

# Sex Chromosome Variations

## Chromosome Conditions

Chromosomes are structures that hold our genetic information; the information that tells our bodies how to grow and function. As humans, we typically have a total of 46 chromosomes or 23 pairs - one set inherited from our mother through the egg and one from our father through the sperm.

Chromosome conditions refer to situations where a baby has extra or missing chromosomes. These conditions usually do not run in families. There is nothing you can do to cause or prevent a chromosome condition. For many of these conditions, the chance increases with the age of the mother, but there are babies born with chromosome conditions to mothers of all ages. Pregnancies where the baby has a chromosome condition have a higher risk for miscarriage. Sex chromosome variations are caused by extra or missing X or Y chromosomes.



47,XYY



Klinefelter Syndrome, 47,XXY

## Sex Chromosome Variations

- Examples of sex chromosome variations include Turner syndrome (45,X), Klinefelter syndrome (47,XXY), 47,XYY syndrome and Trisomy X (47,XXX).
- Children with sex chromosome variations usually have typical intellectual ability, however, they may have learning differences.



Turner Syndrome

- Some of these conditions are associated with a higher chance for health concerns that are often treatable.
- Because these conditions can be so mild, some individuals may go through life without ever even knowing they have a sex chromosome variation.



Trisomy X

You can find more information and videos about prenatal genetic testing options at: [www.doh.wa.gov](http://www.doh.wa.gov) and [www.geneticsupportfoundation.org](http://www.geneticsupportfoundation.org).

OTHER RESOURCES:

AXYS- Organization that provides information and support for individuals with extra sex chromosomes, including Klinefelter syndrome (47,XXY), 47,XYY syndrome, Trisomy X and other sex chromosome variations- <http://www.genetic.org/>

Turner Syndrome (45,X)

Turner Syndrome Society of the United States- <http://www.turnersyndrome.org/#!/about-turner-syndrome/c42u>

Information about Turner syndrome from Genetics Home Reference- <https://ghr.nlm.nih.gov/condition/turner-syndrome>

Klinefelter Syndrome (47,XXY)

Information about Klinefelter syndrome (47,XXY) from Genetics Home Reference- <https://ghr.nlm.nih.gov/condition/klinefelter-syndrome>

Trisomy X (47,XXX)

Information about Trisomy X from Genetics Home Reference- <https://ghr.nlm.nih.gov/condition/triple-x-syndrome>

47,XYY syndrome

Information about 47,XYY syndrome from Genetics Home Reference- <https://ghr.nlm.nih.gov/condition/47xyy-syndrome>