

INHERITED GENETIC DISORDERS

- Inherited disorders are caused by a gene passed from _____ to _____.
- Inherited disorders can be:
 - _____
 - _____
 - _____

Dominant Disorders

- If one parent has the _____ gene disorder, there is a _____% chance that it will be passed to each child.
- Examples

- _____:
 - An inherited _____ disorder that causes loss of control of movements and _____ function, usually starts around 35-50 years old.
- _____:
 - _____ fingers or toes.

Let's say one parent has the disorder (Dd) and the other does not (dd).

Recessive Disorders

- _____ parents must carry the gene for the disorder
- If you have a recessive gene for a disorder, you are a _____
- You may show no _____ but you can still _____ it on to your children
- If both parents carry the recessive gene:
 - _____ chance that a child they _____ will have disorder
 - _____ chance that their child will be a _____
 - _____ chance that a child will _____ get the gene at all

• Examples

- _____
 - Red blood cells have _____ shape
 - Causes _____ and pain, most often in _____ Americans
- _____:
 - Causes _____ retardation, blindness, seizures, and death usually by age 5
 - Most often seen in people of eastern European _____ descent, _____ Canadians, and Cajuns.
- _____:
 - Causes problems in _____ and _____
 - Occurs mostly in people of Northern _____ descent.

Let's say both parents are hybrids (Dd).

X-Linked Disorders

- Disorders caused by genes on the X _____
- Usually abnormal gene is _____.
- Generally seen in _____:
- Women have _____ copies of X, therefore, one normal, dominant X chromosome
- Men have one X chromosome, therefore, no dominant gene to _____ out recessive gene.
- If a _____ has an X-linked disorder, her mother was a _____, her father had the _____
- If you are a carrier, 1 in 2 chance a _____ will have the disorder and a daughter will be a _____.

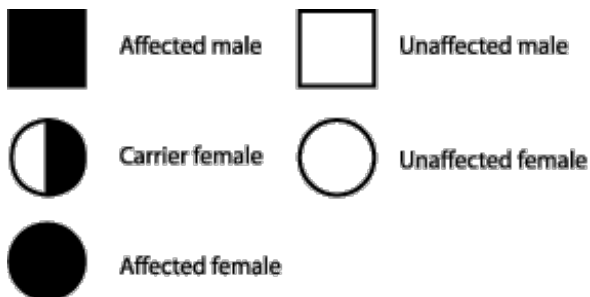
Let's say colourblindness is recessive and linked to the X chromosome. A woman who is a carrier XX' breeds with a normal male.

• Examples

- _____:
 - Most often affecting _____
 - Weakness, muscle _____
 - Death by around _____
- _____:
 - Most common cause of mental _____ issues
 - Piece of X chromosome is not fully _____.
- _____
 - Blood lacks the substance needed to _____
 - Known as the “Royal Disease” because it appeared in the _____ of Great Britain’s Queen Victoria

Pedigrees: A type of chart that shows patterns of _____ within a family

- Generally constructed after an _____ genetic trait has appeared in a family, helps to determine if:
 - Gene is _____
 - Trait is _____ or _____
 - Chance of _____ from parents to children



Read p. 138 in your textbook.
Read the case study 'Hemophilia on p. 141.
Answer #1,2 for homework.