**Inheritance Patterns**

**AUTOSOMAL DOMINANT INHERITANCE**
Affected relatives every generation
Males and females equal chance of passing on mutation
50% risk to children

**X-LINKED INHERITANCE**
No male-to-male transmission
Female carriers typically have milder symptoms than males
Recurrence risk
- 100% for daughters of affected/carryer fathers
- 50% for daughters and sons of affected/carryer mothers
- 0% for sons of affected/carryer fathers

**AUTOSOMAL RECESSIVE INHERITANCE**
May be only one generation affected
Both parents must be carriers of the mutation
25% recurrence risk

**COMPLEX INHERITANCE**
Clustering of biologically related conditions in the family
Risk estimates based primarily on empiric data
The chance of developing a complex trait depends on several factors, including:
- The number of relatives affected with a condition (or related conditions)
- How closely one is related to the affected individual(s)
- Similarity of the shared environment
- The location of disease or body system involved
- Severity of the condition in the affected relative
- The age at onset in the affected family member
- The sex of the affected family member