

Sex linked traits: traits that are only carried on a sex chromosome (X or Y)

Men cannot be “carriers”, they either have the disorder or don’t have it. Females can be a carrier but not show the trait.

Information for practice problems:

XY – Normal male

X^cY – Affected Male (colorblind)

XX- Normal Female

X^cX – Normal (carrier Female)

X^cX^c – Affected Female (colorblind)

Practice problems: Cross a colorblind male with a carrier female. What are the genotypes and phenotypes of their possible offspring?

	X ^c Y	
X ^c	X ^c X ^c	X ^c Y
X	X ^c X	XY

Phenotypes – 2 colorblind, 1 carrier, 1 normal

Cross a Normal Male with a Carrier Female. What are the possible genotypes and phenotypes of their offspring?

	X Y	
X ^c	X ^c X	X ^c Y
X	XX	XY

Phenotypes – 1 Carrier, 1 colorblind, 2 normal

Cross a normal male with a colorblind female. What are the possible genotypes and phenotypes of their offspring?

	X Y	
X ^c	X ^c X	X ^c Y
X ^c	X ^c X ^c	X ^c Y

Phenotypes – 1 carrier, 3 colorblind