Huntington’s Disease
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- Huntington’s disease is a disorder that causes a person to produce quick, jerky movements called chorea.
- Some cases of Huntington’s Disease create a reduce of mental productivity and complications with life expectancy.
- 7 out of 100,000 people will inherit Huntington’s disease.
Diagnosis of Huntington’s Disease

- Abnormal movements are often the symptoms that cause initial impetus to seek medical consultation and lead to diagnosis; however, the disease may begin with cognitive or psychiatric symptoms, which are not always recognized except in hindsight, or if they develop further.

- Pre-symptomatic testing, using a blood test, counts the numbers of CAG repeats in each of the HTT alleles, although a positive result is not considered a diagnosis, since it may be obtained decades before onset of symptoms.
Diagnosis of Huntington’s Disease

- A negative blood test means that the individual does not carry the expanded copy of the gene.
- Embryonic screening is also possible, giving affected or at-risk individuals the option of ensuring their children will not inherit the disease.
- It is possible for women who would consider abortion of an affected fetus to test an embryo in the womb.
Signs and Symptoms

- The physical aspects of the disease result in random and jerky motions throughout the body, and can eventually lead to muscle loss, and the slurring of speech.

- As the disease continues as the patient gets older, one can have severe memory loss and problems concentrating.

- It often leads to a mix of emotional tensions, such as ranges of depression, anger, anxiety, and aggression.
Who Get’s Huntington’s Disease?

- People often obtain this disorder in their mid 30's, but it can also occur at any age.
- When an individual under the age of 20 obtains Huntington's disease, it is known as juvenile HD.
Inheritable Genes

- A normal, healthy person has a string of between 9 and 39 glutamines.
- Because of the abnormal expansion of the *Huntingtin* gene, Huntington's patients have between 36 and 121 glutamines.
Treatments

- Diet and exercise
- Spirit and psychosocial
- Once Huntington's Disease is confirmed, patients are encouraged to continue this healthy lifestyle approach, adding other health support therapies as they become necessary, including physical, occupational, and/or speech therapy.
Tranquilizers such as clonazepam (Klonopin) and antipsychotic drugs such as haloperidol (Haldol) and clozapine (Clozaril) can help control movements, violent outbursts and hallucinations.

While these medications can be helpful, a common side effect is sedation, and in some cases, these medications may cause additional stiffness and rigidity.
Clonazepam

- Clonazepam is a highly potent anticonvulsant, muscle relaxation, and anxiolytic.
Huntington Disease Karyotype

- The karyotype for Huntington’s disease is located on chromosome 4.
What about the babies?

Parent #1
- Black Hair (BB)
  - Dominant
- No Huntington’s (hh)
  - Dominant

Parent #2
- Blond Hair (bb)
  - Recessive
- Huntington’s (HH)
  - Recessive
Punnet Square

Bb (Black Hair) (50% chance)
Bb (Black Hair)

Bb (Black Hair)
Bb (Black Hair) (50% chance)

h
Hh
(50% chance)

h
Hh
(50% chance)

Hh
(50% chance)

Hh
(50% chance)
BABY!!