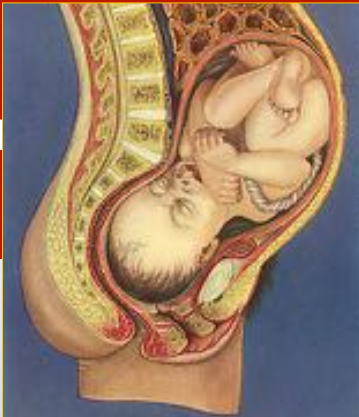


Module 13 – Routine and High-Risk
Prenatal, Post-Partum and Gynaecological
Health Assessment

Module 13 – Routine and High-Risk Prenatal, Post-Partum and Gynaecological Health Assessment

2017 Update by
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CANADIAN HEALTH CARE AGENCY
EXPERIENCE THE NORTH

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1. Explore the Pregnancy!
2. Pregnancy Dating – pregnancy wheel
3. Obstetrical History – Antenatal 1 and 2 forms
4. Labs
5. Physical Exam
6. Genetic Screening and Testing
7. Diagnostic Imaging

Module 13: Objectives/ Topics

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Feelings

- How do you feel about being pregnant?
- How do you feel about the new baby?

Impressions

- What are your ideas about where to go from here?

Functioning

- How does the pregnancy effect your every day life?
- What sort of supports do you have?

Expectations

- How can I help?
- How can we work together?

Patient Centered Model

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- **Very accurate** – both urine and serum will become positive within **7-10 days** of conception
- *An accurate predictor if negative pregnancy test followed within 2 weeks by a positive test*



Positive Pregnancy Tests

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GTPAL TPAL describes the “para”

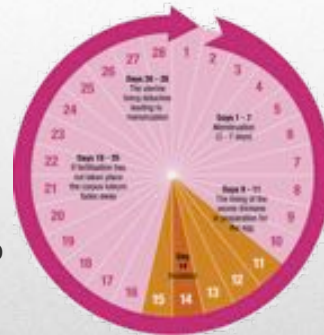
Gravida/ **T**erm-**P**reterm-**A**bstortion-**L**iving

- **G** = number of pregnancies, including the current one
- **T** = number of term pregnancies, terminating after 36 weeks gestation
- **P** = number of premature pregnancies terminating 20 – 36 weeks gestation
- **A** = number of aborted pregnancies terminating before 20 weeks gestation (spontaneous or therapeutic)
- **L** = number of living children

Terminology

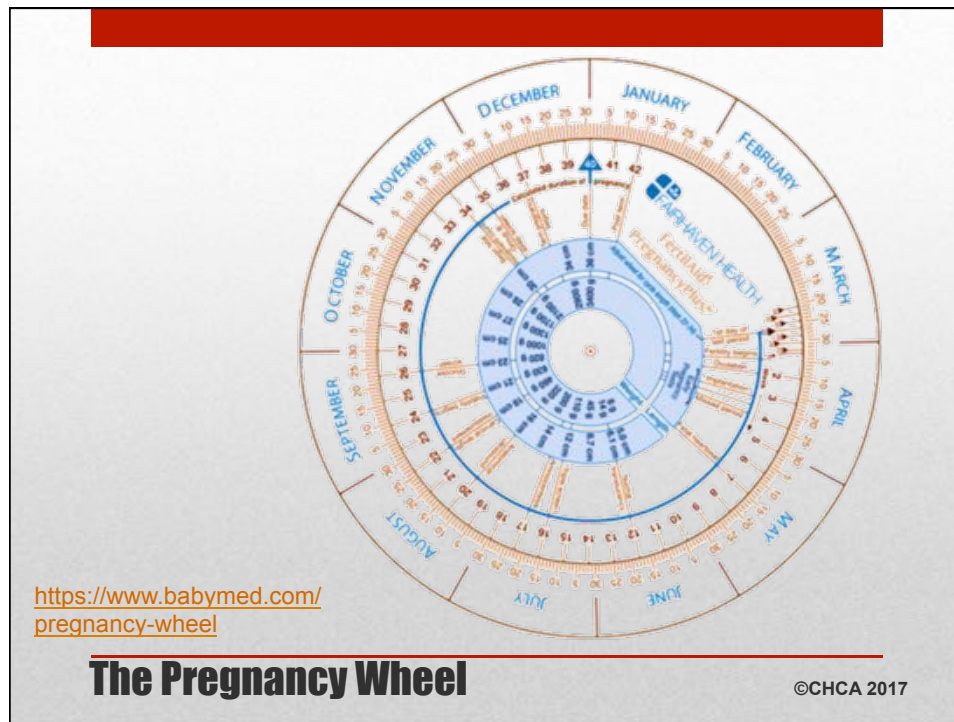
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- “**Gold standard**” if normal flow & frequency
- **Disadvantages:**
- Patients do not always remember LNMP (especially when presenting late for care)
- May be mistaken for implantation bleeding
- May be difficult to determine for Depo users
- With BCPs, first ovulation after cessation of BCPs is frequently delayed from 2-6 weeks



Last Normal Menstrual Period

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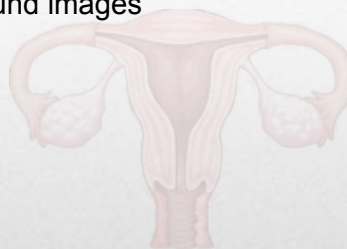
Why is this important?

- Enables expectant mother, family, and provider to know when to expect onset of labor
- Assessment and management of preterm labour, IUGR, postdates, and PROM
- Scheduling various diagnostic testing or procedures, including Glucose Tolerance, IPS amniocentesis, C-section, or induction of labour
- Ongoing management of maternal diseases (ie. DM, HTN, PIH, renal disease)

Gestational Age Assessment

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- Incorrect recall of LMP
- Irregular menses
- Incorrect measurement of ultrasound images
- Late registration for prenatal care
- Inaccurate home pregnancy test
- Molar gestation
- Conception during amenorrhea
- Uterine fibroids or pelvic masses
- Multiple gestation
- Implantation bleeding
- Obesity
- Conception during or after BCPs or Depo
- Incorrect estimation of uterine size



Common Causes of Gestational Dating Inaccuracies -- *Early Pregnancy*

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- Your Provincial Prenatal Record
- Guidelines for Antenatal Screening & Testing

Example:
Ontario College of Family Physicians

<http://ocfp.on.ca>



Antenatal Records I and II

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[illegible][illegible]

[illegible]

Ontario

Ministry of Health and Long-Term Care
Resources

Last Name _____ First Name _____			
Anxiety Screening			
Generalized Anxiety Disorder scale (GAD-7) Date <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u>			
Over the last 2 weeks, how often have you been bothered by the following problems:	Not at all 0	Several days 1	Most or nearly every day 2
1. Feeling nervous, anxious or on edge	0	1	2
2. Not being able to stop or control worrying	0	1	2
A total score of 3 or more warrants consideration of using the GAD-7 for further assessment or additional mental health follow-up.			
Total Score _____		Total Score _____	
Depression Screening			
The Patient Health Questionnaire-2 (PHQ-2) Date <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u>			
Over the last 2 weeks, how often have you:	Not at all 0	Several days 1	Most or nearly every day 2
1. Little interest or pleasure in doing things	0	1	2
2. Feeling down, depressed or hopeless	0	1	2
A total score of 3 or more warrants consideration of using the Edinburgh Postnatal Depression Scale (EPDS) or the Patient Health Questionnaire (PHQ-9) for further assessment or additional mental health follow-up.			
Total Score _____		Total Score _____	
T-ACE Screening Tool (Alcohol)			
Response Key			
1. Drink is equivalent to: + 12 oz of beer + 12 oz of wine + 5 oz of wine + 1.5 oz of hard liquor (mixed drink)			
2. How many drinks does it take to make you feel high?			
3. Have people annoyed you by criticizing your drinking?			
4. Have you felt you ought to cut down on your drinking?			
5. Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?			
A total score of 3 or greater indicates potential prenatal risk and need for follow-up.			
Total Score _____		Total Score _____	
Edinburgh Perinatal / Postnatal Depression Scale (EPDS) Cox, Holden, Sagovsky, (1987)			
In the past 7 days:			
1. I have been able to laugh and see the funny side of things	☐ No, much as I always could = 0	☐ Definitely not so much now = 2	
2. I have lost interest with enjoyment in things	☐ No, not at all = 0	☐ Definitely less than I used to be = 2	
3. I have blamed myself unnecessarily when things went wrong	☐ No, never = 0	☐ Yes, some of the time = 2	
4. I have been anxious or worried for no good reason	☐ No, not at all = 0	☐ Yes, most of the time = 3	
5. I have felt scared or panicky for no good reason	☐ No, not at all = 0	☐ Yes, sometimes = 2	
6. Things have been getting on top of me	☐ No, not at all = 0	☐ Yes, very often = 3	
7. I have been so unhappy that I have had difficulty sleeping	☐ No, not much = 0	☐ Yes, sometimes = 2	
8. I have felt sad or miserable	☐ No, not much = 0	☐ Yes, quite often = 2	
9. I have been so unhappy that I have been crying	☐ No, never = 0	☐ Yes, most of the time = 3	
10. The thought of harming myself has occurred to me	☐ No, not at all = 0	☐ Yes, quite often = 2	
Total Score _____			
Notes: 1. Scores of 10 or less indicate a risk of self-harm. Patient requires immediate mental health assessment and intervention as appropriate. 2. Scores = 4 or greater, support, and offer education. 3. Scores = 12 or follow up with comprehensive psychiatric diagnostic assessment for bipolar.			
Institute of Medicine Weight Gain Recommendations for Pregnancy (2009)			
Pregnancy Weight Category	Body Mass Index	Recommended range of total weight gain (kg)	Rate of Weight Gain in Second and Third Trimesters (kg/wk)
Underweight	Less than 18.5	12.5 to 18 kg (28-40)	1.0 to 1.5
Normal weight	18.5 to 24.9	11.5 to 16 kg (25-35)	0.4 to 1.0
Overweight	25 to 29.9	7 to 11.5 kg (15-25)	0.3 to 0.9
Obese (includes all classes)	30 and greater	5.0 kg (11-25)	0.2 to 0.6 (0.4-0.6)
(Calculations assume a 5.0 to 6.0 kg (11 to 14.4 kg) weight gain in the first trimester)			

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User Guide available at www.pregnancy.ca

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Perinatal Resources

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Module 13 – Routine and High-Risk Prenatal, Post-Partum and Gynaecological Health Assessment

Postnatal Record

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Initial Visit

- Ideally before 10 weeks



Subsequently...

- Every 4 weeks until 28-32 weeks
- Every 2 weeks until 36 weeks
- Every week until birth

Prenatal Care

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- **Gather and/or review history data....**
 - *Go over history written on intake form*
 - *Clarify things*
 - Types of drugs/meds taken since conception
 - Any domestic violence history
 - Family history of genetic disorders
 - Depression



History

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- Substance Use
- Domestic Violence
- Victims of Violence
- Presence of cats in the home
- Toxoplasmosis (Increases risk for epilepsy/ developmental delay)



History and Screening

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- Beck Depression Inventory
- Primary Care Evaluation of Mental Disorders
Patient Health Questionnaire
- Center for Epidemiologic Studies Depression Scale
- Edinburgh Postnatal Depression Scale

Depression Screening Tools

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- Prenatal vitamins
- FeSO₄ if anemic
 - (Hgb < 11 gm/dl)
- If on Synthroid, **check TSH every trimester**
 - may need to increase dosage as pregnancy progresses

Encourage mother to decrease or eliminate alcohol, cigarettes and drugs during pregnancy.



Medication

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- **H**ead to toe
- **B**reast changes – watch for tenderness
- **T**hyroid may be slightly enlarged
- **M**urmur - May hear physiologic murmur, present in most pregnant women



Video 2 – General Appearance

Physical exam - **HBTM**

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AT EVERY VISIT:

- Urine dip for glucose, proteins, ketones
- Weight
- BP
- Fetal Movement inquiry
- Fetal HR

*usually done with doppler,
not external fetal monitor



q Visit Assessment

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- **Doppler** by 9-12 weeks
 - Assume inaccurate dates if not audible by 12 weeks
 - place Doppler wand just above pubic symphysis and aim transducer downwards towards feet/spine
- **Manual Fetoscope** by 17-20 weeks
 - Rarely used today

**Video 3 – Fetal
Heart Tones**



Fetal Heart Tones

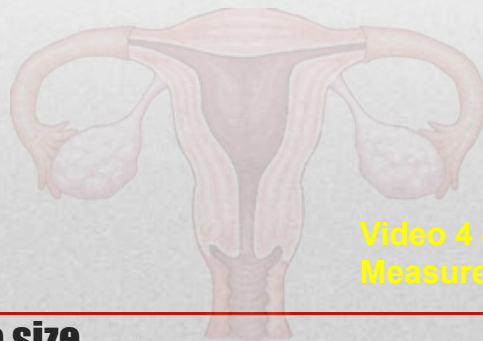
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**FHR monitoring
By Fetoscope**

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- From 18-35 weeks -- fundal height closely approximates gestational age in weeks (*measure from top of symphysis pubis over the curve of uterus to most cephalic portion of fundus*) -- less accurate after “lightening”
- Fundus generally reaches umbilicus at 20 wks.
- Important to screen for IUGR-and refer if detected



Video 4 – Fundal Height Measurement

Uterine size

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- Fetal Movement
- Bleeding
- Uterine contractions
- Vaginal discharge

Video 5 – 5-minute pregnant abdomen exam

- Pelvic pressure
- Dysuria
- Edema
- Changes in psychosocial parameters

History: Subsequent Visits

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- Mother's first perception of fetal movement:
 - *Primigravidas* @ 18-19 weeks
 - *Multigravidas* @ 16-17 weeks



Quickening

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- Fetal malposition
- Fetal anomalies
- Polyhydramnios or Oligohydramnios
- Undiagnosed multiple gestation
- IUGR or macrosomia
- Failure to record gestational milestones

Common Causes of Gestational Inaccuracies – High Risk- Late Pregnancy

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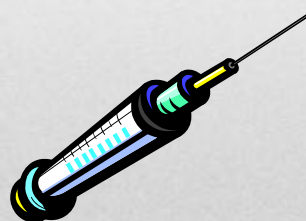
Diagnostic Tests



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Initial

- CBC (or Hemoglobin & Hematocrit)
- ABO group and screen and Antibody screen
- Syphilis Serology (VDRL)
- Rubella and Varicella titres
- Hepatitis B Surface Antigen
- HIV screen - offered to ALL pregnant women
- Ferritin level
- Drug screen (?)
- Sick cell screen
- Cystic Fibrosis screening
- Early 1 hr GTT, if indicated



Laboratory Tests: Blood

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Urinalysis, Culture & Sensitivity

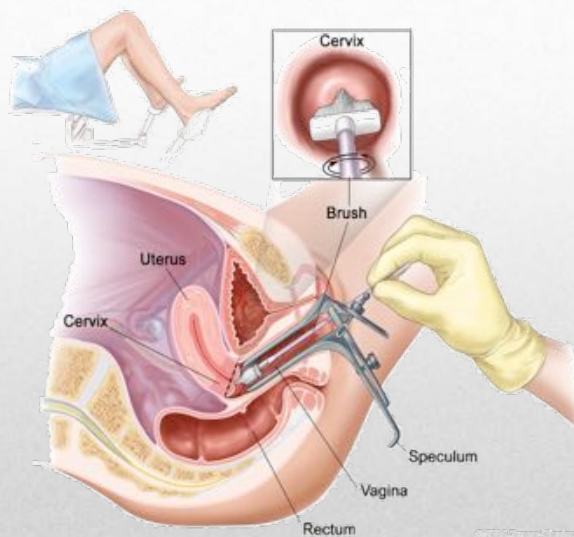
- Treat if $> 100,000$
- If untreated, can lead to pyelonephritis
- In later pregnancy, can cause preterm contractions



Laboratory Tests: Urine

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- Pap smear if overdue or history of dysplasia
- GC/Chlamydia
- Vaginal microbiology swab for BV and Trichomonas



Laboratory Tests: Cervical

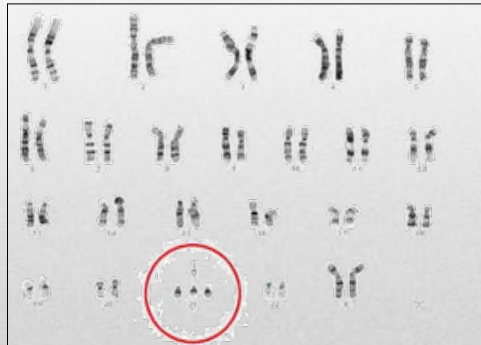
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Maternal Serum Screening/Genetic Testing

- Neural tube defects
- Down's syndrome
- Trisomy 21

Ex. Down's Syndrome defined as a genetic disorder caused when abnormal cell division results in extra genetic material at chromosome 21

From Nursing Station – Can draw:
First Trimester Screen [11w – 13w6d]
[CRL 41-84 mm or BPD <26mm]
Maternal Serum Screen [15w – 20w6d]
Maternal Serum AFP only [15w – 20w6d]



Down's Syndrome Karyotype – Centre for Health Services

Integrated Prenatal Screen has to be pre-arranged via MD/ NP in Thunder Bay or Timmins.

Subsequent Labs

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- Offered from 15w – 20w6d gestation (not mandatory)
- Samples sent to North York General Hospital in Toronto.

NORTH YORK GENERAL
Adding a World of Difference

PRENATAL SCREENING for Down syndrome, Trisomy 18 and Open Neural Tube Defects
NT ultrasound must be booked by referring healthcare provider

External Blood Collection Centres: Send sample & requisition to:
WGS Laboratory, 4001 Leslie Street, 3rd Floor Southeast, Toronto, ON M2K 1E1, Tel: 416-736-6700

Accurate information is necessary for a valid interpretation.
• Patients with a family history of open neural tube defects or Down syndrome should be referred to a genetics centre.
• Prenatal screening requires patient education and should proceed only with the informed choice of the patient.

Integrated Prenatal Screen (NT required)
☐ Part 1 (11w – 13w6d) [CRL 41-84 mm or BPD <26mm]
☐ Part 2 (15w – 18w6d) Time for 2nd sample

Serum Integrated Prenatal Screen (No NT)
☐ Part 1 (11w – 13w6d) [CRL 41-84 mm or BPD <26mm]
☐ Part 2 (15w – 18w6d) Time for 2nd sample

☐ First Trimester Screen (11w – 13w6d) [CRL 41-84 mm or BPD <26mm]
☐ Maternal Serum Screen (15w – 20w6d)
☐ Maternal Serum AFP only (15w – 20w6d)

Chorionic villi sampling (CVS) or amniocentesis in this pregnancy?
NO ☐ or YES ☐
If YES, circle which: CVS or Amnio

Clinical Information
Racial origin: ☐ White ☐ Black ☐ Asian ☐ South East Asian ☐ First Nation Aboriginal ☐ Other: _____ (Specify)
Weight: _____ kg or _____ lbs
Date of Weighing: _____
Last Menstrual Period (LMP): _____
On insulin prior to pregnancy? ☐ No ☐ Yes (egg gestational diabetes)
Smoked cigarettes EVER in this pregnancy? ☐ No ☐ Yes
Is this an IVF pregnancy? ☐ No ☐ Yes → Egg Donor Birth Date (even if patient is donor): _____ (yyyy/mm/dd)
Egg Harvest Date (if egg donor was frozen): _____ (yyyy/mm/dd)

Ultrasound (US) Information (Sonographer or ordering provider to complete. Identify US operator code only if doing IFS or FTS.)
Singleton/Twin A: CRL: _____ mm BPD: _____ mm NT: _____ mm
US Date: _____
Open-Rump Length CRL 41-84 mm
Twin B: ☐ dichorionic ☐ monochorionic CRL: _____ mm BPD: _____ mm NT: _____ mm
☐ unidentifiable
Open-Rump Length CRL 41-84 mm
US Operator Code: _____ Initials: _____ US site: _____ US phone #: _____
Ordering Provider: _____ Address: _____ Phone: (____) _____ FAX: (____) _____
Additional Report To: _____ Address: _____ Phone: (____) _____ FAX: (____) _____
Signature: _____ Writing # _____
For Collection Centres Use Only: Send 1 mL of serum to the laboratory indicated above (serum separator tube preferred). Do not anticoagulate or freeze blood. Centrifuge. Send primary tube to laboratory if there is a gel barrier, otherwise aliquot.
Collection Centre: _____ Specimen Date: _____
Phone #: _____ (Prenatal Screening Subcommittee Oct2011) www.nygh.on.ca (Areas of Care > Genetics > Laboratories)

Maternal Serum Screening

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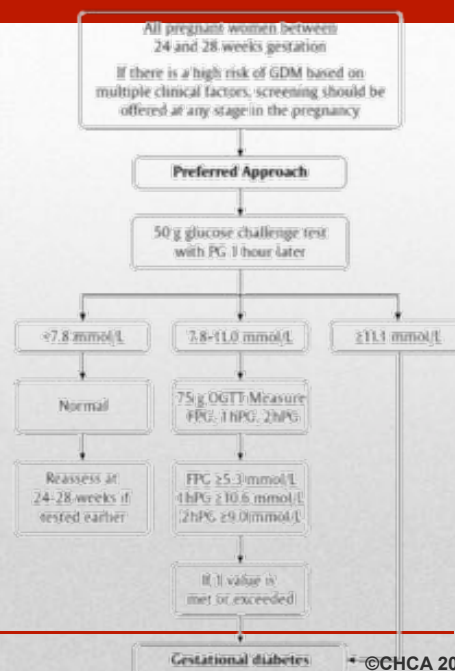
At 24-28 weeks gestation:

- CBC
- Ferritin
- Antibody/Indirect Coomb's on Rh negative women
 - if negative, order Rhogam!
- 50 Gramm, 1-hour OGTT
 - If necessary, proceed with 75 g OGTT, to make dx of gestational diabetes if values are:
 - Greater or equal to 5.3 mmol/L fasting, at one hour greater or equal to 10.6mmol/L and at two hours, greater or equal to 9.0 mmol/L

Subsequent Labs

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Preferred approach
for the screening and
diagnosis of
gestational diabetes
- Canadian Diabetes Association



Subsequent Labs

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- 35-36 weeks
 - Vaginal/ Rectal swab for GBS – Group B Streptococcus
 - Offer HIV rescreen



- *If history of HSV, offer suppressive therapy (Valtrex, Zovirax, Famvir)*

Subsequent Labs

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- Confirmation
- Fetal number
- Dating
- Growth patterns
- Overall Fetal health
- Fluid volume



Diagnostic Tests: Ultrasound

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- Specific ultrasound technique
- Looks at blood flow through the umbilical and uterine arteries
- Specifically useful for looking at uteroplacental insufficiency
 - IUGR
 - Postdates
 - Results may be influenced by smoking

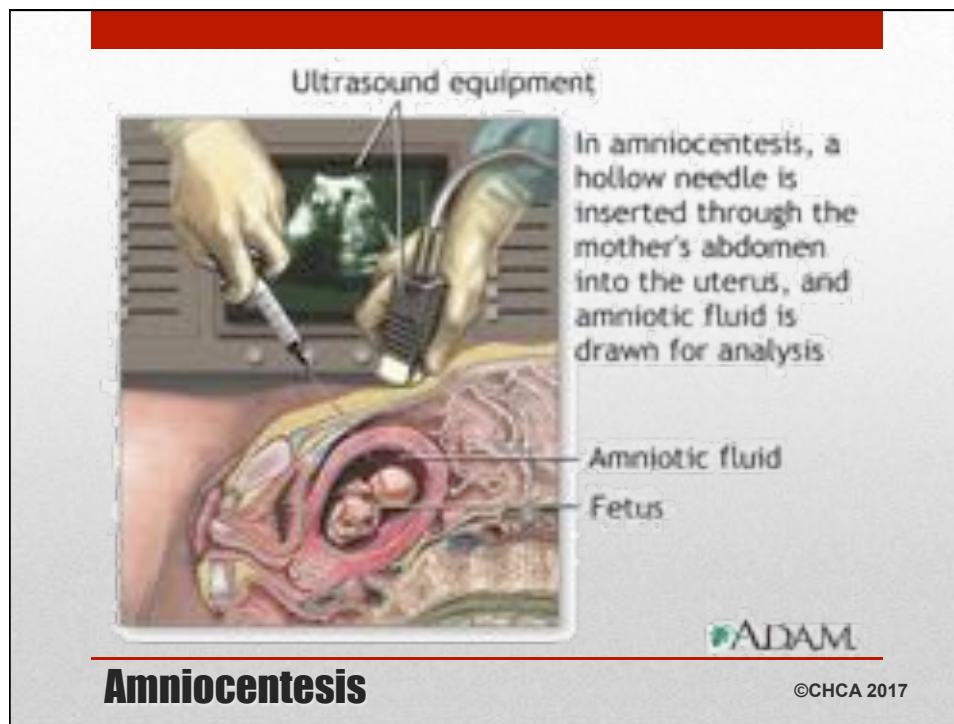
Doppler Blood Flow Analysis

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- **Purpose**
 - Chromosome analysis
 - NTD (Neural Tube Defect)
 - Fetal lung maturity
 - PG presence
 - L/S ratio
- Can't be done prior to 15 weeks
- **Prior to procedure**
 - sonogram for GA
 - blood type
- If Rh negative - give RhoGAM

Amniocentesis

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Indicator	Appropriate Time	Accuracy
LNMP	Entire Pregnancy	+/- 14.6 days
Conception/ Ovulation	Entire Pregnancy	+/- 1 days
Serum Preg Test Urine Preg Test	Before 4 weeks	7-10 days after conception
Detection of FHT	Between 9-12 weeks	+/- 3 weeks
Uterus at umbilicus	20 weeks	+/- 15 days
Fundal Height	Between 18-35 weeks	+/- 13-19 days
Quickening – primip	18-19 weeks	+/- 18 days
Quickening – multi	16-17 weeks	+/- 18 days

Clinical Indicators of Gestational Age

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- <http://ocfp.on.ca>
- <http://www.perinatalservicesbc.ca/NR/rdonlyres/FE14A0F8-1B67-454E-9B24-68029CDC762A/0/GuideAntenatallandII19Nov2012.pdf>
- <http://www.hc-sc.gc.ca/fn-an/nutrition/prenatal/index-eng.php>
- <http://guidelines.diabetes.ca/Browse/Chapter36>
- http://www.hopkinsmedicine.org/healthlibrary/test_procedures/gynecology/chorionic_villus_sampling_cvs_92.P07769
- <http://guidelines.diabetes.ca/Browse/Chapter36>
- <http://www.mayoclinic.org/diseases-conditions/down-syndrome/basics/definition/con-20020948>

References

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