

What is it?

Turner Syndrome is a randomly occurring chromosomal condition affecting 1 in 2,500 newborn females. While one X chromosome is normal, the other female X chromosome is missing or altered. Researchers believe that this missing or altered chromosome affects bone development and growth.

Turner syndrome is characterized by short stature and ovarian failure causing infertility. Frequent ear infections are also a usual sign to rule diagnosis. Diagnosis usually occurs in early childhood as growth rates decline. A blood test can confirm suspicion of the syndrome.



What are the physical characteristics?

- Average untreated height 4'8"
- Swelling of hands and feet
- Lack of spontaneous puberty
- Kidney problems like UTI's
- Heart issues like congenital defect
- Type II Diabetes
- Hypertension
- Hyperthyroidism
- Lack of stamina
- Scoliosis
- Webbed neck
- Droopy eyelids
- Strabismus
- Low set ears and hairline

How is learning affected?

Children with TS not only face the above conditions but also potential learning difficulties. Most girls with TS have normal intelligence and verbal capabilities but demonstrate weaknesses in the areas of visual-spatial, executive, and social cognitive function. This includes variables in things like nonverbal skills, slowed response times and immaturity. Children with TS can have trouble recognizing social cues and things like facial expressions are easily misinterpreted. With spatial understanding, girls with TS may have problems with personal boundaries and struggle to keep order in their personal environment. Students in school most often struggle with math. While they can problem solve, the issues of spatial awareness and abstract concepts make subjects like geometry very difficult. Spatial awareness can also affect spelling, punctuation, mapping, understanding time, changing point of view, and even drawing and handwriting.

Suggested school accommodations

- Maintain structure and daily routine
- Present information first in outline form
- Schedule most difficult subjects early in the day
- Practice social skills through role-playing
- Check for understanding , repeat information
- Offer short bursts of information
- State the obvious when teaching
- Maintain a quiet, calm environment
- Encourage eye contact
- Use handouts versus the chalkboard
- Note short term memory problems
- Note difficulty with fine motor skills like buttons, buckles and ties
- Note difficulty with gross motor skills

SHNIC school nurses information:

Specific health issues for individual health care plans

- Diagnosis including student specific characteristics
- Current medication list
- Baseline cardiac assessment including blood pressure parameters; note date of last cardiac exam
- Fluid intake goals related to risks for HTN, UTI
- Nutrition orders
- Diabetic emergency action plan, if applicable
- Education on growth hormone and replacement hormone therapy, if applicable
- Adapted PE
- PT/OT/SLP/Vision services and hearing specialists / communication with staff

Resources & Manuals

Turner Syndrome Foundation

<http://www.turnersyndromefoundation.org>

How to help your child survive and succeed at school:

A Guide for Parents and Teachers

Turner Syndrome Support Society

<http://tss.org.uk/downloads/TSSS%20education%20booklet.pdf>

Ardary, D.A. (2007). Increasing school nurses awareness of Turner syndrome. *Journal of School Nurses*, 23(1), 28-33.