of which result in re-narrowing of the artery after the procedure.	Bypass surgery creates a detour to re-route the blood around the blockage, using blood vessels from other parts of the body.

Shortfalls of Treatments

Treatment	Disadvantage
Lifestyle change and medication	Effective only if coronary artery disease is detected before it becomes severe.
Angioplasty and stent	Scar tissue may form and push through the wire mesh of the stent, causing re-blockage of the artery. Patients may require repeat treatments to keep the artery clean.
Atherectomy	The drill used in this procedure can damage the wall of the artery. Also, the pieces of plaque that are shaved from the arterial wall can travel through the bloodstream and possibly cause blockage in a vessel.
Coronary artery bypass graft	The sternum in the chest is sawed open to allow the surgeon access to the heart. During the procedures, the patient relies on a heart-lung machine to perform the functions of the heart and lungs. Sending the blood through the heart-lung machine can cause damage to the cells of the body, which may result in complications, such as loss of brain function.

1. Based on the condition of his heart, which treatment do you recommend for Mr. Harvey?

2. Use the space provided on page 4-4 to write a letter to Dr. Silver explaining the treatment you chose for Mr. Harvey. Discuss at least two reasons for choosing the treatment, as well as any disadvantages it may have.

Notes:

[illegible]

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Oak Lawn, Illinois 60453-2699
Telephone 708.425.8000



SUBJECT: Recommended treatment for Mr. Harvey

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3. Share your letter with the class. Explain why you recommended this treatment.
4. As an up-and-coming cardiologist, which treatment of the four are you most interested in improving? Which aspect of the treatment would you research?

- a. _____
- _____

- b. _____
- _____

- C. _____
- _____

Go to the Advocate Health website at **www.advocatehealth.com** to read about the latest advances in heart disease treatments. Research current treatment options, and then report on three advances.

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