RECOMMENDED PRENATAL TESTS 2.0

Early pregnancy (First visit or somewhat later):

1. ABO and Rhesus Blood group (only if not yet known)
2. Indirect Coombs (for all pregnancies)
3. Hb – if normal, repeat at 28 weeks
4. Rubella – if no documented immunity
5. HIV – if negative, repeat at 32 weeks
6. Syphilis – if negative, repeat at 32 weeks
7. Hepatitis B (HepBs Ag)
8. Mid-stream urine for culture – if positive, treat and repeat
9. HBA1c for all women or high risk (> 6.5% = overt DM)
   OR random HGT for all or high risk (≥ 11.1mmol/l = overt DM)
   OR fasting HGT for all or high risk (> 5.1mmol/l = abnormal)
   OR formal 75 g 2h OGTT on plasma or serum if any risk factors (5.1 (f) -10.0 (1h) -8.5 (2h); skip if fasting ≥ 7 = overt DM)
   "High risk for diabetes"
   - GDM in a previous pregnancy.
   - First-degree relative with diabetes
   - High-risk race/ethnicity
   - History of cardiovascular disease
   - Hypertension (≥140/90 mmHg) or on therapy for hypertension
   - High-density lipoprotein cholesterol level <35 mg/dL (0.90 mmol/L) and/or a triglyceride level >250 mg/dL (2.82 mmol/L)
   - Chronic steroid use
   - Polycystic ovary syndrome (PCOS)
   - Physical inactivity
   - Other clinical condition associated with insulin resistance (e.g., severe obesity, acanthosis nigricans)
   - 40 years or older
   - Obesity
   - Previous macrosomia (> 4.5 kg)
   - Previous late unexplained IUFD
   - Previous congenital anomaly
   - Glycosuria

Screening later in pregnancy

1. Preeclampsia screening in first, second or third trimester (see specific guideline)
2. Cervical length screening for preterm birth (see specific guideline)
3. Routinely screen for diabetes at 24-28 weeks
    a. Two-hour 75g OGTT after overnight fast (cancel 2h value if fasting ≥ 5.1 – criteria 5.1 (f) - 8.5 (2h))
    b. OR non-fasting one-hour 50g challenge test (if ≥ 7.5 mmol/L do formal OGTT; if > 11.1 = overt DM; this approach reduces cases of GDM without altering the outcomes)
4. Group B Streptococcus (vaginal swab) – at 35 -37 weeks and only if planned vaginal birth

Screening for aneuploidies including Down syndrome

Discuss all options in detail at the first antenatal visit (use of the SASOG patient information leaflet is recommended, available in 5 languages on SASOG website)

Obtain pre-test written informed consent!

If patient opts for screening:

First Trimester Screening:

1. PAPP-A and b-HCG at 8 – 14 weeks (early is best)
2. NT scan at 11-13^{6} weeks (FMF-accredited operator)
3. Combined first trimester screen (1 AND 2) is superior compared to either alone
4. Cell-free DNA (NIPT) as alternative option – any time from 10 weeks onwards
5. If any of the above are positive (i.e., high risk result): Offer
    a. Amniocentesis or
    b. Chorion Villus sampling

Second Trimester Screening:

1. AFP, HCG and estriol between 15 and 20 weeks if first trimester T21 screening or NIPT not performed
2. Cell-free DNA (NIPT) as alternative option (any time)
3. If any of the above positive: Offer
    a. Amniocentesis or
    b. Cordocentesis
    c. Referral for a level 3 scan (detailed fetal anatomy scan with inclusion of genetic soft markers to refine the risk calculation)
4. Maternal serum alpha-fetoprotein (MSAFP) if detailed scan not performed by specially trained practitioner.

The BetterObs "Antenatal Ultrasonography in pregnancy guideline" is to be used in combination with the above, as parents who opt for T21 screening usually also request detailed assessment for other fetal abnormalities.

Reference

1. Adam, S. & Soma-Pillay, P. 2018. Obstetric Essentials. 3rd Edition. University of Pretoria
2. WHO recommendations on antenatal care for a positive pregnancy experience. WHO 2016. ISBN 978 92 4 154991 2
3. Uptodate. Prenatal Care: Initial assessment. 2022, Lockwood CJ, Magriples U.

Authorship

These guidelines were drafted by a clinical team from Mediclinic and were reviewed by a panel of experts from SASOG and the BetterObs clinical team in 2019 and revised by the scientific subcommittee of BetterObs in 2022. All attempts were made to ensure that the guidance provided is clinically safe, locally relevant and in line with current global and South African best practise. Succinctness was considered more important than comprehensiveness.

All guidelines must be used in conjunction with clinical evaluation and judgement; care must be individualised when appropriate. The writing team, reviewers and SASOG do not accept accountability for any untoward clinical, financial or other outcome related to the use of these documents. Comments are welcome and will be used at the time of next review.

Released on 2022.08.01

Disclaimer:

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