

on recessive traits via the – X chromosome that are not
manifest the
recessive trait.

matched on the Y chromosome the son will

EXAMPLE – Color Blindness. Color Blindness is a recessive

Trait. Approximately 20 TIMES as many men have it related

To women that have it – because a woman must inherit the

Same recessive trait from both mother and father, whereas

The man only need inherit it from his mother. There is no

Matching allele from the father so the trait is passed on.

(NOTE: “Color blindness” is extremely rarely “absolute” – it

usually refers to varying degrees starting with blues and greens

being indistinguishable. Only very rarely does a person see

only purple and EXTREMELY rarely, only shades of grey. (like

a black & white TV)

REPRODUCTION: SEXUAL & NON-SEXUAL

MITOSIS: Non-sexual reproduction by cell division replenishing cells, amoeba & other single celled organisms

DNA “uncoils” and “rungs” split with $\frac{1}{2}$ going to either new cell.

RNA provides the other side of the DNA molecule and “remembers

The order of the “rungs” resulting in two new cells exactly the same

As the original cell – containing mRNA (MESSENGER RNA)

Which “communicates” the genetic code to the organism resulting in the phenotype.

MEIOSIS – sexual reproduction

The sperm and ovum (in plants, pollen and ovule) unite. Each has

Only 23 alleles – together they form 46 pairs.

ZYGOTE united ovum & sperm (a newly fertilized egg)

MONOZYGOTIC TWINS – “identical twins” One Zygote

Identical genetic makeup 1 in 1,000 or 0.1%

Phenotype varies ONLY if differences in environment

DIZYGOTIC TWINS – “fraternal twins” Two Zygotes

Genotype & phenotype as different as any sib.s

Can be different genders @ 3.2 in 100 or 3.2%

MULTIPLE BIRTHS: (memorization not req. re stats on multiples)

- Twins (ANY TYPE) 3.31%

- Triplets, 0.14%

- Quadruplets, 0.0078%

- Quintuplets and more, 0.00092%

NON-RANDOM MATING effects allele frequency

HOMOGAMY – Tendency to marry someone like self (IE ear lobes)

U.S: Age (when older, prob 17 years max – less when younger)

Race (now 0.5% B/W, more other races – was against law)

Social Class (95% - other 5% Fem 1 up/ Males 1 down)

Perceived Attractiveness (perception over actual)

Religion (FAR less significant than 50 years ago)

SOCIAL CLASS – division of groups within a culture

BASED ON Unequal Distribution of:

WEALTH

POWER

PRESTIGE In the U.S. it is MEASURED BY:

EDUCATION

INCOME