

## How will I find out the result of the risk assessment?

The combined risk calculation will give an individual assessment (likelihood ratio) for your risk of having pre-eclampsia.

The result will be made available to your doctor.

Your doctor will review the results with you and advise you on the subsequent management of the pregnancy.

## Benefits of Pre-eclampsia screening

- Increased surveillance for high risk pregnancies
- Possibility to initiate aspirin treatment early in high risk pregnancies
- Better outcome for mother and baby
- Cost effective health care – reduction in cost of hospitalisation and need for intensive care

## What else should I know?

If your likelihood risk is within normal range, it is recommended that you should still have the routine checks for fetal anomaly and fetal well being at the various later stages of your pregnancy.



**Fetal Assessment Unit**  
(The Centre for Prenatal Diagnosis & Obstetric Ultrasound)  
at Thomson Medical Centre

**Complimentary Shuttle Bus @ Novena MRT**  
30 mins interval

**Operating Hours:**  
**Mon-Fri:** 9.00am - 1.30pm  
3.00pm - 5.30pm  
**Sat:** 9.00am - 1.30pm  
3.00pm - 4.00pm

**Thomson Medical Centre** T +65 6354 4115  
339 Thomson Road, F +65 6259 4959  
Level 4, E xray@thomsonmedical.com  
Singapore 307677 W thomsonmedical.com

**Thomson Diagnostic Ultrasound Centre**  
at Novena Medical Centre

**Novena Medical Centre** T +65 6397 6866  
10 Sinaran Drive, F +65 6397 6366  
Square 2, #11-09/10, E tduc@thomsonmedical.com  
Singapore 307506 W thomsonmedical.com

**Thomson Imaging Centre**  
at Paragon Medical Centre

**Paragon Medical Centre** T +65 6735 0010  
290 Orchard Road, F +65 6735 0145  
#19-01 (access via Lift Lobby F) E contact@thomsonimagingcentre.com  
Singapore 238859 W thomsonmedical.com

# First Trimester Pre-eclampsia Screening



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## What is Pre-eclampsia?

Pre-eclampsia is defined as the development of high blood pressure and protein in the urine during the second half of pregnancy (after 20 weeks gestation).



It is common and affects between 2 and 8 in 100 women during pregnancy. It is often mild and has little effect on pregnancy. However, about 1 in 200 women (0.5%) may develop severe pre-eclampsia. The effects of severe pre-eclampsia on the mother and baby may be life-threatening.

Pre-eclampsia in the mother is characterised by seizure and coma. Severe complications include abruption of the placenta, acute renal failure, pulmonary edema, stroke, circulatory collapse, disseminated intravascular coagulation which may lead to multiple organ failure.

Pre-eclampsia effects on the baby may include fetal growth restriction where the fetus does not have enough oxygen and nutrients to grow normally, premature delivery of the baby, low fetal birth weight, developmental delay and chronic ill-health in childhood.

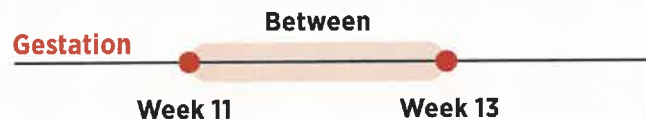
## Pre-eclampsia Risk Assessment

The pre-eclampsia assessment screening is done by combining the following to calculate the likelihood risk factor.

- Ultrasound measurement of the uterine artery pulsatility index (PI) at 11-13 weeks' gestation
- Maternal history
- Blood pressure
- Maternal blood sample serum biochemistry for Serum PAPP-A and Placental Growth Factor (PLGF)

This combined method of screening has been estimated to be able to predict 90% of pre-eclampsia requiring delivery before 34 weeks and 45% of late pre-eclampsia (for a false-positive rate of 5%).

## When should Pre-eclampsia risk assessment be performed?



Pre-eclampsia risk assessment should be performed between 11-13 weeks gestation.

It is recommended to be performed on the same visit as the 1st trimester assessment of risk for fetal anomalies (OSCAR) so that only one sample of blood is required for the two tests.

It is also recommended that the risk assessment is performed at this stage as studies have shown the preventive treatment of Pre-eclampsia with medication is most effective if it starts at this earlier stage.

## Why is first trimester prediction so important?

Although early onset pre-eclampsia is less common than late onset pre-eclampsia, early onset pre-eclampsia is more severe and may be life threatening for both mother and baby.

In early onset pre-eclampsia, the baby has to be delivered before 34 weeks of pregnancy.

A reduced level of placenta growth factor (PLGF) is predictive of both early and late onset forms, but since the reduction is already visible in the first trimester, PLGF assay is particularly useful in identifying the potentially most serious cases.

It is widely recommended that low dose aspirin treatment in high risk cases should commence before 16 weeks, hence it is crucial to identify high risk cases in the first trimester.

