**7.1 Chromosomes and Phenotype**

*Key Concept: The chromosomes on which genes are located can affect the expression of traits.*

Two types of autosomes genes affect out phenotype.

* Mendel studied autosomal gene traits, like hair texture.

Mendels rules if Inheritance apply to autosomal genetic disorders

* A heterozygote for a recessive disorder is a carrier
* Disorders caused by dominant alleles are uncommon.

(dominant)

Males and Females can differ in sex-linked traits

* Genes n chromosomes are called sex linked genes.
	+ Y chromosomes in mammals are responsible for male characteristics
	+ X chromosomes genes in mammals affect many traits.
* Male mammals have an XY genotype
	+ All of a males sex linked genes are expressed
	+ Males have no second copies of sex linked genes.

Females mammals have an XX genotype.

* Expression of sex linked genes is similar to autosomal genes in females
* X chromosome inactivity randomly “turns off “ one X chromosome.