

# Biochemical Markers in Pregnancy

An information guide



# Biochemical Markers in Pregnancy

## Introduction

This information leaflet has been given to you because you have been found to have either:

- Low levels of PAPP-A.
- Increased levels of Inhibin-A or AFP.

PAPP-A, Inhibin-A and AFP are known as 'biochemical markers'

## What are biochemical markers?

PAPP-A, Inhibin-A and AFP are all hormones produced by the placenta (afterbirth).

**PAPP-A** levels are measured as part of the Combined screen (approximately 11 to 14 weeks).

**Inhibin-A and AFP** levels are measured as part of the Quad test (approximately 14 to 20 weeks).

Studies have shown that low levels of PAPP-A, or increased levels of Inhibin-A or AFP may be associated with the placenta not working as well as it should do.

This can lead to some babies not meeting their growth potential (not growing as expected). Research has shown an increased incidence of smaller babies in later pregnancy.

Low levels of PAPP-A can also be associated with Down's Syndrome. However, you will already have been contacted by your screening midwife if you have had a higher chance result from this test.

## What are normal levels?

You will have noticed on your Combined screen or Quad screen report that hormones levels are measured as an average (MoM) value.

- A MoM of 1.00 is average.
- Higher than 1.00 is above average.
- Lower than 1.00 is below average.

We will recommend and offer serial growth scans of your baby if:

- Your PAPP-A levels are below 0.415 MoM.
- Your Inhibin-A levels are above 2.00 MoM.
- Your AFP levels are above 2.20 MoM.

This is because research has shown that these levels are more likely to be associated with smaller babies.

## What does this mean?

**It is important to remember that most babies born to mothers with a low PAPP-A or increased Inhibin-A or AFP will be a normal weight at birth.**

However as some babies can be born growth restricted (smaller than expected), or preterm (earlier than expected), we would like to refer you to a consultant obstetrician.

When you attend for your detailed 20 week scan the sonographer will measure the blood flow between you and your baby (known as a Uterine Artery Doppler).

Based on the results of the Uterine Artery Doppler (UATD), your consultant will make a plan with you to closely monitor your baby's growth – in all cases this will mean having an increased number of growth scans later in pregnancy. How often, and when you have

these scans will depend on the results of the UATD and will be discussed with you by your doctor or midwife.

In later pregnancy, your baby's estimated weight will be plotted on your personalised growth chart in your hand-held notes.

If these measurements plot within the normal range, you will be given an appointment for your next scan and advised to see your midwife or consultant at your next pre-arranged visit.

If any of the measurements plot outside of the normal range, or your baby is starting to show signs of reduced growth, you will be asked to see a consultant following the scan to discuss a plan of care.

### **Is there anything I can do to help my baby to grow well?**

If you smoke, it is extremely important that you try to stop. Smoking can affect the placenta and the baby's growth.

We have a team of specialist midwives that can help you to stop smoking by providing support and nicotine replacement therapies. Please speak to your midwife about a referral, and one of the team will be in touch.

Monitoring your baby's movements is a very good way for you to check your baby's wellbeing. If you notice a change in your baby's pattern of movements, always ring the hospital the same day.

**Do not** leave it until the next day or your next appointment.

## **Who can I speak to if I need further information?**

You are welcome to phone one of the Antenatal Clinic midwives if you have any queries or concerns.

Receiving the news about low or increased biochemical markers may cause anxiety, but please be assured that the majority of babies will have normal growth.

For those babies that are found to be small you will have the reassurance of close surveillance with the Antenatal Clinic team and the Obstetricians.

## **Useful contacts**

### **Ante Natal Clinic (ANC): (General queries):**

**The Royal Oldham Hospital**

Telephone: 0161 627 1269

**Rochdale Infirmary**

Telephone: 01706 517 050

### **Ante Natal Day Unit (ANDU): (concerns about your baby's movements):**

**The Royal Oldham Hospital**

Telephone: 0161 627 8179

## **Acknowledgements**

Dorset County Hospital NHS Foundation Trust, Low PAPP-A - Information for Patients

St Helen's & Knowsley Teaching Hospitals NHS Trust, Low PAPP-A - Information for Parents

**Notes:**

**If English is not your first language and you need help, please contact the Interpretation and Translation Service**

Jeśli angielski nie jest twoim pierwszym językiem i potrzebujesz pomocy, skontaktuj się z działem tłumaczeń ustnych i pisemnych

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Dacă engleza nu este prima ta limbă și ai nevoie de ajutor, te rugăm să contactezi Serviciul de interpretare și traducere

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**For general enquiries please contact the Patient Advice and Liaison Service (PALS) on 0161 604 5897**


**For enquiries regarding clinic appointments, clinical care and treatment please contact 0161 624 0420 and the Switchboard Operator will put you through to the correct department / service**

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