

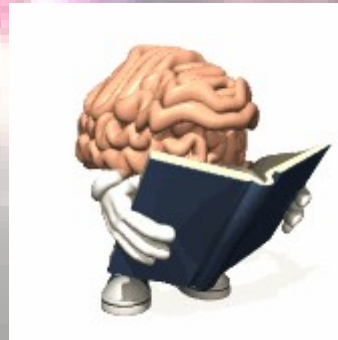


# **Spastic Cerebral Palsy**

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# Spastic Cerebral Palsy

- Common disorder of childhood caused by an abnormality of the brain
- Affects a child's ability to coordinate body movements
- Often accompanied by disturbances in behavior, cognition, communication, and perception



# Symptoms

- Stiff and tight muscles that cannot stretch
- Abnormal walk
  - Legs make “scissor” movements
  - Arms tucked in toward the sides
- Can affect one leg, arm, both, or an entire side of the body
- Joint contracture
- Paralysis



# Brain and Nervous System Symptoms

- Mild to severe mental retardation
- Hearing and vision problems
- Dysarthria (speech problems)
- Seizures
- Pain



# Diagnosis

- Electroencephalogram (EEG)
  - Used to check for epilepsy
- Brain Scans
  - Cranial ultrasound
  - CT Scan
  - MRI
- Lab Tests
  - Blood tests
  - Hearing screen
  - Vision testing



# Treatment

- There is NO cure, it is a lifelong disorder
- Therapies
  - Physical therapy
  - Occupational therapy
  - Speech therapy
- Medications
  - Anticonvulsants
  - Botulinum toxin
  - Muscle relaxants
- Surgery
  - Orthopedic
  - Severing nerves



# Molecular Genetics

- Through various methods, such as, linkage analysis and long-range PCR, we can find 3 different genetic variations :
  - homozygous mutation in the GAD1 gene on chromosome 2q31
  - homozygous mutation in the AP4M1 gene on chromosome 7q22.1
  - deletion of ANKRD15 gene on chromosome 9p24
- Imprinting effect inheritance
- Great example of how multiple genes give rise to the same disease



# Conclusion

- The rate of cerebral palsy has not decreased
- Improvements in care have greatly improved over the last 15 years





# Sources

- OMIN
- GeneReviews
- MayoClinic.com
- A.D.A.M.