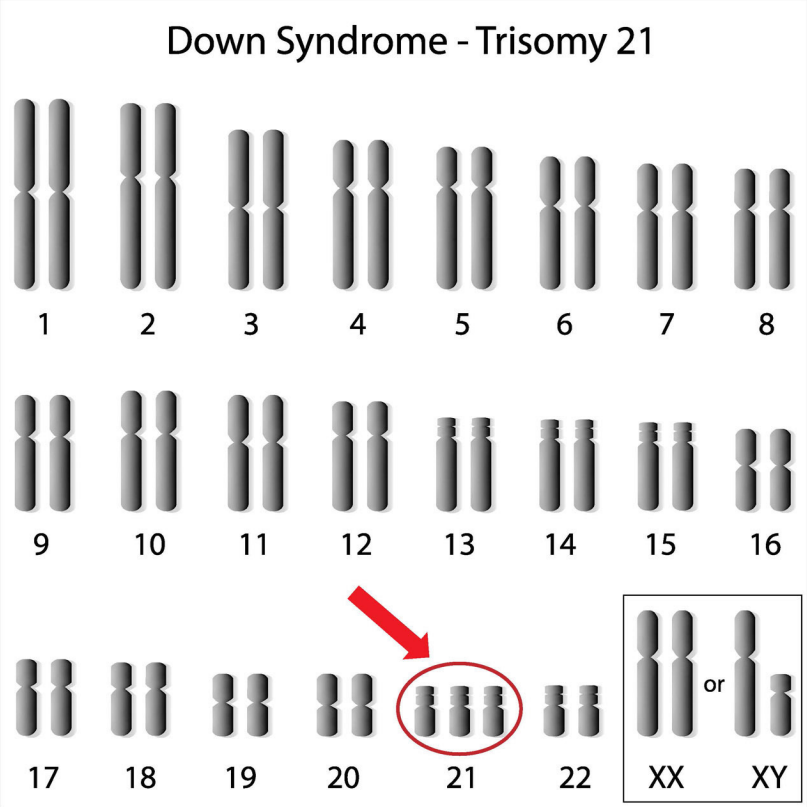
## 2.1.1 Chromosonal Conditions

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Chromosomal conditions or anomalies occur when there is an abnormal amount of chromosomal material. The usual chromosome complement in each cell is 46. There are 22 pairs of autosomes numbered 1 to 22, with each pair having the same genes. The 23rd pair is called the sex chromosomes, with females having two "X" chromosomes and a male having an "X" and a "Y" chromosome. The "X" and "Y" chromosomes, unlike autosomes, have different genes. There is sometimes an abnormal total number of chromosomes – sometimes an extra chromosome. For example, a child with Down syndrome has three copies of chromosome 21, rather than the usual two, so the condition is called "trisomy 21."

You can find more information about these conditions and how they happen at:

- SickKids, the Genetics section (If a user profile box pops up, you can press 'cancel' or create a user profile to access this site.)
- Centers for Disease Control and Prevention, Facts on Pediatric Genetics