# Human Mendelian Traits

Mendelian Traits are those traits which follow Mendel's rules of only 2 possible versions of a gene (1 dominant, 1 recessive).  There are only a few examples of this in humans.

1.  Use the chart below to determine your phenotype (observable characteristic) and possible genotype(s) (a pair or pairs of alleles).  Since you cannot do a genetic test right now, if you have the dominant phenotype, you should include both the homozygous and heterozygous genotypes—see the example for Advanced Sleep Phase Syndrome in the first row.

| Trait | Possible alleles | Your Phenotype | Your Genotype(s) |
| --- | --- | --- | --- |
| Advanced Sleep Phase Syndrome | Wakes up very early (E) Wakes up at normal time (e) | Ex., wakes up very early | EE (homozygous) or Ee (heterozygous) |
| Achoo Syndrome | Sneezes in the sun (A) Doesn't sneeze in the sun (a) | | |
| Ear wax (wet/dry) | Wet (W) Dry (w) | | |

2.  Did you have mostly dominant or recessive traits? _____

3.  Compare your findings with other students.

    a.  For which trait were most students dominant?


    b.  For which trait were most students recessive?

Name: _____        Date _____

Class period:_____       

4.  First complete the Punnett Squares below using your own genotype for each trait. If you have a dominant trait, choose to use either the heterozygous or homozygous genotype. The other person's genotype is provided. After completing the Punnett Square, identify possible phenotypes of offspring and the probability of each phenotype in percentage.

a) Achoo Syndrome genotypes: Yours _____ & the other person's _Aa_
   List possible Phenotypes     % (Probability of inheritance)

| | |
|---|---|
| | |
| | |

b) Ear wax genotypes: Yours _____ & the other person's _ww_
   List possible Phenotypes     % (Probability of inheritance)

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