

### Student Learning Objectives

By the end of this class you should understand the following:

- The purpose of a karyotype
- The reason mitosis must be stimulated during a karyotype
- The notation used to describe chromosomal abnormalities
- The two ways to karyotype a fetus
- The names and types of chromosomal abnormalities
- The major risk factors in chromosomal abnormalities
- Why many developmental disorders occur as a result of chromosomal abnormality

Support videos:

- Chromosomes
  - [http://www.youtube.com/watch?v=KnZ35U\\_9M2A](http://www.youtube.com/watch?v=KnZ35U_9M2A)
  - <http://www.youtube.com/watch?v=XY1UsaF0Wlg>

Vocabulary:

- Centromere
- Chromosome arm
- Karyotype
- Amniocentesis
- Chorionic villus sampling
- Nondisjunction
- Polyploidy
- Aneuploidy
  - Monosomy
  - Trisomy
  - Patau Syndrome
  - Edwards Syndrome
  - Down Syndrome
  - Turner Syndrome
  - Klinefelter Syndrome
  - XYY Syndrome
- Translocation
- Deletion
- Copy Number Variant