

Ruptulators: Atherosclerosis Progression and Regression Activity Suggestion

Activity 4D

Note:

This activity suggestion describes how specific content might be taught to middle school students. It does not contain fully developed lesson materials, which we hope to develop under future funding in this content area. Any feedback on how you are able to use this lesson suggestion would be greatly appreciated. Your comments can be sent to us at teachhealthk-12@uthscsa.edu.

Activity Focus:

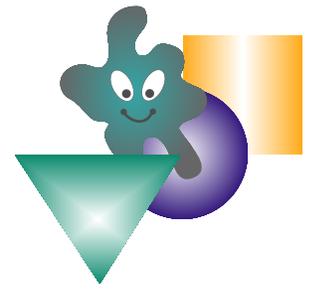
The focus of this activity is to provide an awareness of what atherosclerosis is, how it can be prevented or reduce the risk, and treatment. Students will gather information from several sources. They will then create a brochure about the progression and possible regression of atherosclerosis. Students will write their brochure as though it will be used in a doctor's office to inform patients about health risks and treatment of atherosclerosis.

Activity Rationale:

Atherosclerosis is the main cause of heart attack and stroke. Atherosclerosis is the hardening and narrowing of arteries. It is caused by plaque build up in the artery. These plaques take up space in the artery where blood flows. Obviously as the plaques build up there is less space for blood flow.

Plaques not only take up precious space through which blood flows, but they are also unstable. Think of it like debris in a river. Even if the debris is stuck on the river bank eventually the pressure from the flow of the river causes the debris to break free and travel down stream.

So it is with plaque that builds up in the artery—it can break free and travel along the artery. This is a rupture that causes clots to form. If debris from the plaque breaks free it will be traveling toward blood vessels that are gradually getting smaller in diameter. If it blocks a blood vessel to the heart it causes a heart attack. If the clot blocks a blood vessel to the brain it causes a stroke.



Activity Suggestion



ACTIVITY 4D
SUGGESTION

INFLAMM-O-WARS

That's all the bad news about atherosclerosis. The good news is that through diet and exercise the plaque build up can become greatly reduced. The great news is that because atherosclerosis is a health problem that develops over a long period of time the progression can be reversed if caught in time.

Becoming aware of the process and the risks, students will have the knowledge to make informed lifestyle choices. They will also better understand how they can play a role in informing others, particularly their family.

Suggested Methodology:

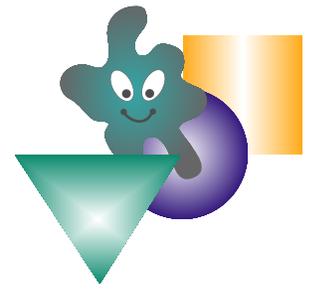
Students will develop a brochure on Atherosclerosis: Progression and Regression. The brochure should give the bad news and good news. It should contain information on:

- How atherosclerosis forms
- The progression of atherosclerosis — include pictures
- Health issues that impact individuals with atherosclerosis
- List healthy choices that can reduce the risk of developing atherosclerosis
- List reasons why even healthy, active people can be at risk for atherosclerosis
- Describe how healthy changes in lifestyle can help atherosclerosis regress

A rubric will need to be made ahead of time. You will need to familiarize yourself with a publishing program like Microsoft Publisher. It is recommended that students who have not made brochures before use provided program templates.

If a student's brochure is well done and accurate you might recommend your student share their brochure with their doctor. Who knows, the doctor might want to make copies for their patients!

Activity 4A: Arteries by Design and *Activity 4C: Dire Progress: Observing the Progress of Atherosclerosis* from the **Positively Aging[®]/M.O.R.E.** curriculum are good pre-activities for students to gain an understanding of arteries and atherosclerosis.



Activity Suggestion, continued



**ACTIVITY 4D
SUGGESTION**

INFLAMM-O-WARS

Activity Resources:

American Heart Association—Atherosclerosis

<http://www.americanheart.org/presenter.jhtml?identifier=4400>

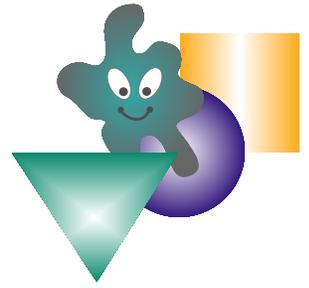
Medline Plus—Atherosclerosis

[http://www.nlm.nih.gov/medlineplus/ency/article/000171.htm#Expectations%20\(prognosis\)](http://www.nlm.nih.gov/medlineplus/ency/article/000171.htm#Expectations%20(prognosis))

National Heart Lung and Blood Institute—What Atherosclerosis is and how it is treated.

http://www.nhlbi.nih.gov/health/dci/Diseases/Atherosclerosis/Atherosclerosis_WhatIs.html

http://www.nhlbi.nih.gov/health/dci/Diseases/Atherosclerosis/Atherosclerosis_treat.html



Activity Suggestion, continued



ACTIVITY 4D
SUGGESTION

INFLAMM-O-WARS