

MATERNAL SCREENING (DOUBLE, TRIPLE AND QUADRUPLE MARKERS)

INTRODUCTION

The **first and second trimester screening** is done for screening Prenatal disorders (trisomy 21,18 and 13) to identify those women who are at sufficient risk for a congenital anomaly in the fetus. **All women, regardless of age, should be offered screening before 20 weeks gestation as per the guidelines of American College of Obstetricians and Gynecologists.** The risk is calculated using the PRISCA software, supported by SIEMENS.

TECHNOLOGY INVOLVED

Statistical risk factor calculation for **Trisomy 21 (Down's syndrome), Trisomy 18 (Edward Syndrome) & Open Neural tube defect** has been done using CE approved PRISCA-5 software. All tests are run on the technology of CLIA (Chemi Luminescence Immuno Assay).

FEATURES

- **Double Markers: Free-BHG+ PAPP-A**
- **Triple Markers: AFP+ UE3+ HCG**
- **Quadruple Markers: AFP+ UE3+ HCG+ Inhibin A**

ADVANTAGE:

TRIMESTERS	SCREENING TEST	DETECTION RATE (%)
1ST	NT	64-70
	NT+ PAPP-A+ Free BHCG	82-87
2ND	AFP+HCG+UE3	69
	AFP+HCG+UE3+Inhibin-A	81
1ST AND 2ND	Integrated (NT+PAPP-A + Quadruple)	94-96
	Serum integrated (PAPP-A+ Quadruple)	85-88

SPECIAL REQUIREMENTS

Properly filled "Maternal Screening Format" with a recent USG report including CRL, NT and Nasal Bone for Double Marker and BPD or CRL for Triple and Quadruple Markers.

- Double Marker: done at 8-13.6 weeks
- Triple Marker: done at 14-22.6 weeks
- Quadruple Marker: done at 14-22.3 weeks

***Note: the gestational age should be calculated by the USG report (NOT LMP)**

SPECIMEN

Serum Sample

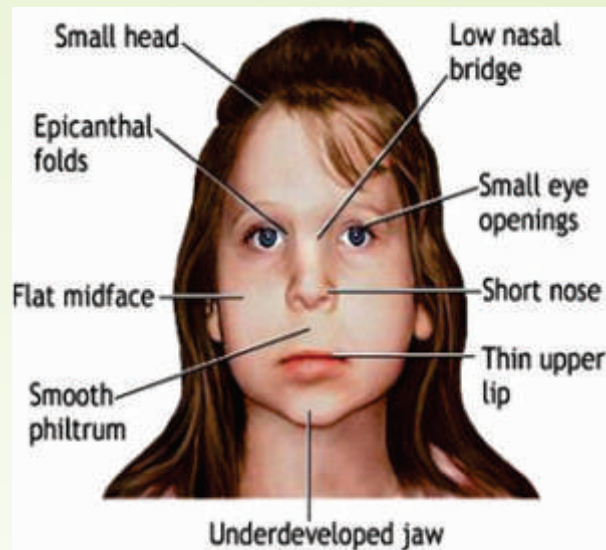
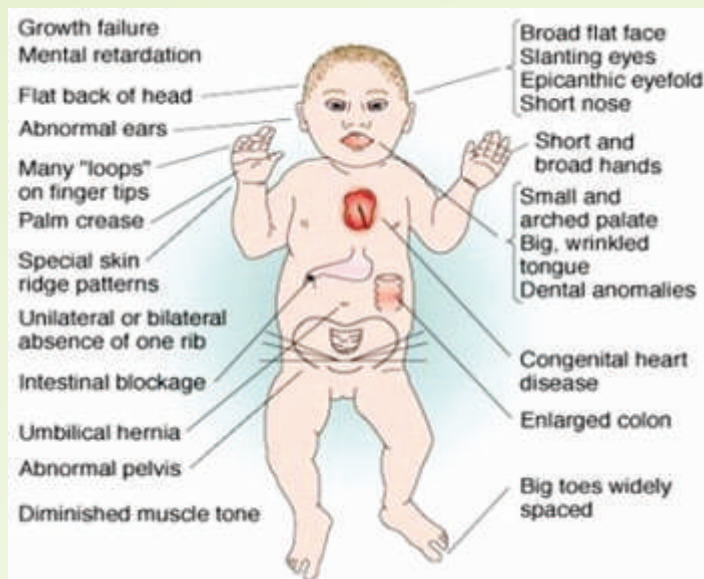
TURN AROUND TIME (TAT)

Cut-off-upto 8:00pm and Repoting time: 3rd day 5:00pm



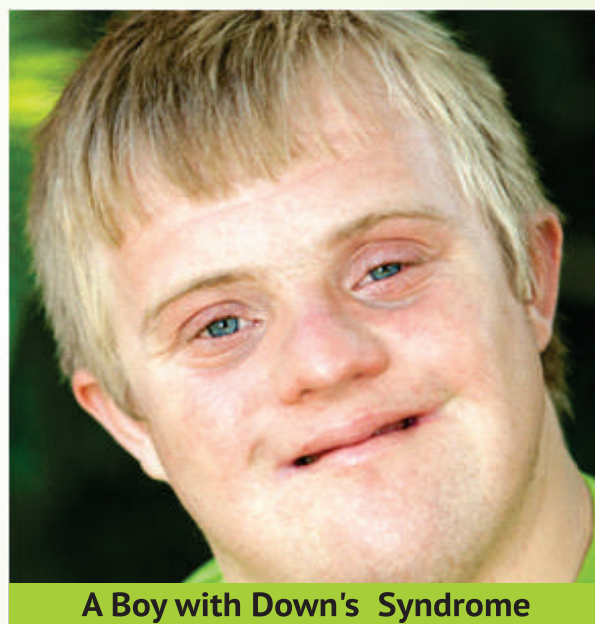
SIEMENS IMMULITE 2000 XPI

COMPLICATIONS OF DOWN'S SYNDROME



Some of the conditions that occur more often among children with Down syndrome include:

- Heart defects like congenital heart disease (CHD) which leads to high BP in the lungs, an inability of the heart to effectively and efficiently pump blood, and cyanosis (blue-tinted skin caused by reduced oxygen in the blood).
- Vision problems including cataracts, near-sightedness, "crossed" eyes, and rapid, involuntary eye movements.
- Hearing loss because of problems with ear structures.
- People with Down syndrome are 12 times more likely to die from untreated and unmonitored infections than other people. Infants with Down syndrome have a 62-fold higher rate of pneumonia, especially in the first year after birth.
- Hypothyroidism.
- Blood disorders like leukemia, polycythemia, etc.
- Problems with the upper part of the spine, underneath the base of the skull. These misshaped bones can press on the spinal cord and increase the risk for injury.
- Sleep disorders, Gum disease and dental problems, Epilepsy, Digestive problems, Celiac disease, Mental health and Emotional problems.



A Boy with Down's Syndrome