Wednesday April 8th

1. Introduction
2. Variables
3. Resting Heart Rate
4. Exercise/Recovery Time
5. Lab – Due at the end of class*
6. Importance
7. Cardiovascular Disorders (optional)

What might affect your heart rate?
Variables

- **Manipulating**: What are you changing
  - Specific (amount of exercise)
- **Responding**: What are you observing
- **Control**: What must remain constant

Ms. Lis

**Resting Heart Rate**

- Average heart rate (bpm)
- 60-75 bpm
How do you feel after a workout?

Exercise

• Muscles become sore and inefficient.
• Without oxygen, muscles cannot release energy.
• Waste product called lactic acid builds up causing pain and stiffness.
  – Lactic acid is broken down using oxygen*

Recovery Time

• Time to return to resting
• Time taken for oxygen and lactic acid levels to return to normal after exercise.

Cardio Examples

• High Knees
• Jumping Jacks
• Sumo Kick Box
Heart Rate Lab

- Form groups of 3-4
- Responsibilities
  - Timer
  - Recorder
  - Subject

Outline

- Question ______________ - 5min
- Hypothesis (If… then… because) – 5min
- Procedure Outlined
- Variables - 5min

- Activity- 10min
  - Record data
  - Analysis questions
  - Hand in
Oxygen

Importance

• Training allows a person to exercise longer before muscle fatigue.
  – Improves body’s efficiency:
    • Pump more blood
    • Absorbs more oxygen
    • Remove waste
• More oxygen reaching muscles = less lactic acid

Cardiovascular Diseases

• Disorders- YouTube Video

Cardiovascular Disorder

• Arteriosclerosis – artery walls thicken and lose elasticity
• Most common– build up of plaque (fat) along arteries
What might cause plaque buildup?

- Treated with *medicine* (aspirin)
  - Reduce clotting
- Angioplasty opens up arteries
  - Inflation of balloon

Treating Cardiovascular Disease

- Angioplasty (left) opens blocked arteries.
- A *triple coronary bypass* (right) creates three new pathways for blood to travel through because of blockages in the existing vessels.

Homework

- Read summary on page 281
- Review Questions:
  - 2, 3, 4, 6, 7