

Name: _____

Date: _____ Core: _____

Genetic Disease and Disorders

Genetic Disease

- It only takes _____ gene!

Mutations--Mutation

- A _____ in the order of _____ in DNA
- Can cause a _____ effect (cancer, asthma), _____ effect (immunity to malaria, evolution), or a _____ effect (not noticeable)
- Caused by _____ (UV radiation, chemical) or _____ mistake when DNA is copied

Mutations--Genetic Disease

- A disorder caused by a mutation in an organism's _____
- May be _____ from a parent
- May not be inherited and results from a _____ mutation during a person's _____
- Most are triggered or worsened by _____ factors (smoking, poor diet, lack of exercise, exposure to dangerous chemicals)

Cancer

- Cells' DNA is _____ causing them to grow and divide _____
- Cells do not die normally and begin to grow where not needed (_____)
- Cancer cells can _____ other parts of the body
- Over _____ types of cancer
- 580,350 people died of cancer in the U.S. last year

Hemophilia

- Bleeding disorder where your blood does not _____ (form a scab)
- People will bleed for _____ periods of time and could potentially bleed to _____
- More common in _____ than females because it is a _____ trait (X-linked recessive)

Down Syndrome (Trisomy 21)

- Caused by an _____ copy of the 21st chromosome when sex cells are passed to offspring
- Causes significant _____ problems (speech, health, learning)
- Noticeable _____ traits (short stature, large tongue, low muscle tone, slanted eyes)

Sickle Cell Anemia

- Serious disorder where body makes _____-shaped red blood cells. ("Sickle-shaped" = crescent)
- Sickle cell anemia is an _____, lifelong disease. People who have the disease are born with it. They inherit two _____ genes for sickle hemoglobin—one from each parent.
- Sickle cells are stiff and sticky. They tend to _____ blood flow in the blood vessels. Blocked blood flow can cause _____, organ _____ and raise the risk for _____.

Spina Bifida

- Spina bifida is a birth defect resulting from the bones in the backbone not forming around the _____ correctly
- It can be _____ or _____
- The cause is _____ but thought to be an _____ factor that causes the _____ to not create the cells properly