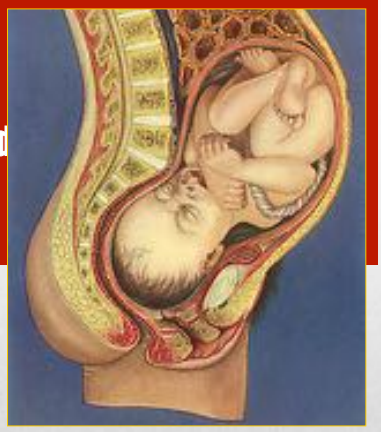
Module 13 – Routine and High-Risk Prenatal, Post-Partum and Gynaecological Health Assessment



2017 Update by
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CANADIAN HEALTH CARE AGENCY
EXPERIENCE THE NORTH

Module 13: Objectives/ Topics

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

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

- 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

GTPAL TPAL describes the "para"

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

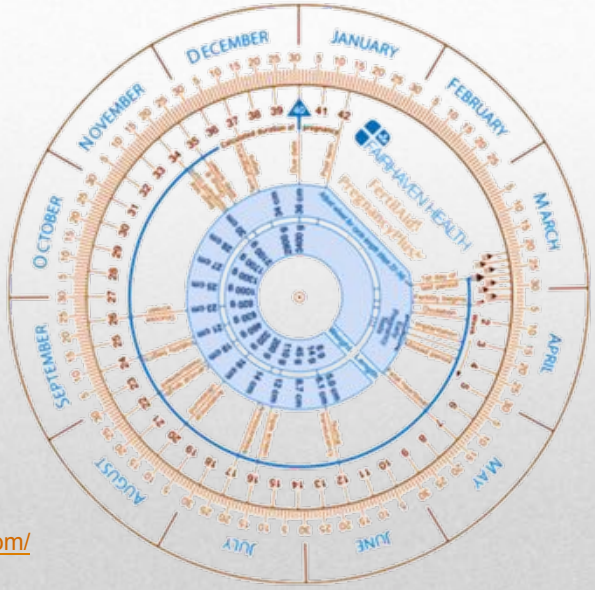
- G = number of pregnancies, including the current one
- T = number of term pregnancies, terminating after 36 weeks gestation
- P = number of premature pregnancies terminating 20 – 36 weeks gestation
- A = number of aborted pregnancies terminating before 20 weeks gestation (spontaneous or therapeutic)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

Terminology

- "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



https://www.babymed.com/pregnancy-wheel

The Pregnancy Wheel

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

- 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

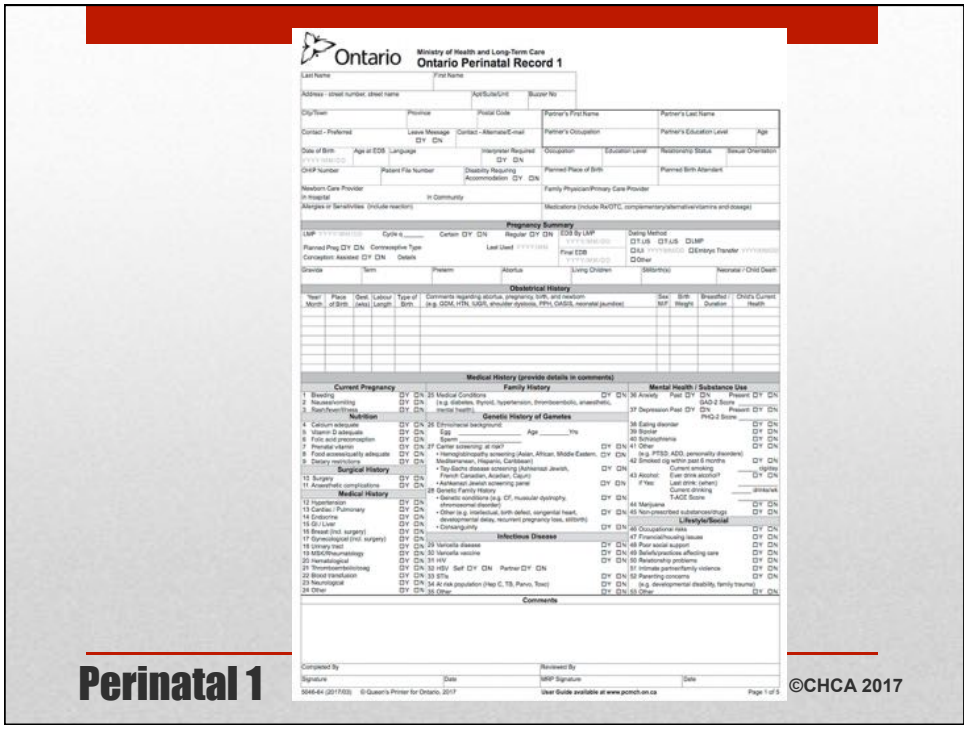
Common Causes of Gestational Dating Inaccuracies -- *Early Pregnancy*

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

Example:
Ontario College of Family Physicians

http://ocfp.on.ca

Antenatal Records I and II


Ontario
Ministry of Health and Long-Term Care
Ontario Perinatal Record 1
Perinatal 1
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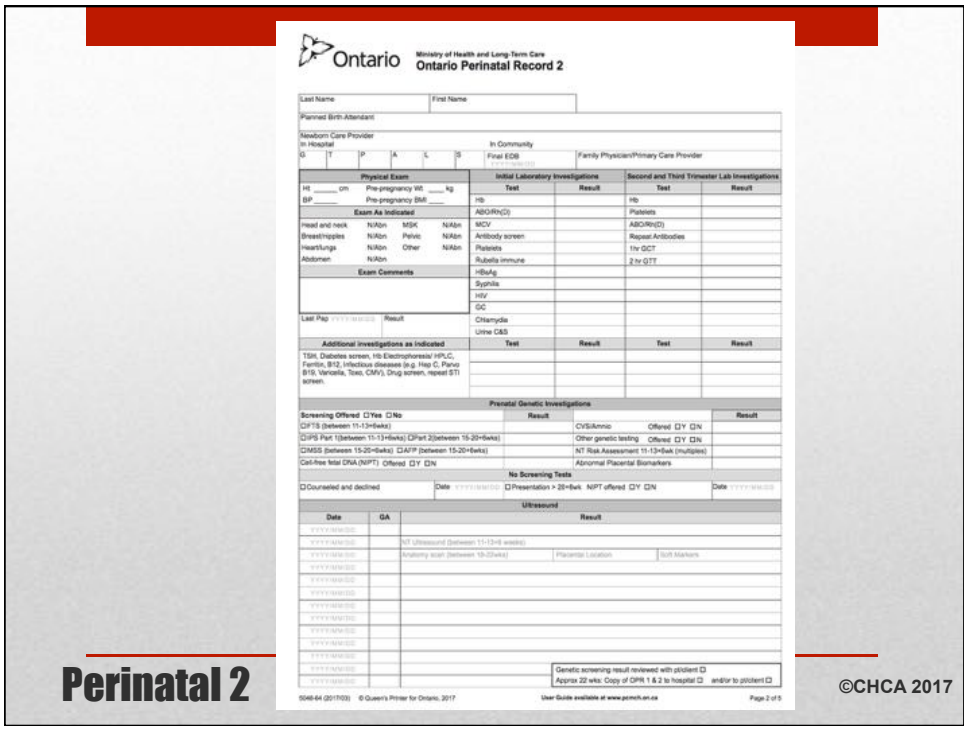
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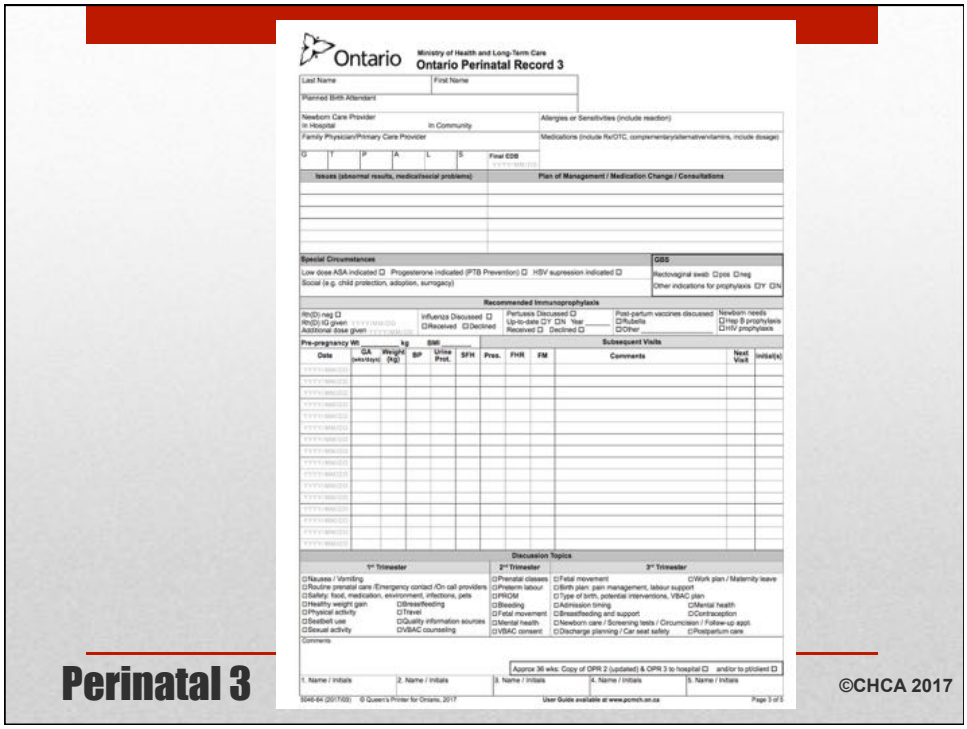
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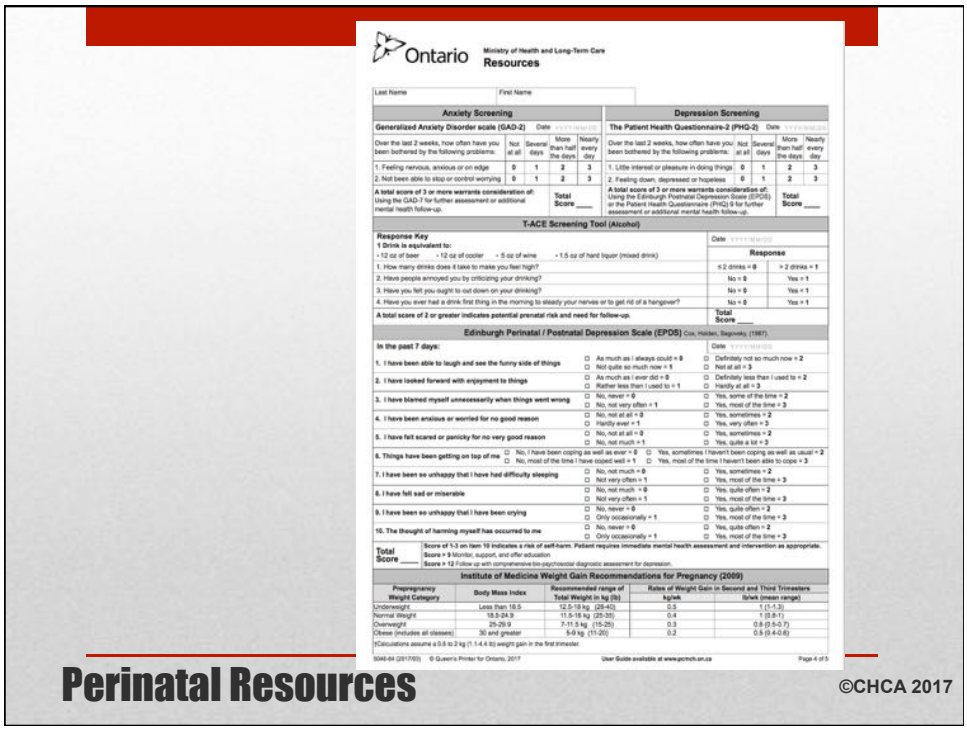
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Resources
Perinatal Resources
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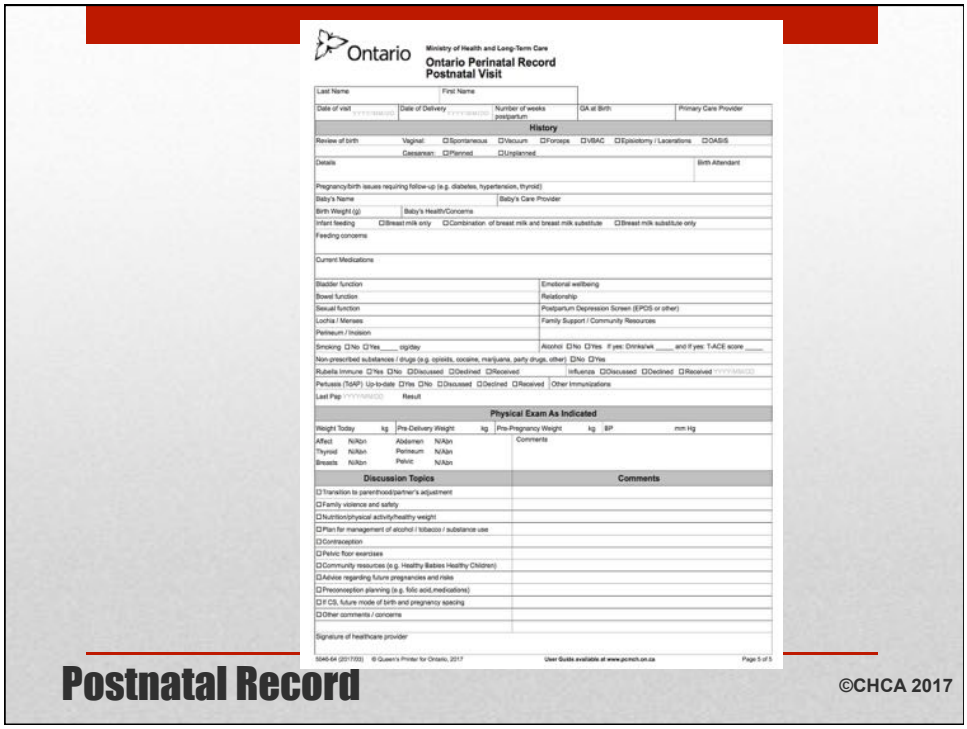
Ontario
Ministry of Health and Long-Term Care
Ontario Perinatal Record
Postnatal Visit
Postnatal Record
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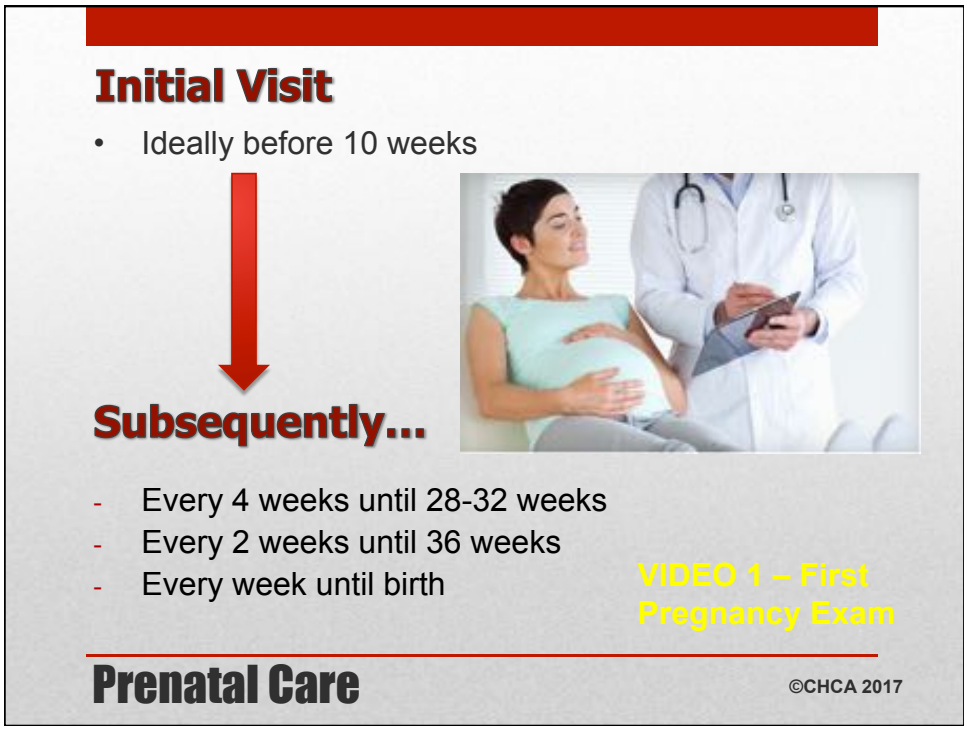

Initial Visit
• Ideally before 10 weeks
Subsequently…
- Every 4 weeks until 28-32 weeks
- Every 2 weeks until 36 weeks
- Every week until birth
VIDEO 1 – First Pregnancy Exam
Prenatal Care
©CHCA 2017

- 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

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

History and Screening

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

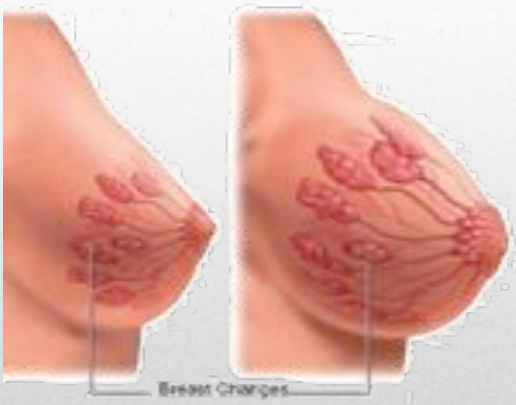
Depression Screening Tools

- 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

- **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



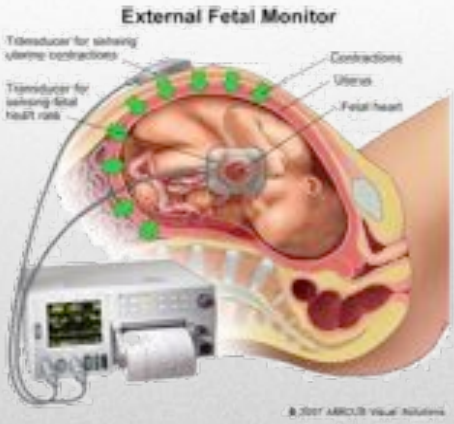
Video 2 – General Appearance

Physical exam - HBTM

AT EVERY VISIT:

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

*usually done with doppler, not external fetal monitor

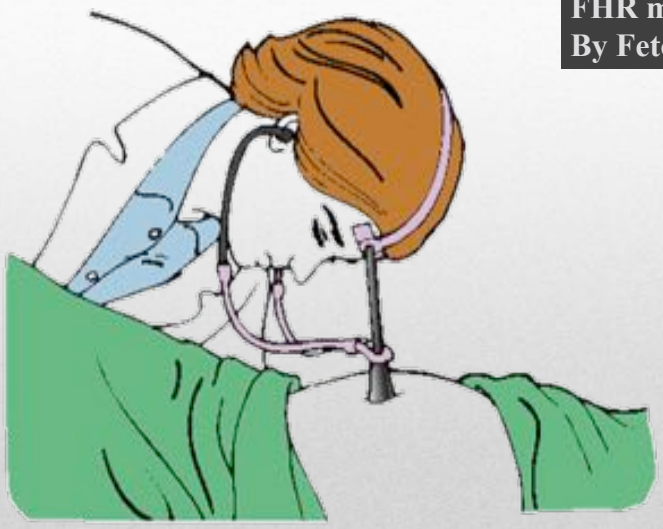


q Visit Assessment

- *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

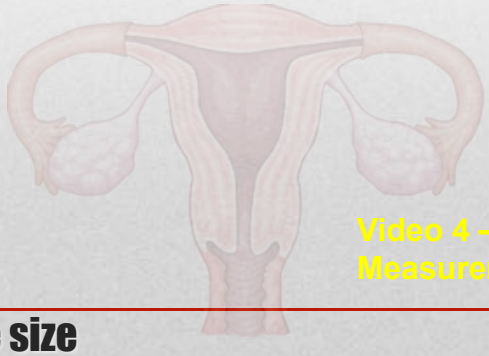
Video 3 – Fetal Heart Tones

Fetal Heart Tones



FHR monitoring By Fetoscope

- 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

- Fetal Movement
- Bleeding
- Uterine contractions
- Vaginal discharge

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

Video 5 – 5-minute pregnant abdomen exam

History: Subsequent Visits

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

Quickening

- Fetal malposition
- Fetal anomalies
- Polyhydramnios or Oligohydramnios

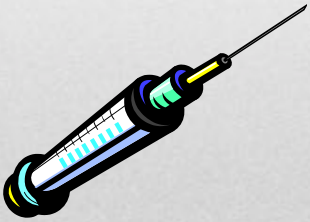
- Undiagnosed multiple gestation
- IUGR or macrosomia
- Failure to record gestational milestones

Common Causes of Gestational Inaccuracies – High Risk- Late Pregnancy

Diagnostic Tests

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 (?)
- Sickle cell screen
- Cystic Fibrosis screening
- Early 1 hr GTT, if indicated



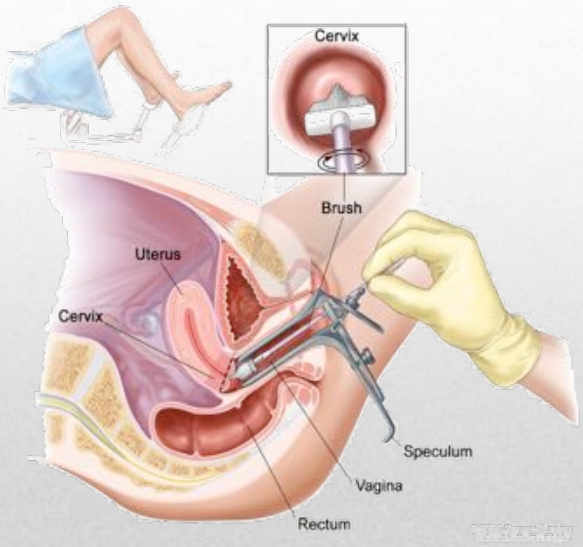
Laboratory Tests: Blood

Urinalysis, Culture & Sensitivity

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

Laboratory Tests: Urine

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



Laboratory Tests: Cervical

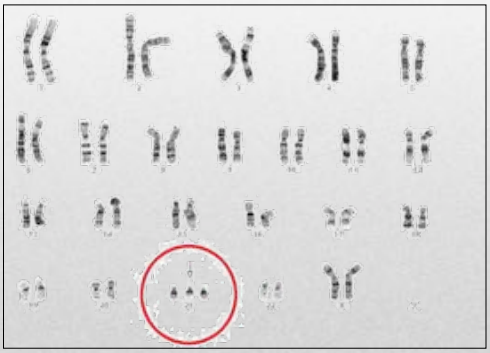
Maternal Serum Screening/Genetic Testing

- 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]

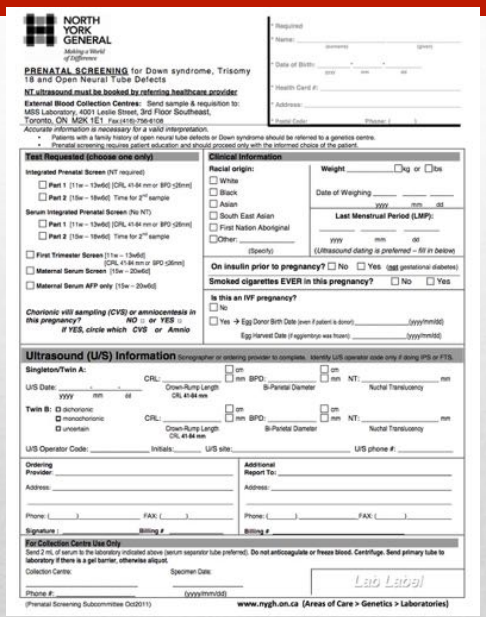
Integrated Prenatal Screen has to be pre-arranged via MD/ NP in Thunder Bay or Timmins.



Down's Syndrome Karyotype – Centre for Health Services

Subsequent Labs

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



NORTH YORK GENERAL

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: MSS Laboratory, 4001 Leslie Street, 3rd Floor Southeast, Toronto, ON M2K 1E1

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.

Test Requested (choose one only)

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 _____ (yyyy mm dd)

Last Menstrual Period (LMP): _____ (yyyy mm dd)
(Ultrasound dating is preferred – fill in below)

On insulin prior to pregnancy? ☐ No ☐ Yes (not 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/embryo was frozen) _____ (yyyy/mm/dd)

Ultrasound (U/S) Information Sonographer or ordering provider to complete. Identify U/S operator code only if doing IPS or FTS.

Singleton/Twin A:
U/S Date: _____ (yyyy mm dd)
CRL: _____ cm / _____ mm — Crown-Rump Length CRL 41-84 mm
BPD: _____ cm / _____ mm — Bi-Parietal Diameter
NT: _____ mm — Nuchal Translucency

Twin B: ☐ dichorionic ☐ monochorionic ☐ uncertain
CRL: _____ cm / _____ mm — Crown-Rump Length CRL 41-84 mm
BPD: _____ cm / _____ mm — Bi-Parietal Diameter
NT: _____ mm — Nuchal Translucency

U/S Operator Code: _____ Initials: _____ U/S site: _____ U/S phone #: _____

Ordering Provider: _____
Address: _____
Phone: (_____) _____ FAX: (_____) _____
Signature: _____ Billing # _____

Additional Report To: _____
Address: _____
Phone: (_____) _____ FAX: (_____) _____
Billing # _____

For Collection Centre Use Only

Send 2 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: _____ (yyyy/mm/dd)
Phone #: _____

Label Lab Goal

(Prenatal Screening Subcommittee Oct2011)

www.nygh.on.ca (Areas of Care > Genetics > Laboratories)

Maternal Serum Screening

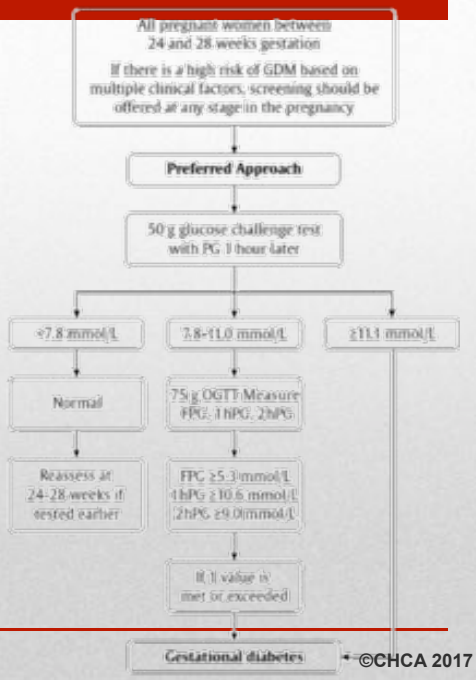
At 24-28 weeks gestation:

- 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

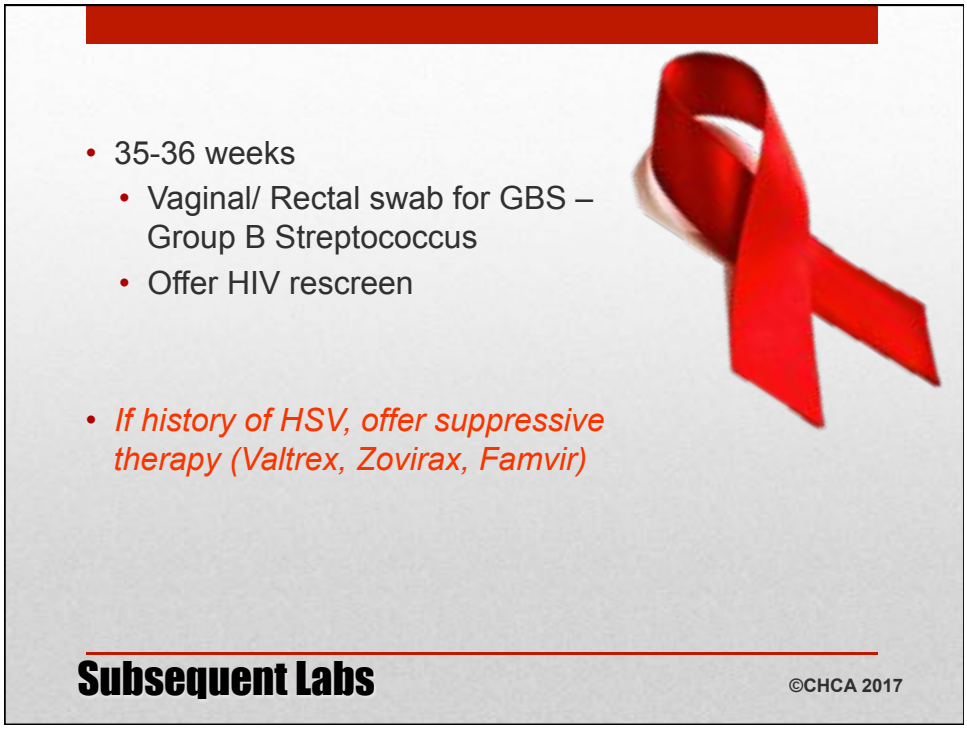
Subsequent Labs

Preferred approach for the screening and diagnosis of gestational diabetes

- Canadian Diabetes Association



Subsequent Labs


• 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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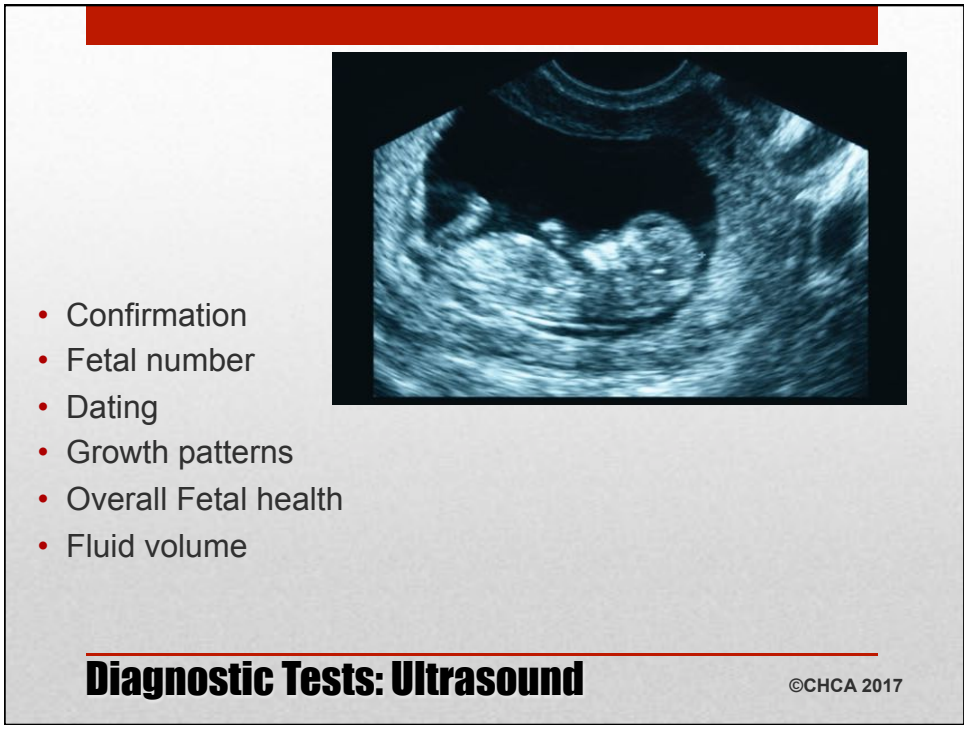
• Confirmation
• Fetal number
• Dating
• Growth patterns
• Overall Fetal health
• Fluid volume
Diagnostic Tests: Ultrasound
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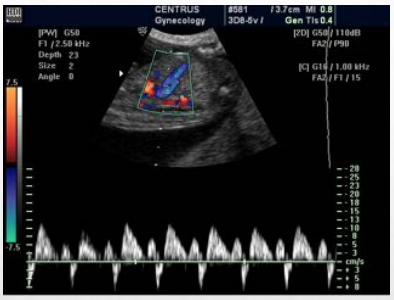
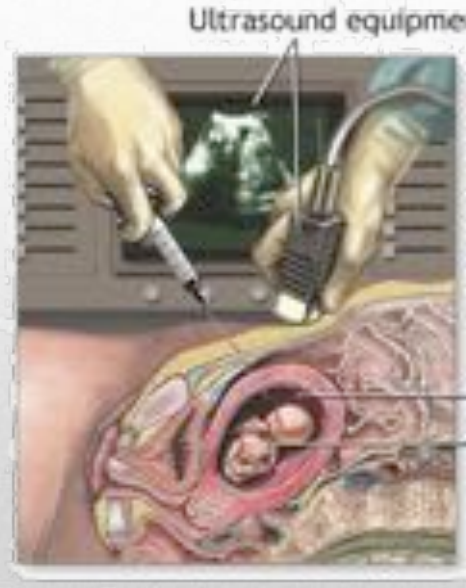


- Specific ultrasound technique
- Looks at blood flow through the umbilical and uterine arteries
- Specifically useful for looking at uteroplacental insufficiency
  - IUGR
  - Postdates
    - Results may be influenced by smoking

Doppler Blood Flow Analysis

- ***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

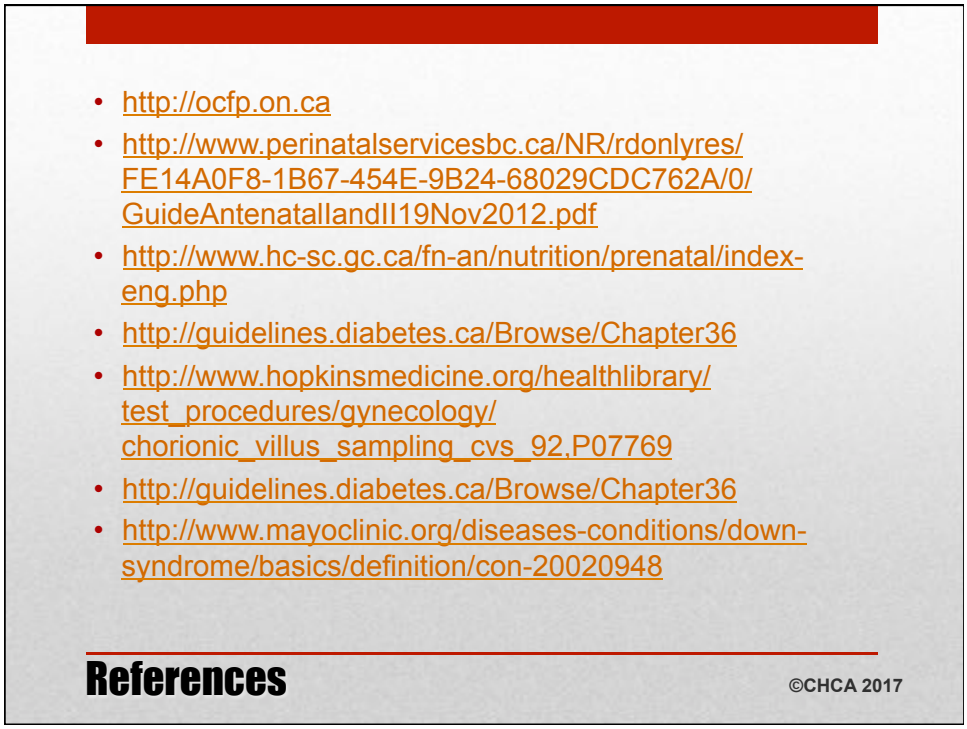
Amniocentesis



Amniocentesis

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://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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