

Topic: Tobacco

Time: 20 minutes plus discussion time

Materials: 10 Volleyball size balloons
A rope to serve as a net

Activity:

1. Divide your class into two teams. Stretch a rope, which will serve as the net, about three feet off of the ground across the room and have the two teams lie down on their backs with their heads towards the net.
2. This activity is played much like a volleyball game. There are a few differences. No one may get up off of the floor. Instead of having a server, the teacher or their appointee throws a balloon onto one side of the net. The team must hit the balloon at least three times before it may pass over the net.
3. When a team can't return the balloon, then a point is awarded to the other team. Teams rotate positions just as they would in regular volleyball so that everyone gets to play the different positions. To make the game more exciting, you may have more than one balloon in play at a time.
4. This activity simulates the action of the cilia. The balloons represent particles of smoke or tar that pass down the airway. The arms of the players represent the cilia. After playing the game for a while, stop and explain this to the students. To simulate the problem of cilia becoming covered with tar and ceasing to catch particles. You may have some students who can't hit the balloons once they have had a turn. This further inhibits the team's abilities to keep the balloon in the air. Any Penalty or combination that causes fewer arms to be used will demonstrate your point of diminished cilia effectiveness.

Discussion:

1. In the beginning was this game hard to play?
2. As we continued the game did it become harder? Why?
3. What can this activity tell us about smoking?

4. What do you think having more than one balloon going at a time could tell us about smoking?
5. How did you feel when your team couldn't use all of their arms to hit the balloon?
6. When many people weren't using their arms, what problems did you have?
7. How can we relate those problems to smoking?
8. Using the game as an example, how well does your body's defense system work when the cilia become covered with tar?
9. When some people couldn't hit the balloons, what did others have to do to compensate for them?
10. What does your body do when some of its cilia are not being effective?