

BioSpect

the business of Bio

24 years of leveraging the business of Bio
www.biospectrumindia.co

PAPP-A Test in Pregnancy: Purpose, Results, and Importance

03 June 2026 | Views

Learn what the PAPP-A blood test measures during your first trimester, how to understand MoM results, and what low levels mean for placental function.



Pregnancy brings a series of routine screenings designed to monitor the health of both mother and baby. Some of these tests are done in the first trimester to spot potential concerns early, when intervention or further investigation can still make a meaningful difference. One such screening looks at a specific protein in the mother's blood that reflects how well the placenta is developing. The [Pap-A test](#), more correctly known as the PAPP-A test, is part of the first-trimester combined screening and offers valuable information about pregnancy progression and certain chromosomal risks.

What Is the PAPP-A Test?

PAPP-A stands for Pregnancy-Associated Plasma Protein-A. It is a protein produced by the placenta during pregnancy, and its level in the mother's blood rises steadily through the first trimester. A simple blood draw measures the amount of PAPP-A circulating, usually between weeks 11 and 14 of pregnancy. The **Pap-A test** is rarely interpreted on its own. Instead, it forms part of the first-trimester combined screening alongside free beta-hCG levels and a nuchal translucency ultrasound scan, which together estimate the risk of certain chromosomal conditions.

When Should You Get a PAPP-A Test?

Doctors recommend this test for several reasons:

1. Screening for Chromosomal Conditions

Low PAPP-A levels in the first trimester may indicate an increased risk of conditions such as Down syndrome (trisomy 21), Edwards syndrome (trisomy 18), or Patau syndrome (trisomy 13).

2. Assessing Placental Function

PAPP-A is produced by the placenta. Lower-than-expected levels may suggest the placenta is not developing optimally, which could affect foetal growth later in pregnancy.

3. Predicting Pregnancy Complications

Low PAPP-A has been associated with a higher risk of preeclampsia, intrauterine growth restriction, preterm delivery, and other adverse outcomes. Identifying this risk early allows closer monitoring.

4. Routine First-Trimester Screening

Many obstetricians include PAPP-A as a standard part of antenatal care during the first trimester, especially for pregnancies considered higher risk.

How is the Test Done?

The PAPP-A test involves a routine blood sample drawn from a vein in the mother's arm. No fasting is required. The blood is processed in a laboratory, and the results are reported as a value measured in mIU/mL, then adjusted for gestational age, maternal weight, ethnicity, smoking status, and other variables. This adjusted figure is called the Multiple of the Median (MoM).

The test is usually performed between 11 weeks and 13 weeks plus six days of pregnancy, in combination with the nuchal translucency ultrasound.

Understanding the Results

PAPP-A results are not interpreted as a simple high or low number, but in the context of the combined screening as:

- **MoM around 1.0:** Considered within the expected range.
- **MoM below 0.4:** Considered low and may indicate higher risk.
- **MoM above the upper reference range:** Less clinically significant in most cases.

A low PAPP-A result does not confirm a chromosomal condition or complication. It only suggests that further investigation may be appropriate, such as a non-invasive prenatal test (NIPT), detailed anomaly scan, or, in some cases, chorionic villus sampling or amniocentesis.

What Low and High Levels May Mean

Low PAPP-A levels in the first trimester may be linked to:

- Increased risk of Down syndrome, Edwards syndrome, or Patau syndrome
- Reduced placental function
- Higher risk of preeclampsia or pregnancy-induced hypertension
- Foetal growth restriction in later pregnancy
- Preterm birth or stillbirth in rare cases

High PAPP-A levels are usually not a cause for concern, though very high values are occasionally noted in multiple pregnancies or larger babies. A doctor will review the result with all other screening parameters before suggesting the next steps.

Importance of Combined Screening

The strength of the first-trimester combined screening lies in looking at PAPP-A, free beta-hCG, and the nuchal translucency scan together. Each parameter on its own offers limited information, but together they produce a risk estimate with much greater accuracy. This combined approach is the preferred screening method recommended by Indian obstetric guidelines and the Federation of Obstetric and Gynaecological Societies of India (FOGSI).

Choosing a Reliable Diagnostic Partner

Accurate test results are critical during pregnancy, since they shape decisions about monitoring, additional testing, and overall care planning. Expectant mothers benefit from choosing diagnostic labs such as **Lupin Diagnostics** that maintain strict quality protocols and offer convenient sample collection. They provide PAPP-A and broader maternal screening tests across India through its National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited labs, with free home sample collection available in major cities.

Conclusion

The PAPP-A test is a valuable part of early pregnancy screening, offering insight into placental function and the likelihood of certain chromosomal conditions. While abnormal results can be worrying, they are only one piece of a much larger picture and should always be discussed with an obstetrician. Routine first-trimester screening, combined with timely follow-up where needed, helps support a safer pregnancy for both mother and baby.