

Science Experiment

Do You Have the Strength?

How strong do you think your heart is? How hard does it need to pump to push blood throughout your body? You may want someone to join you in this experiment.

Materials:

- paper and pencil
- 1 tennis ball

Experiment:

1. Hold the tennis ball in your strongest hand (generally, your writing hand).
2. Squeeze the ball as hard as possible; then, release the grip without dropping the ball.
3. This is very similar to the force of one pump of the heart, but the difference is that the heart does not get tired.
4. Now, squeeze the tennis ball as fast and as hard as you can for ten seconds, 30 seconds, and one minute. Record the result.

Questions to think about:

- Did it become harder to squeeze the tennis ball as time passed?
- Did your hand hurt after squeezing for one minute?

Imagine if you had to squeeze that tennis ball all day without stopping. You might get tired! That is how strong your heart is!

Engineers design devices to fix the heart when something has gone wrong. Imagine that you must design a heart. Think of ways to keep the heart pumping for ten years, plus have the strength to move blood through the body.

