5. Huntington's disease—dominant genes, cause the brain to deteriorate and affects both psychological and motor functions

ii. Sex-Linked Disorders
   1. Most are caused by recessive genes
   2. One fairly common sex-linked disorder is red-green color blindness
   3. Hemophilia—the blood of people lack the chemical components that cause blood to clot
   4. Fragile-X syndrome—a person with this disorder has an X chromosome with a fragile or damaged spot
      a. Can cause mental retardation that becomes progressively worse
      b. Strongly associated with autism

c. Chromosomal Errors
   i. Trisomies
      1. A condition in which an individual has three copies of a particular autosome
         a. Most common is Down syndrome in which the child has three copies of chromosome 21
            i. Varies with the age of the mothers
      2. Scientists have identified children with trisomies of the 13\textsuperscript{th} and 18\textsuperscript{th} pairs of chromosomes as well—more severe effects
   ii. Sex-Chromosomes Anomalies
      1. Associated with an incomplete or incorrect division of a sex chromosome
      2. XXY pattern called Klinefelter’s syndrome
         a. Boys look quite normal, long arm and legs with underdeveloped testes
         b. Language and learning disabilities are common
      3. XYY pattern—develop as boys, usually tall with mild retardation
      4. A single X pattern (XO) called Turner’s syndrome and a triple X pattern may occur
         a. Both develop as girls
         b. Turner’s syndrome—stunted growth and are usually sterile, have to take hormones to menstruate or develop breasts
         c. XXX pattern—normal size but are slow at physical development

d. Teratogens: Maternal Diseases
   i. A particular teratogen will result in a defect in the embryo only if it occurs during a particular period of days or weeks of prenatal life
   ii. Rubella
      1. First few weeks of gestation
      2. Show some degree of hearing impairment, visual impairment, and/or heart deformity
   iii. HIV/Aids
   iv. Cytomegalovirus and other STDS
      1. Virus in the herpes group
      2. Congenital mental retardation an deafness
      3. Can sometimes produce crippling disabilities
      4. Syphilis and gonorrhea can also cause birth defects
   v. Chronic Illnesses
      1. Heart disease, diabetes, and lupus
   vi. Environmental Hazards
      1. Women who work with mercury
      2. Lead, arsenic, cadmium, anesthetic gases, solvents, parasite-bearing substances