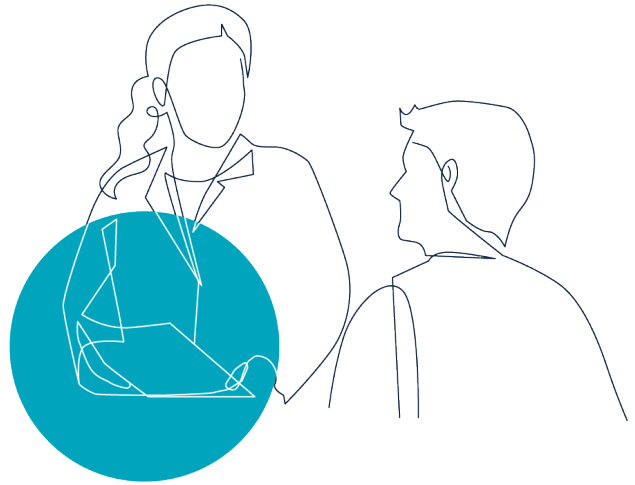
What All Primary Care Providers Should Know: Managing Lifelong Cardiovascular & Metabolic Health Risks After Pregnancy Complications

January 16, 2024 | 1830–2000 PT

Ask your questions: slido.com | #postpregnancycare



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LAND ACKNOWLEDGMENT

We acknowledge that UBC CPD work on the traditional, ancestral and unceded territory of the Skwxwú7mesh (Squamish), xʷməθkwəy̓əm (Musqueam), and Sə̓lílwətaʔ/Selilwitulh (Tsleil-Waututh) Nations.

What is your relationship to the territory or the land that you're on?

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FUNDING ACKNOWLEDGEMENT

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SharedCare Partners for Patients

JCC Joint Collaborative Committees

LEARNING OBJECTIVES

1. Identify pregnancy complications, including maternal placental syndromes, that increase future cardiovascular risks, and be able to manage impacted patients for effective long-term care.

2. Discuss health consequences of patients diagnosed with gestational diabetes during pregnancy and apply best strategies for lifetime monitoring.

3. Be able to access helpful resources and know how to monitor and provide lifelong care in support of patients who have undergone pregnancy complications.

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DISCLOSURES

Panelists

- **Dr. Tracy Monk:** Member of the PathwaysBC Provincial Resource Committee, a collaborative non-profit GPSC initiated project, freely available to all BC physicians and their teams.
- **Dr. Shahin Jaffer. Dr. Jennifer Kask, Dr. Shelley Ross, Dr. Mirjana Pavlic:** No conflicts of interest

Planning Team

- **Dr. Bob Bluman, Stephanie Din:** No conflicts of interest

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Managing Lifelong Cardiovascular Health Risks After Pregnancy Complications

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Clinical Professor of Medicine
University of British Columbia
Internal Medicine

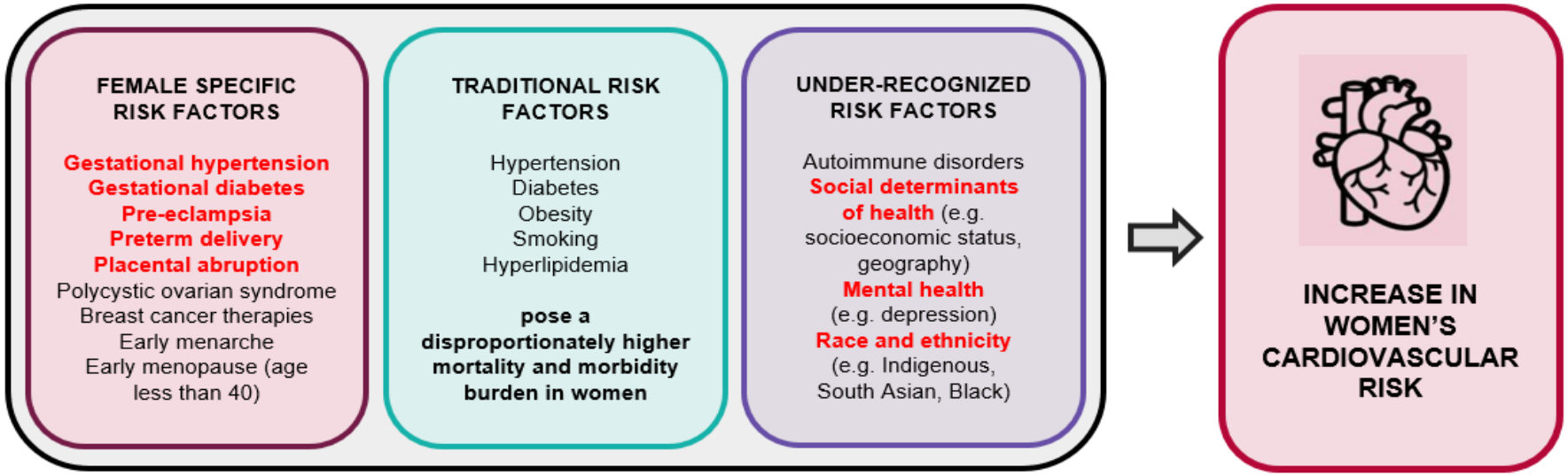
January 16, 2024

Is Each Statement **True or False**:

1. A reproductive health history is not relevant when assessing CV* risk
2. In women with a history of pre-eclampsia, the mean age at the time of first MI or stroke is age 50
3. In utero exposure to pre-eclampsia increases the risk of CVD** in the offspring
4. Pre-eclampsia is a risk factor for depression
5. Preeclampsia begins in the placenta and ends in the maternal vascular system

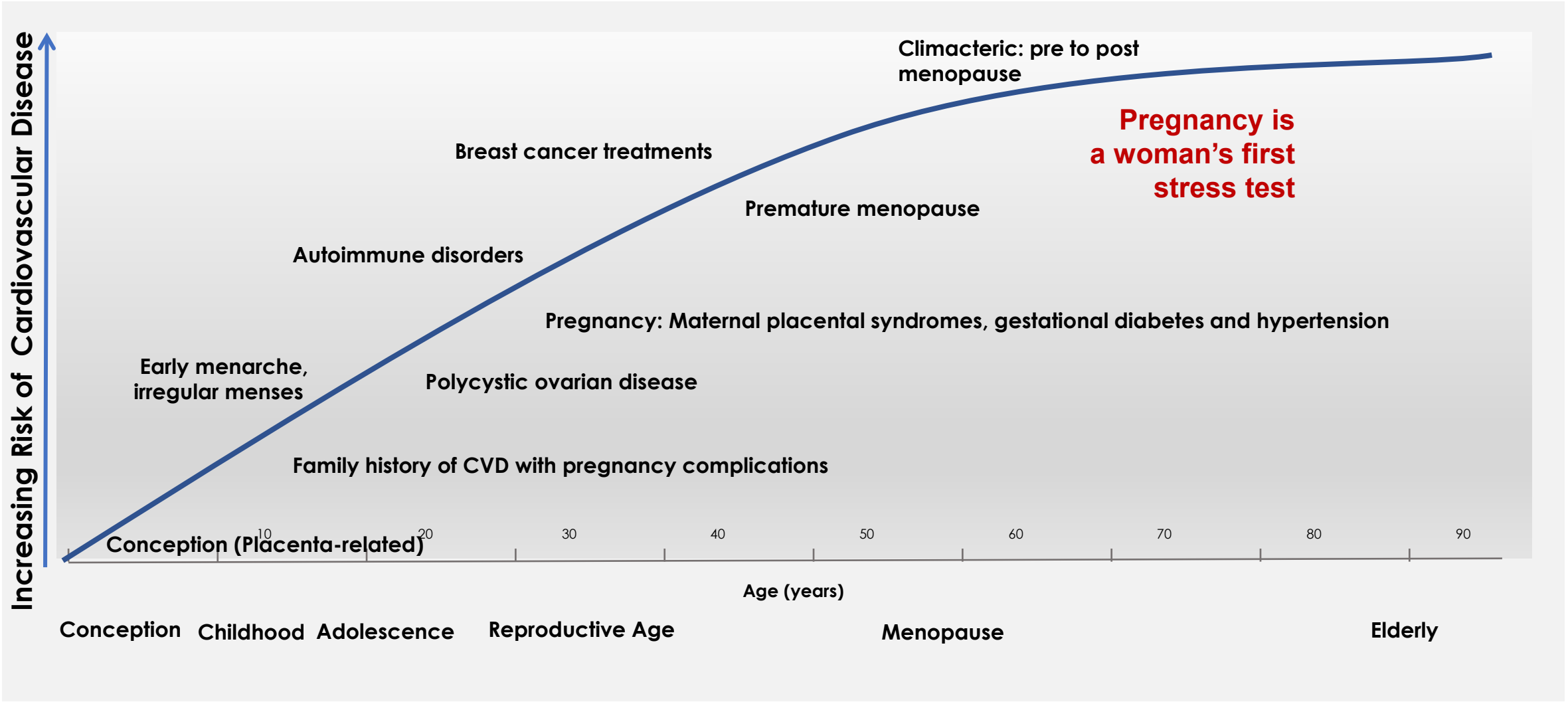
*CV: cardiovascular, **CVD: cardiovascular disease

Comprehensive Intersectional Cardiovascular Risk Factor Assessment in Women



Jaffer S, Noble M, Pozgay A et al., The Development of a Chest Pain Protocol for Women Presenting to the Emergency Department, CJCO December 09, 2023, DOI:https://doi.org/10.1016/j.cjco.2023.12.003

Conception to the Climacteric: Sex and Gender-specific Risk Factors for CV Disease in Women



Modified from

CANADIAN WOMEN'S HEART HEALTH CENTRE | NATIONAL ALLIANCE

Coutinho T et al. Curr Treat OptionsCardiovasc Med. 2018

Aggarwal et al, Circulation, Cardiovascular Quality and Outcomes, 2008

Solomon CG et al. J Clin Endo & Metab, 2002

Adverse Pregnancy Outcomes (APOs): Scope of the Problem

- occur in ~ 20% of all pregnancies in Canada
- associated with a 2 – 8 fold increased lifetime risk of CV risk factors and CV events
- CV outcomes are independent of pre-existing traditional CVD risk factors
- Premature future CVD occurs ~ 10-15 years earlier
  - early onset (< 20 weeks) or severe pre-eclampsia
  - recurrent pre-eclampsia
  - multiple gestation
  - early delivery (< 34 weeks)

TABLE 1 Complications During Pregnancy That Are Associated With Increased Cardiovascular Disease Risk

Adverse Pregnancy Outcomes	Definition
Hypertensive disorders of pregnancy (HDP)	This category includes gestational hypertension, chronic hypertension, and pre-eclampsia
Gestational hypertension	New-onset hypertension (SBP ≥140 mm Hg or DBP ≥90 mm Hg) after 20 weeks gestation
Pre-eclampsia Includes HELLP*	New-onset hypertension (SBP ≥140 mm Hg or DBP ≥90 mm Hg) after 20 weeks gestation with proteinuria or evidence of end-organ dysfunction
Chronic (pre-existing) hypertension	Hypertension present prior to 20 weeks gestation
Pre-term birth	Delivery before 37 weeks gestation
Early pre-term birth	Delivery before 34 weeks gestation
Pregnancy loss	Miscarriage or stillbirth
Intrauterine growth restriction	Fetal birthweight less than expected for the gestational age, ≤10th percentile
Gestational diabetes	Glucose intolerance with onset or first recognition during pregnancy

DBP = diastolic blood pressure; SBP = systolic blood pressure.

*HELLP: hemolysis, elevated liver enzymes, low platelets

Leslie Cho, L et al., Summary of Updated Recommendations for Primary Prevention of Cardiovascular Disease in Women: JACC State-of-the-Art Review, JACC, 2020, 75:20, 2602-2618
Nerenberg KA, Cooke CL, Smith GN, Davidge ST. Optimising Women's Cardiovascular Health After Hypertensive Disorders of Pregnancy: A Translational Approach to Cardiovascular Disease Prevention. Can J Cardiol. 2021 Dec;37(12):2056-2066.
Garovic VD, Dechend R, Easterling T, et al., Hypertension in Pregnancy: Diagnosis, Blood Pressure Goals, and Pharmacotherapy, 2022 Feb;79(2):e21-e41
Ranthe MF, Andersen EA, Wohlfahrt J, et al., Pregnancy loss and later risk of atherosclerotic disease. Circulation. 2013 Apr 30;127(17):1775-82

Under-recognized and Intersectional Disparities in APOs and Follow-up

- Indigenous:
  - preterm birth rates 1.7-1.8 times higher than non-Aboriginal populations
- People of Colour
  - case fatality rate for preeclampsia 2.7 times higher among Black women than among White women
- “Forces Above the Skin”
  - Gender roles
  - Socioeconomic factors affect access to health care services:
    - geography, poverty, food insecurity

Nerenberg KA, Cooke CL, Smith GN, et al., Optimising Women's Cardiovascular Health After Hypertensive Disorders of Pregnancy: A Translational Approach to Cardiovascular Disease Prevention, Can J Cardiol. 2021 Dec;37(12):2056-2066

Sheppard AJ, Shapiro GD, Bushnik T, et al., Birth outcomes among First Nations, Inuit and Métis populations. Health Rep. 2017 Nov 15;28(11):11-16.

Shapiro GD, Sheppard AJ, Bushnik T, et al., Adverse birth outcomes and infant mortality according to registered First Nations status and First Nations community residence across Canada. Can J Public Health. 2018 Dec;109(5-6):692-699. doi: 10.17269/s41997-018-0134-6.

Parikh NI , Gonzalez JM, Anderson AM et al., Adverse Pregnancy Outcomes and Cardiovascular Disease Risk: Unique Opportunities for Cardiovascular Disease Prevention in Women, Circulation. 2021 May 4;143(18):e902-e916

Pre-eclampsia and the Prophetic Placenta

Maternal:

- High morbidity (including depression) and mortality
- Increased risk premature CVD (dyslipidemia, HT, chronic kidney disease, MI, stroke)
- Increased depression

Offspring:

- Increased preterm birth
- Increased small-for-gestational age newborns
- Increased congenital heart disease in neonate
- Increased HT, body weight, CVD and DM2

Wojczakowski W, et al., Preeclampsia and Cardiovascular Risk for Offspring. J Clin Med. 2021 Jul 16;10(14):3154
Stuart, JS et al., Cardiovascular Risk Factors Mediate the Long-Term Maternal Risk Associated With Hypertensive Disorders of Pregnancy JACC. 2022 May, 79 (19) 1901–1913

Pregnancy and Future Risk of Cardiovascular Disease

CHAMPS: CV Health After Maternal Placental Syndromes (**MPS**: pre-eclampsia, gestational hypertension, placental abruption, and placental infarction) **increased risk of CV disease by 2-fold**

- **Mean age at time of 1st CV event ~ 38 years**
- Dose response relationship of MPS severity to cardiovascular disease

	ADJUSTED HR
GESTATIONAL HYPERTENSION (N=20942)	1.8 (1.4-2.2)
PRE-ECLAMPSIA (N=36982)	2.1 (1.8-2.4)
MPS AND POOR FETAL GROWTH (N=4390)	3.1 (2.2-4.5)
MPS AND INTRAUTERINE FETAL DEATH (N=1171)	4.4 (2.4-7.9)

Ray, J.G. et al. 2005. Lancet,366(9499), 1797-1803.
Stuart, JS et al., Cardiovascular Risk Factors Mediate the Long-Term Maternal Risk Associated With Hypertensive Disorders of Pregnancy J Am Coll Cardiol. 2022 May, 79 (19) 1901–1913

Pathophysiology of Hypertensive Disorders of Pregnancy

Phase 1 (fetal): abnormal placentation, vasoconstriction, reduced uteroplacental perfusion

Phase 2 (maternal): endothelial dysfunction, impaired vascular relaxation

Phase 3 (maternal): persistent systemic endothelial dysfunction, microvascular damage, accelerated vascular ageing

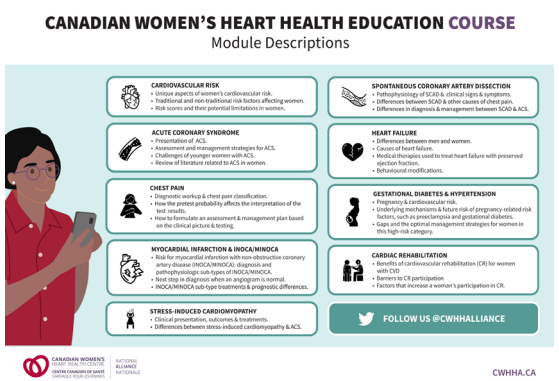
Powe CE, Levine RJ, Karumanchi SA. Preeclampsia, a disease of the maternal endothelium: the role of antiangiogenic factors and implications for later cardiovascular disease. Circulation. 2011 Jun 21;123(24):2856-69.

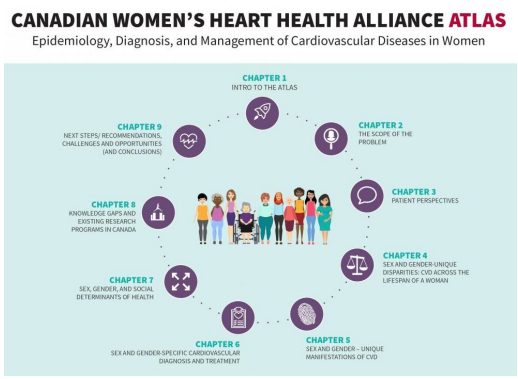
Kelsey McLaughlin, Melanie C. Audette, et al., Mechanisms and Clinical Significance of Endothelial Dysfunction in High-Risk Pregnancies, CJC, 34:4, 2018: 371-38

Nerenberg KA, Cooke CL, Smith GN, Davidge ST. Optimising Women's Cardiovascular Health After Hypertensive Disorders of Pregnancy: A Translational Approach to Cardiovascular Disease Prevention. Can J Cardiol. 2021 Dec;37(12):2056-2066.

Garovic VD, Dechend R, Easterling T, et al., Hypertension in Pregnancy: Diagnosis, Blood Pressure Goals, and Pharmacotherapy: A Scientific Statement From the American Heart Association. Hypertension. 2022 Feb;79(2):e21-e41

RESOURCES





- Accredited (and free) education course on women's heart health
  - https://cwhhc.ottawaheart.ca/national-alliance/projects-and-initiatives/canadian-womens-heart-health-education-course

- Publications: ATLAS of articles in Canadian Journal of Cardiology, open access and infographics
  - https://cwhhc.ottawaheart.ca/national-alliance/projects-and-initiatives/cwhha-atlas
  - https://www.cwhha.ca/cwhha-atlas

- Wear Red Canada Day, annually February 13: Key messages translated into 14 languages, Tool kit for supporting women's CV health
  - https://cwhhc.ottawaheart.ca/how-get-involved/wear-red-campaign
  - https://wearredcanada.ca/multilingual-resources - 14 languages

True or False:

1. A reproductive health history is not relevant when assessing CV* risk — **F**
2. In women with a history of pre-eclampsia, the mean age at the time of first MI or stroke is age 50 — **F**
3. In utero exposure to pre-eclampsia increases the risk of CVD** in the offspring — **T**
4. Pre-eclampsia is a risk factor for depression — **T**
5. Preeclampsia begins in the placenta and ends in the maternal vascular system — **T**

*CV: cardiovascular, **CVD: cardiovascular disease

TAKE HOME MESSAGES

Life. We don’t want to miss it.*

Women can be at **greater risk** for heart disease than men.

Implement **early prevention** of CVD risk factors and CVD in women with adverse pregnancy outcomes

*Heart & Stroke Foundation

WHAT ALL PRIMARY CARE PROVIDERS SHOULD KNOW:

MANAGING LIFELONG CARDIOVASCULAR & METABOLIC HEALTH RISKS

AFTER PREGNANCY COMPLICATIONS

DR. MIRJANA PAVLIC MD FRCPC

ENDOCRINOLOGY & METABOLISM

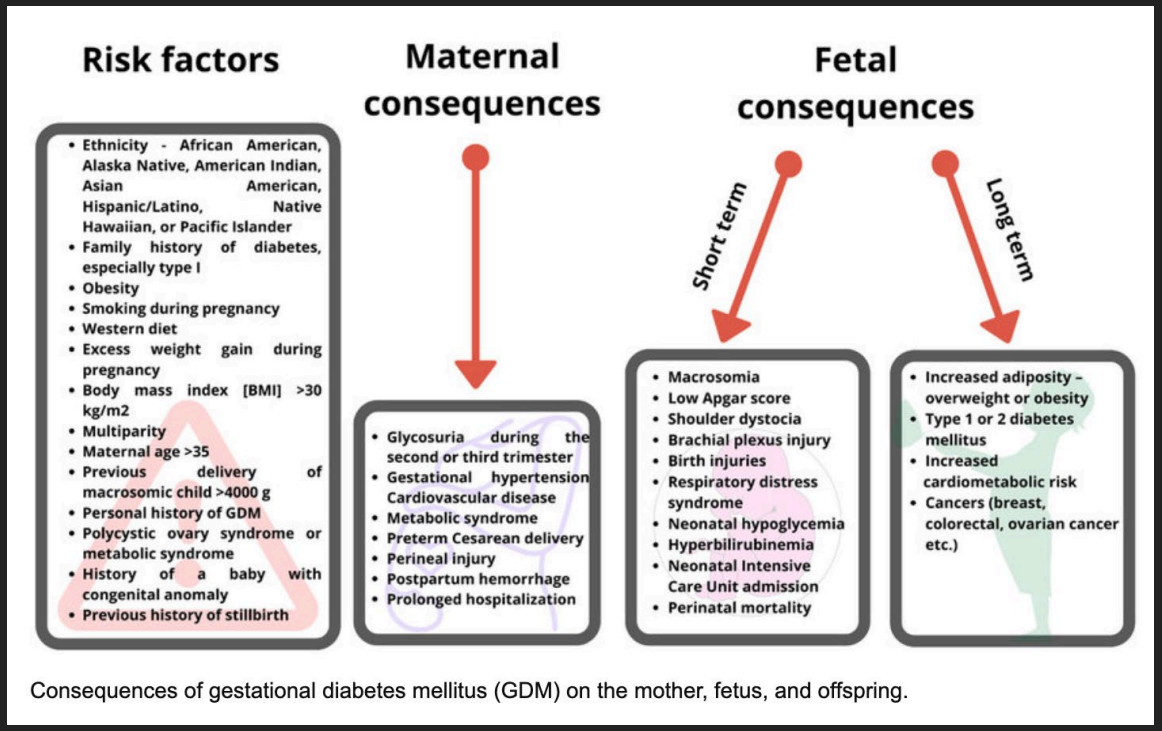
HEALTH CONSEQUENCES OF PATIENTS DIAGNOSED WITH GESTATIONAL DIABETES AND BEST STRATEGIES FOR LIFETIME MONITORING

OUTLINE

- Discuss long term consequences of gestational diabetes (GDM) for mother
- Discuss interventions to decrease the risk of adverse health outcomes
- Discuss strategies to increase postpartum screening

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- Recurrence of GDM in subsequent pregnancies
- **Type 2 diabetes (T2DM)**
- Metabolic syndrome (MS)
- Cardiovascular disease (CVD)
- Malignancies
- Ophthalmic and Renal disease
- Psychiatric disease



Consequences of gestational diabetes mellitus (GDM) on the mother, fetus, and offspring.

Int. J. Mol. Sci. 2021, 22, 7866.

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- Recurrence of GDM in subsequent pregnancies
  - 30% to 84%
  - Ethnicity most consistent predictor
    - Japanese - 65.6%
    - Hispanic - 69%
    - Korean - 45%

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- Metabolic syndrome
  - Obesity OR 2.64
  - HyperTg OR 3.68 to 4.14
  - Hyperglycemia OR 1.62
  - HTN OR 3.60

Metabolic disorder definitions

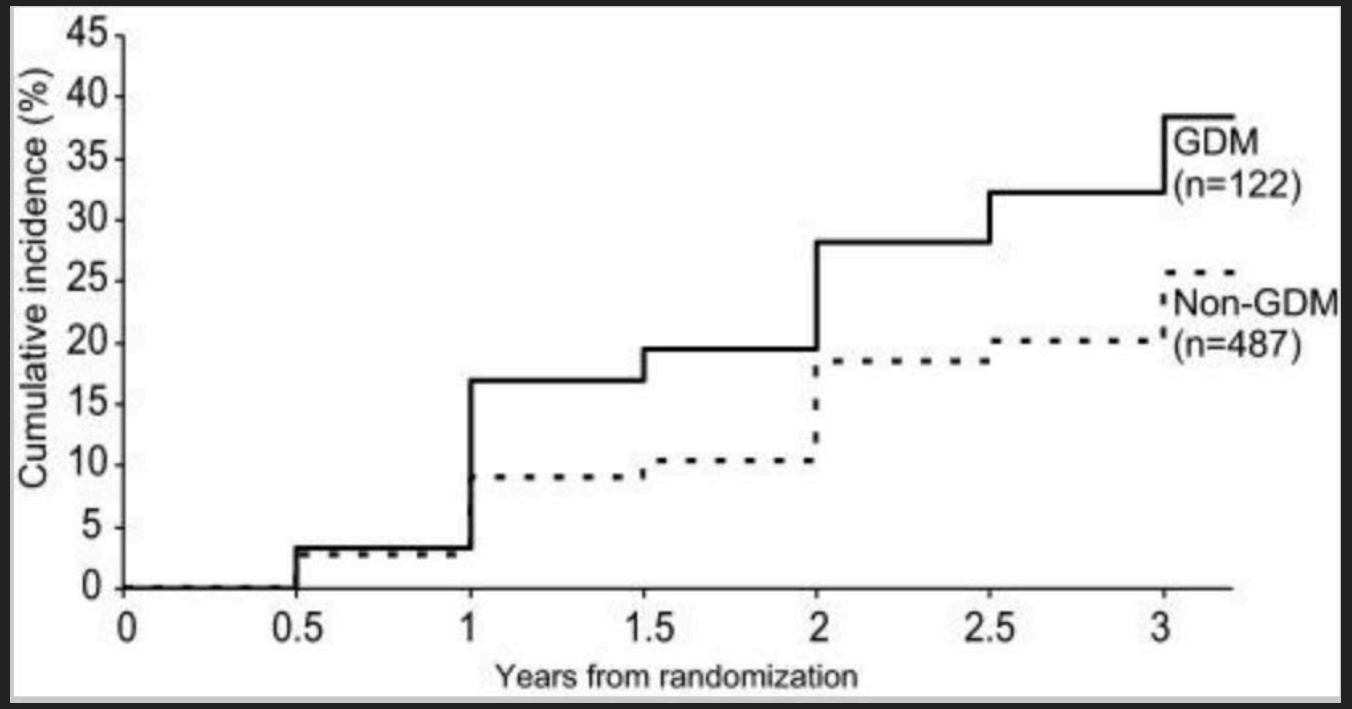
	IDF	NCEP ATPIII
Definition	Central obesity + at least 2 additional criteria:	At least 3 of the following:
Central Obesity	Waist circumference ≥80 cm	Waist circumference ≥80 cm
Triglyceride Levels	>150 mg/dL or using specific treatment of lipid abnormalities	>150 mg/dL or using specific treatment of lipid abnormalities
HDL Cholesterol Level	<50 mg/dL or using specific treatment of this lipid abnormality	—
Blood Pressure	SBP ≥ 130 mm Hg or DBP ≥ 85 mm Hg or using antihypertensive agent	SBP ≥ 130 mm Hg or DBP ≥ 85 mm Hg or using antihypertensive agent
FPG Level	>100 mg/dL or previously diagnosed T2DM	>100 mg/dL or using agent for treatment of increased glucose level

Abbreviations: DBP, diastolic blood pressure; HDL, high-density lipoprotein; SBP, systolic blood pressure.

Adapted from Alberti KG, Zimmet P, Shaw J, et al. The metabolic syndrome–a new worldwide definition. Lancet 2005;366(9491):1060; and Grundy SM, Cleeman JI, Daniels SR, et al. Diagnosis and management of the metabolic syndrome: an American Heart Association/National Heart, Lung, and Blood Institute Scientific Statement. Circulation 2005;112(17):2739; with permission.

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- Type 2 diabetes
  - 20% to 50% w/i 5 years
  - 70% w/i 10 years
  - OR - 17.9
  - 7-fold increase



J Clin Endocrinol Metab. 2008 Dec; 93(12): 4774–4779.

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- Risk factors
  - <24 weeks at diagnosis
  - Higher FBG
  - MDI
  - Advanced maternal age
  - Non white ethnicity
  - FMHx of DM
  - Recurrence of GDM
  - Obesity

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

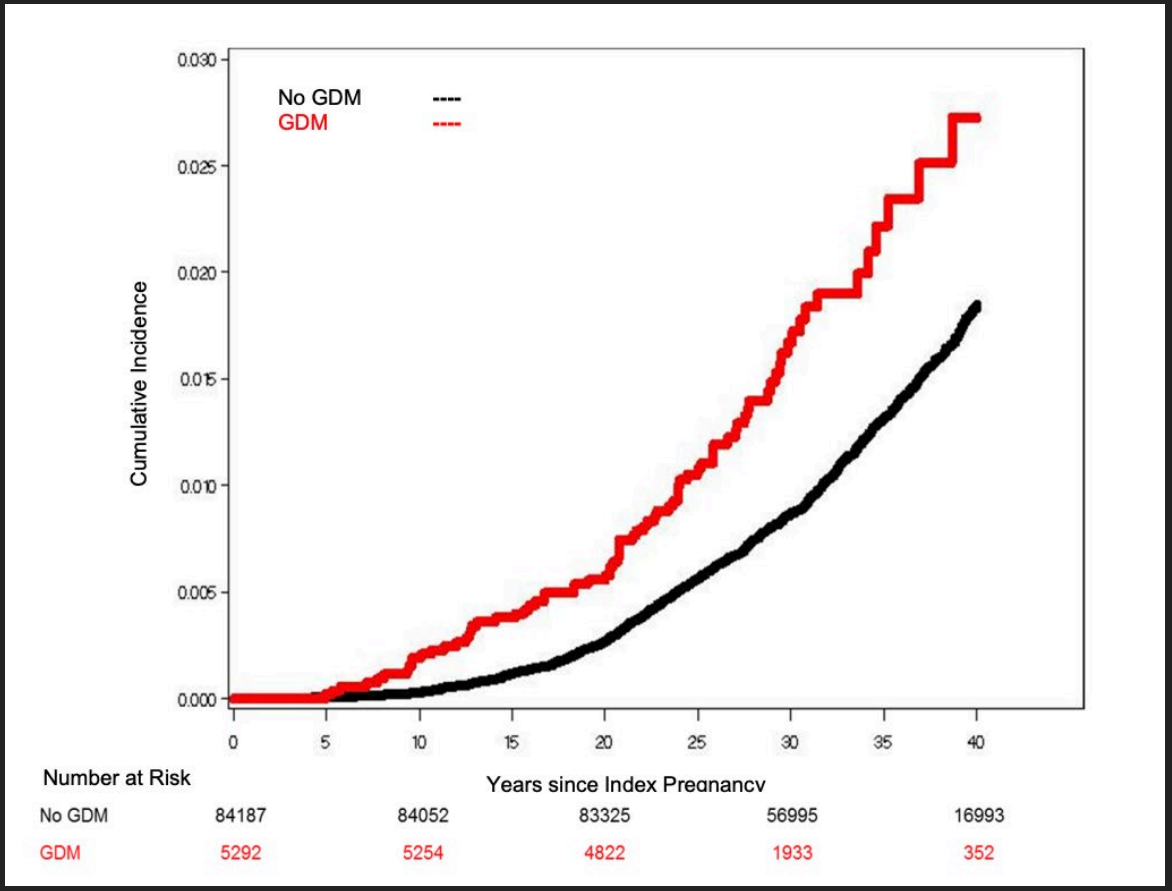
- Type 2 diabetes risk assessment calculator (5-yr risk):

Risk Factor	Points Allotted
BMI	5 x BMI
GDM on insulin	+ 132
FMHx of DM	+ 44
Breastfeeding	- 35

<140: 11%; 141 - 220: 29%; 221 - 300: 64% >300: 80%

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- Cardiovascular disease
  - HTN, CAD, CVD
    - 43% CVD
    - 2.3 fold increased risk CV events



JAMA Intern Med. 2017 Dec; 177(12): 1735–1742.

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- Malignancies
- Ophthalmic disease
- Renal disease
- Psychiatric disease

INTERVENTIONS TO DECREASE THE RISK OF ADVERSE OUTCOMES

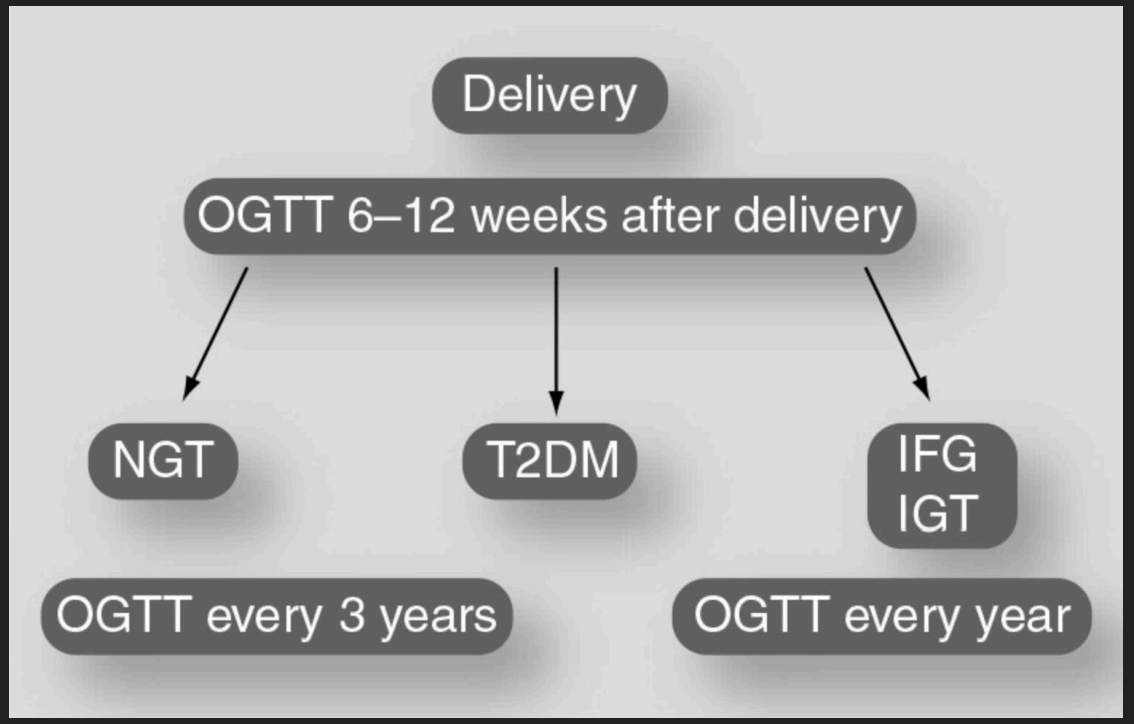
- Postpartum glucose intolerance screening
  - Multiple professional guidelines: 2-hr OGTT ; FPG (NIHCE)

Recommended guidelines for postpartum diabetes screening among women with gestational diabetes mellitus

Year	Organization	Postpartum Testing Period Recommended (wk)	Recommended Test
2007	Fifth International Workshop-Conference on Gestational Diabetes Mellitus	6–12	2-h 75-g OGTT[17]
2013	Endocrine Society	6–12	2-h 75-g OGTT[67]
2013	American College of Obstetricians and Gynecologists	6–12	2-h 75-g OGTT or FPG[11]
2015	National Institute for Health and Care Excellent	6–13	FPG[45]
2018	ADA	4–12	2-h 75-g OGTT[3]

LONG-TERM CONSEQUENCES OF GESTATIONAL DIABETES FOR THE MOTHER

- q 1 to 3 yr testing in -ve OGTT (ADA)/(A1c, FPG, OGTT)
  - Risk factors
    - FMHx / Pre-pregnancy BMI
    - Medical Rx of GDM / Breastfeeding
- q 1 year testing in abnormal OGTT/testing



Int. J. Mol. Sci. 2021, 22, 7866.

STRATEGIES TO INCREASE POSTPARTUM SCREENING

- Low screening rates
  - Misconception
  - Emotional stress
  - Fear of diagnosis
  - Socioeconomic status

STRATEGIES TO INCREASE POSTPARTUM SCREENING

- Patient centred
  - Education
  - Patient/provider reminder system
  - Maternity-primary care provider communication

https://www.diabetes.ca/DiabetesCanadaWebsite/media/Managing-My-Diabetes/Tools%20and%20Resources/gestational-diabetes-postpartum-screening.pdf?ext=.pdf

STRATEGIES TO INCREASE POSTPARTUM SCREENING

- Protective measures
  - Breastfeeding
  - Healthy dietary intake
  - Intensive exercise and metformin
    - 35% and 40% 10 yr risk reduction
    - NNT 5 to 6 in 3 years postpartum

https://patienteduc.fraserhealth.ca/file/healthy-living-after-gestational-diabetes-153218.pdf

CONCLUSION

- GDM increases lifetime risk of chronic disease
- Significant public health concern
  - Identification
  - Intervention
- Prevention
  - Increasing awareness
    - Postpartum testing
    - Education on screening

KEY POINTS

- GDM is one of the most common metabolic complications in pregnancy
- Multiple long-term health outcomes have been associated with GDM
- Postpartum glucose screening is recommended for early identification of persistent hyperglycaemia
- Rates of diabetes screening are poor with numerous barriers and interventions to increase screening such as education and reminders are important
- Women are often motivated to make positive changes during pregnancy which is an opportunity for early intervention and prevention of future chronic diseases

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Practical Approaches – Family Medicine

Jennifer Kask MD CCFP FCFP
Campbell River

CANADIAN WOMEN'S
HEART HEALTH CENTRE

PREGNANCY AND HER HEART

BECAUSE HER HEART MATTERS TOO • FOR MORE INFORMATION VISIT YOURHEART.CA

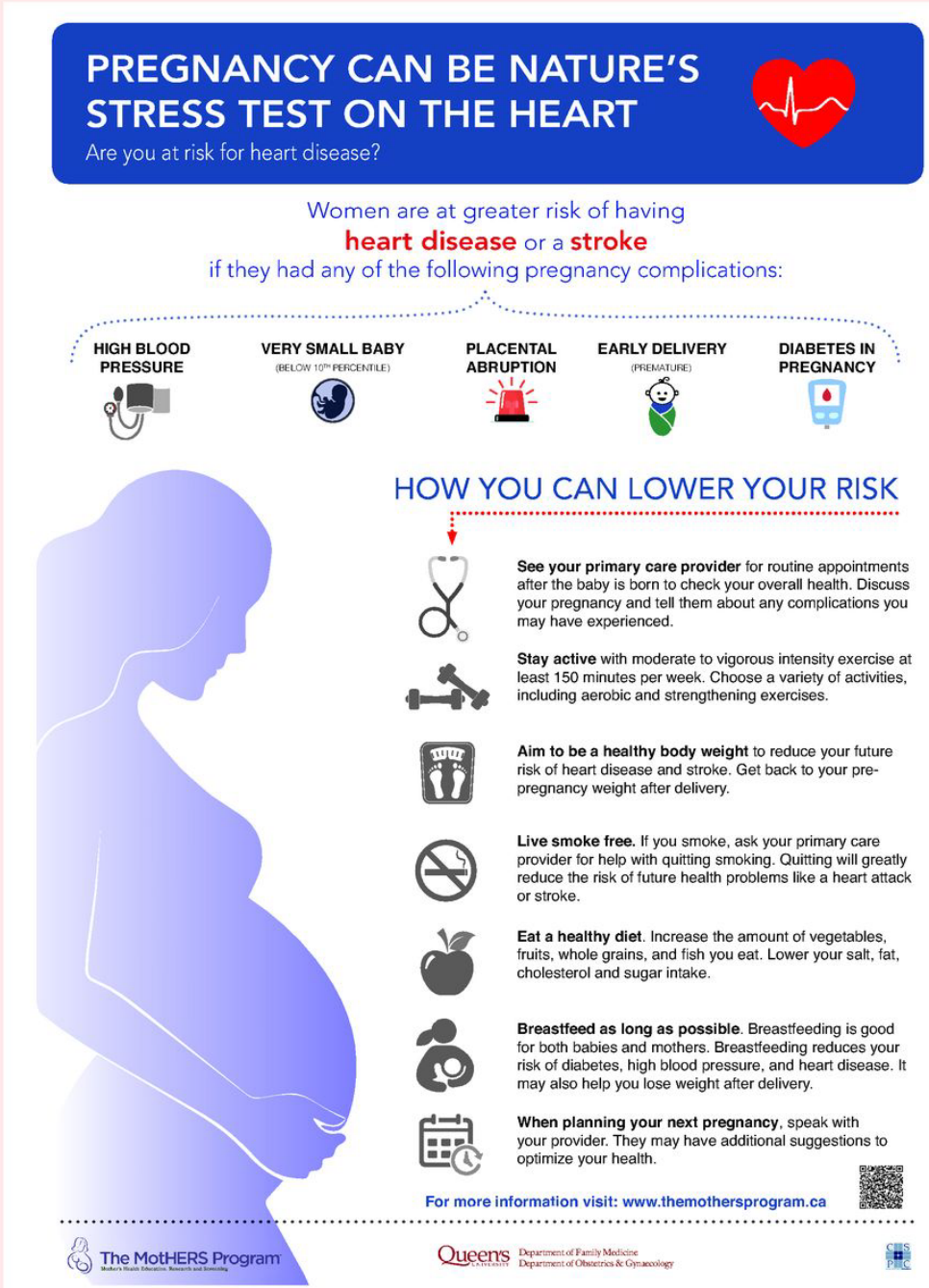
Pregnancy is like a 9-month-long heart stress test. If you delivered **preterm**, had **high blood pressure** or **diabetes** during your pregnancy, it could mean you are at **higher risk** for future heart disease.

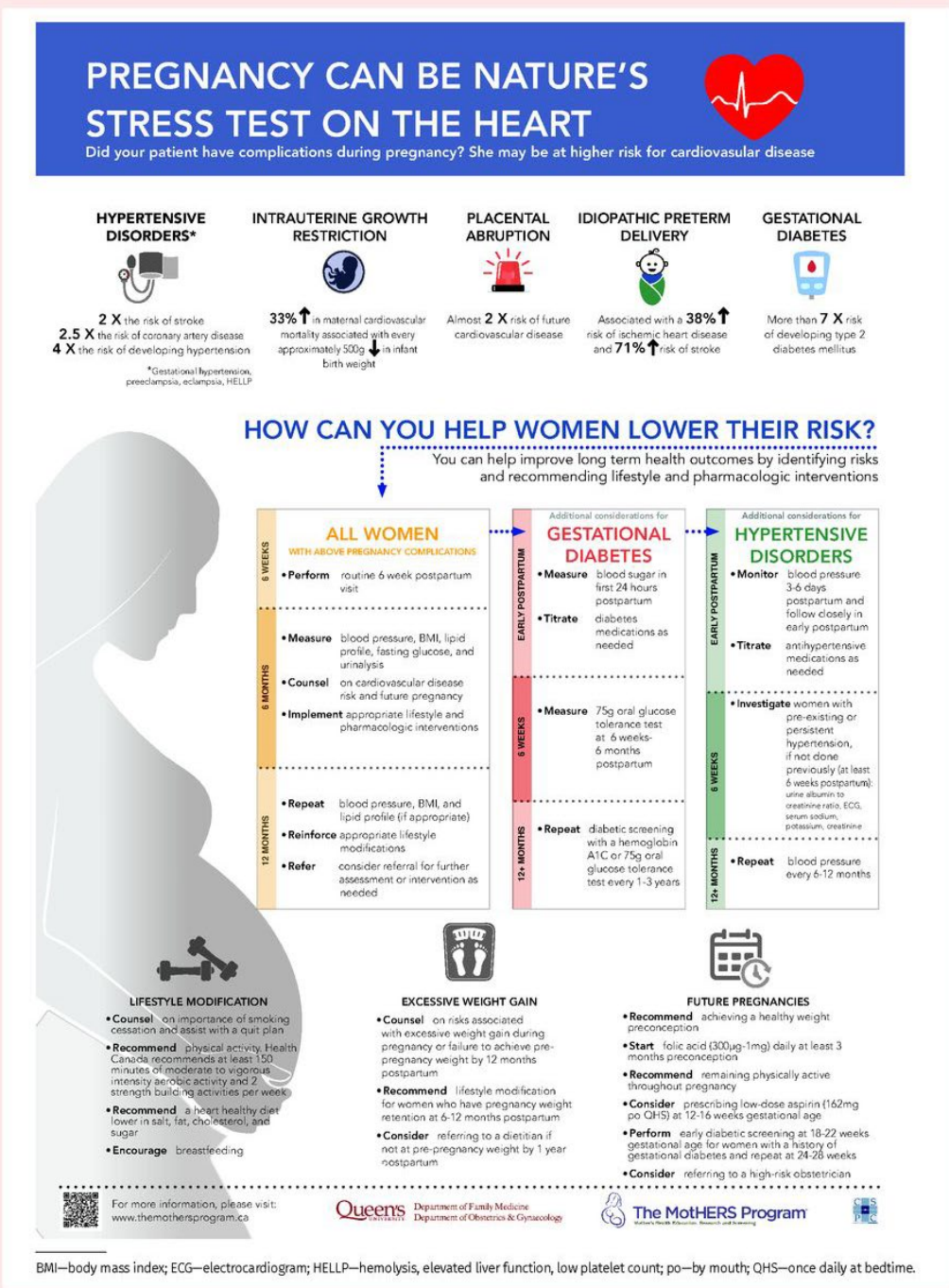
As there are **no** long-term **guidelines** for women with pregnancy-related risk factors, women must be **advocates** of their own heart health.

It is a **myth** that all pregnancy-related complications go away after the baby is born!

Canadian Guidance for Follow Up

- Canadian Cardiovascular Society 2021 Lipid Guidelines
- SOCG Hypertensive Disorders of Pregnancy Guideline 2022
- Diabetes Canada 2018 Guideline
- Hypertension Canada





Pregnancy-related cardiovascular risk indicators
Primary care approach to postpartum management and prevention of future disease

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General Health Recommendations

- Healthy Nutrition
- Lactation Support
- Physical Activity
- Cardiometabolic Risk Factor Screening
- Stress Management
- Maintenance of Healthy Body Weight
- Sleep
- Smoking Cessation

ABCs

- **Patients:**
  - **A**ctivity
  - **B**reastfeeding
  - **C**heck Ups
  - **D**iet
- **Providers:**
  - **A**1C and **A**CR
  - **B**lood Pressure
  - **C**holesterol
  - **C**ontraception
  - **D**epression (mental wellbeing)

- **Future Pregnancies:**
  - **A**SA
  - **B**lood Pressure
  - **C**heck ups
  - **D**iabetes screening
  - **E**xercise

ABCs for Patients

- **A**: Activity
- **B**: Breastfeeding
- **C**: Check Ups with a care provider
- **D**: Diet

Stay active by exercising at least 150 minutes per week

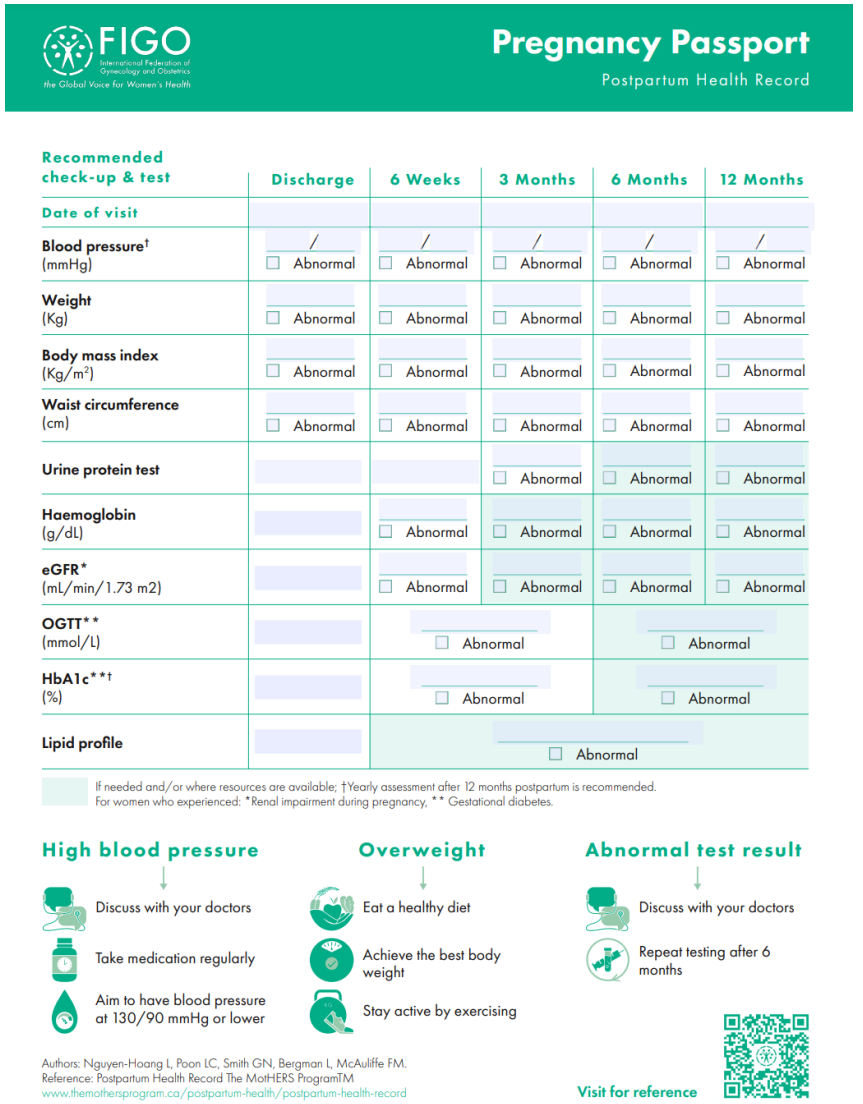
Breastfeed as long as possible

See your primary care provider for routine appointments

Eat a diverse diet rich in colourful fruits and vegetables, including nuts and seeds; and reduce salt, fats and sugar intake

ABCs for Providers (at “check ups”)

- **A**: A1C and ACR
- **B**: Blood Pressure
- **C**: Cholesterol
- **C**: Contraception/birth spacing
- **D**: Depression (mental wellbeing)



FIGO
International Federation of Gynecology and Obstetrics
the Global Voice for Women's Health

Pregnancy Passport
Postpartum Health Record

Recommended check-up & test	Discharge	6 Weeks	3 Months	6 Months	12 Months
Date of visit					
Blood pressure† (mmHg)	/ ☐ Abnormal	/ ☐ Abnormal	/ ☐ Abnormal	/ ☐ Abnormal	/ ☐ Abnormal
Weight (Kg)	☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal
Body mass index (Kg/m²)	☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal
Waist circumference (cm)	☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal
Urine protein test			☐ Abnormal	☐ Abnormal	☐ Abnormal
Haemoglobin (g/dL)		☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal
eGFR* (mL/min/1.73 m2)		☐ Abnormal	☐ Abnormal	☐ Abnormal	☐ Abnormal
OGTT** (mmol/L)		☐ Abnormal		☐ Abnormal	
HbA1c**† (%)		☐ Abnormal		☐ Abnormal	
Lipid profile		☐ Abnormal			

If needed and/or where resources are available; †Yearly assessment after 12 months postpartum is recommended.
For women who experienced: *Renal impairment during pregnancy, ** Gestational diabetes.

High blood pressure
- Discuss with your doctors
- Take medication regularly
- Aim to have blood pressure at 130/90 mmHg or lower

Overweight
- Eat a healthy diet
- Achieve the best body weight
- Stay active by exercising

Abnormal test result
- Discuss with your doctors
- Repeat testing after 6 months

Authors: Nguyen-Hoang L, Poon LC, Smith GN, Bergman L, McAuliffe FM.
Reference: Postpartum Health Record The MotHERS Program™
www.themothersprogram.ca/postpartum-health/postpartum-health-record

Visit for reference

Birth Spacing (Contraception)

Space your next pregnancy, seek help from your provider to optimise your health before the next pregnancy and seek early attention when you become pregnant

- Discuss family planning at postpartum visits (or antepartum)
- Highest risk is a pregnancy within 6 months of a live birth
  - Preterm birth
  - Placental abruption
  - Low birth weight
  - Maternal anemia
  - Congenital Disorders
- Optimal birth spacing is a pregnancy 18-24months (but less than 5 years) after a live birth.
- Individuals >35yo might consider 12 months (to balance risks of infertility)
- SOGC resources: sexandu.ca

Mental Wellbeing

- Consider screening (using EPDS or other screen) at 4-6 months post-delivery
- Individuals with APOs are at high risk of postpartum mood disorders (depression, anxiety, PTSD)
- Partners of those with APOs also at increased risk
- Individualized counselling, group/peer supports, consideration of pharmacotherapy… mental wellbeing impacts physical wellbeing
- Test for other medical conditions (thyroiditis, anemia, iron deficiency, obstructive sleep apnea etc) that may mimic depression

ABCs for Future Pregnancies

- **A**: ASA
- **B**: Blood Pressure
- **C**: Check ups / Referral
- **D**: Diabetes screening
- **E**: Exercise

See your primary care provider for routine appointments

Stay active by exercising at least 150 minutes per week

Future Pregnancies

- Preconception: healthy weight, physical activity, folic acid, safe meds
- In pregnancy: early initiation of antenatal care/BP checks
- Consider ASA initiated before 16wks pregnancy through to 36weeks GA
- Remain physically active (reduces GDM, HDP, PTB)
- Early GDM Screening with repeat at 24-28wks
- OB referral early
- Preterm Birth – see Prevention of Preterm Birth Pathway (including vaginal progesterone special authority form)

Case:

41 yo with SOB/fatigue on exertion at women's recreational hockey

"I can't play like I used to."

Healthy existing pt

"Stress test" X 2 - (in 2011, 2015) - both POSITIVE

"I am healthy and active." No CV investigations or follow up since that time

Pregnancy is a Stress Test

Women are at greater risk of having
heart disease or a **stroke**
if they had any of the following pregnancy complications:

- **HIGH BLOOD PRESSURE**
- **VERY SMALL BABY** (BELOW 10TH PERCENTILE)
- **PLACENTAL ABRUPTION**
- **EARLY DELIVERY** (PREMATURE)
- **DIABETES IN PREGNANCY**

New (or existing?) Patients

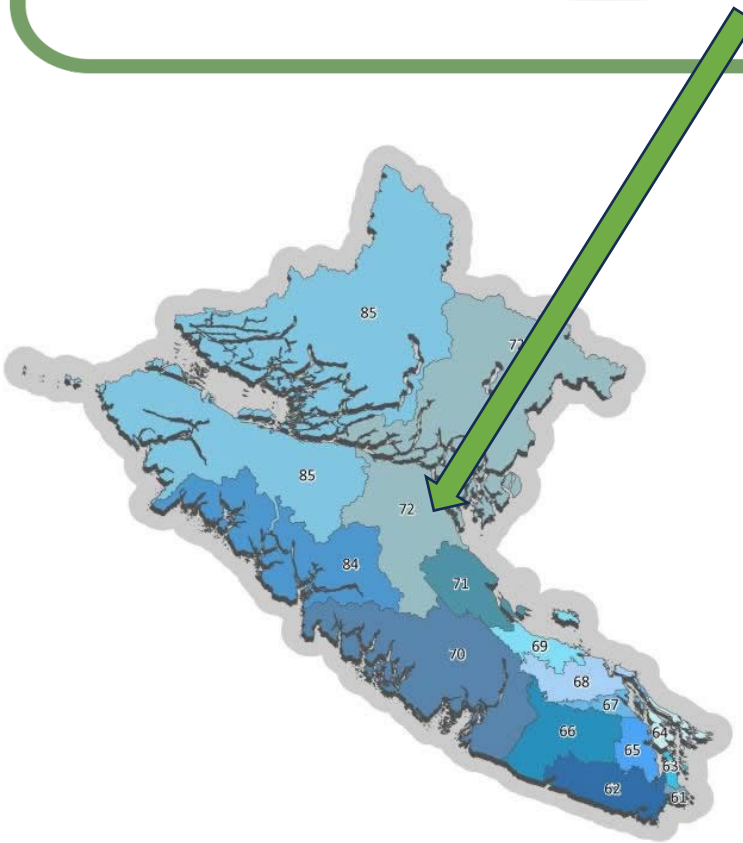
- Healthcare professionals who meet women for the first time later in their lives, after the pregnancy, should take a careful and detailed history of pregnancy complications with focused questions on specific pregnancy-related CV risks.

Appropriate follow up, careful monitoring and risk factors control

Continue to re-evaluate CVD risk for your patient annually, or at an interval individualized to your patient especially if planning future pregnancies

BIRCH

BIRTH RELATED CARDIOVASCULAR HEALTH CLINIC



Patients with APO are referred by FPOB, RM, OBGYN from Maternity Ward or Office.

Visit (virtual and IRL) with RN, FP and IM at 6mo PP

FP: 6mo well baby visit, contraception, mental wellbeing and future pregnancy considerations
IM: review of labs and CVD risk stratification and recommendations
Consult on Powerchart (on Care Connect)

Created to “bridge the gap” if unattached to PCP (open to attached patients also)

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