

Universitäts-Frauenklinik Essen



First Trimester Screening





What is first trimester screening?

It's the personalised risk calculation for the chromosomal abnormalities like Trisomy 21 (Down's Syndrome), Trisomy 18 (Edwards Syndrome) or Trisomy 13 (Patau Syndrome). An exact diagnosis for these problems can only be given by performing invasive procedures.

The individual probability of the above mentioned three most common chromosomal abnormalities can be calculated with this screening. The aim of the screening is to help the parents with the decision regarding having invasive diagnostics. (sampling of placenta (Chronionic villus sampling – CVS) or sampling of amniotic fluid (Amniocentesis)).

Unnecessarily performed invasive procedures can be avoided with low risk results. There are also a number of other risk calculations which can be performed, that can have an influence on the course of the pregnancy. (see below)

When can the first trimester screening performed?

The first trimester screening can be performed between 11. and 14. weeks of pregnancy (between 11+0 and 13+6. weeks) You can arrange your appointment by calling this number: 0 201 723 3574.



What kind of examinations will be done during the screening?

The computerised risk calculation can be performed with the following components which are based on the guidelines of FMF London (Fetal Medicine Foundation):

- Age of mother

Ultrasound:

- Measurement of nuchal translucency
- Fetal nasal bone
- Blood flow pattern in one of the heart valves (Tricuspid)
- Blood flow pattern in a vessel in fetal liver (Ductus venosus)
- Blood test to check 4 parameters in mother's blood (β -hCG, PAPP-A, PIGF, AFP)
- History

When do I get the results?

The results will be given to you and your partner on the same day of the examination after getting the lab results. (in 1-2 hours)

Are the results reliable?

With combination of the components mentioned above, it's possible to screen for Trisomy 21 with specificity up to 98 %. But a 100 % diagnosis cannot be given for chromosomal abnormalities. When a diagnosis is needed, this can be done by sampling of placenta (Chronionic villus sampling – CVS) or sampling of amniotic fluid (Amniocentesis). These tests can also be performed in our unit.



Are there any other tests to calculate the risk for Trisomy 21 (Down's Syndrome)?

A new aspect of first trimester screening is to check for Trisomy 21 in mother's own blood. This is a moleculogenetic test which can be offered at the moment by the company Lifecodexx in Germany. A blood test after 11 weeks of pregnancy gives the results in 2 weeks. The specificity is 99%.

When results are positive, the diagnosis must still be made through sampling of placenta (Chronionic villus sampling – CVS). The parents who are interested in this test can have it done in our clinic through our cooperation with MVZ Institut für Klinische Genetik, Pathologie und Zytologie Nordrhein GmbH.

Will there be any other results given after the screening which would be important for the pregnancy and my baby?

It is possible to check for organ anomalies, for ex. complicated heart and brain problems, through ultrasound examination.

A recent and novel aspect of screening is the risk calculation for preeclampsia. The aim of this study is to help you and your physicians regarding the decision of initiating a therapy with Aspirin. The use of Aspirin can delay or even prevent the onset of preeclampsia.

In addition, a risk calculation for risk for preterm delivery can be carried out during first trimester screening. This may influence the decision about a therapy with progesterone or cerclage for prevention or delay of preterm delivery. The gestational age and due date can be determined or



adjusted more accurately by measuring the crown-rump length.

Who pays for first trimester screening?

Since the screening is not covered by your health insurance, the costs must be paid by the patient as so-called IGel (individual health service) payment.

Contact:

Prenatal Diagnostics:	0 201 - 723 3574
Labour Ward:	0 201 - 723 2345
Hotline for the Colleagues:	0 201 - 723 83 431

