
IMPROVING MY HEALTH

FOLLOWING A PREGNANCY
COMPLICATED BY
HYPERTENSION



WHAT ARE HYPERTENSIVE DISORDERS OF PREGNANCY?

There are several hypertensive states of pregnancy, also known as **hypertensive disorders of pregnancy**.

- **Chronic hypertension:** Some women already have a history of high blood pressure **before becoming pregnant**, with or without medications. Other women are diagnosed with hypertension during the first half of their pregnancy (before 20 weeks gestation).
- **Gestational hypertension:** Hypertension is present only in the **second half** of the pregnancy (20 to 40 weeks gestation) or immediately following the delivery, and it disappears in the weeks following childbirth.
- **Preeclampsia with HELLP syndrome** *: Arterial hypertension accompanied by **symptoms** (e.g.: headache, seeing flashing spots, upper abdominal pain, rapid swelling) or **abnormal test results** from blood or urine samples. Preeclampsia can sometimes attack the placenta, which hinders the baby's growth.

* HELLP: Hemolysis, Elevated Liver enzymes, and Low Platelet count.

WHAT ARE THE REASONS FOR HAVING HIGH BLOOD PRESSURE DURING MY PREGNANCY?

- **Chronic hypertension:** The most frequent cause of this type of hypertension is **heredity**. For most women, blood pressure will drop at the onset of pregnancy only to rise toward the end of the pregnancy. These women sometimes also develop preeclampsia.
- **Gestational hypertension:** The most frequent type of hypertension. It appears among **5 to 6%** of pregnant women.
- **Preeclampsia:** All pregnant women are somewhat at risk of developing preeclampsia; however, preeclampsia occurs only in **1 to 3%** of all pregnancies.

Certain women, however, are more likely to develop gestational hypertension or preeclampsia. Risks factors include:

- **First pregnancy:** 10% of all first pregnancies are complicated by preeclampsia or gestational hypertension.
- First pregnancy with a **different father:** if this is not your first pregnancy but it is your first pregnancy with a new partner, you may be at increased risk.
- **Less than 2 years or more than 10 years** since last pregnancy.
- Preeclampsia in a **previous pregnancy**.
- **Family history** (sister or mother) of preeclampsia.
- Women **older than 40 years old**.
- **Obesity** (being overweight).
- **Multiple pregnancies**, like twins or triplets.
- **Diseases prior to pregnancy**, including hypertension (high blood pressure), kidney disease, diabetes, previous blood clot, or lupus.
- **Fertility treatment** (*in vitro* fertilization, sperm/egg donation).



WHAT IS THE RISK OF RECURRENCE OF HYPERTENSION-RELATED COMPLICATIONS IN A SUBSEQUENT PREGNANCY?

Having a history of hypertension in a previous pregnancy increases the risk of recurrence in a subsequent pregnancy.

The more risk factors present, the greater the risk. Obviously, the risk is greater if you had **preeclampsia**, especially if it was present well **before the end** of the pregnancy.

The risk is lower if you had preeclampsia at term (after 37 weeks), whether or not you had gestational hypertension or your chronic hypertension remained stable throughout the pregnancy.

If no intervention is made, women who had a preeclampsia-induced delivery before 34 weeks have a risk of recurrence of up to 40% in a subsequent pregnancy. However, half of these preeclampsia cases will be less severe and will occur at a later stage in the pregnancy. Remember that you are always **more likely to have a normal pregnancy** than a complicated one.

WHAT CAN I DO TO LOWER THE RISK OF RECURRENCE OF HIGH BLOOD PRESSURE IN A SUBSEQUENT PREGNANCY?

BEFORE the pregnancy

In order to lower the risk of preeclampsia, it is recommended that you wait at least **two years** after the onset of your last pregnancy with high blood pressure before getting pregnant again.

Furthermore, if you are overweight, you should try to achieve a **healthy weight** or as close as possible to one. Being overweight is one of the most important **modifiable** risk factors.

DURING the pregnancy

It is most important to be **adequately monitored** during the pregnancy, especially after 20 weeks gestation, with frequent consultations, ultrasounds to monitor the baby's growth and well-being, and home blood pressure monitoring.

Having a sufficient intake of **calcium** (3 to 4 daily servings of dairy products) lowers the risk of preeclampsia and is recommended for all pregnant women.

If your health care professional considers that you are at risk of having preeclampsia at the onset of your pregnancy, low-dose **Aspirin®** (80-120 mg/day) is sometimes prescribed and must be initiated ideally between 8 and 16 weeks of gestation.

IF I HAD HIGH BLOOD PRESSURE DURING MY PREGNANCY, WHAT ARE THE RISKS FOR MY FUTURE HEALTH?

It is now known that a woman who has had preeclampsia, especially if its onset was early in the pregnancy, is at greater risk of having health problems in the future. The same applies for women who have had chronic hypertension.

The risk is low for women who have had only gestational hypertension.

RISKS AFTER PREECLAMPSIA

- **Chronic hypertension (high blood pressure)**
- **Cardiovascular diseases:**
 - Obstruction of coronary arteries: angina, infarct
 - Obstruction of brain arteries: stroke (cerebrovascular accident)
 - Obstruction of leg arteries
- Kidney disease
- Diabetes

IF I HAD HIGH BLOOD PRESSURE DURING MY PREGNANCY, WHY IS IT IMPORTANT THAT I KNOW THE RISKS FOR MY FUTURE HEALTH?

Cardiovascular diseases (heart and stroke problems) are the leading cause of **death** among adult women. Often there are **no symptoms** for several years until the disease progresses to an advanced stage and causes a heart attack or paralysis, which can have severe health consequences.

RISK FACTORS ASSOCIATED WITH CARDIOVASCULAR DISEASE

- Heredity
- Preeclampsia
- Tobacco use
- Chronic hypertension (high blood pressure)
- Diabetes
- Obesity or being overweight
- Cholesterol
- Lack of exercise (sedentariness)

Heredity is an important risk factor; unfortunately, it cannot be modified. However, by modifying other risk factors starting now, cardiovascular disease and its consequences can be prevented or slowed down in **80%** of cases.

WHAT CAN I DO TO IMPROVE MY ODDS FOR LONG-TERM HEALTH?

Maintain or achieve a healthy body weight

Good nutrition combined with **regular physical activity** will enable you to improve your health long-term. Avoid strict diets during the first few weeks following childbirth or while breastfeeding. Aim to return to the body weight you had prior to your pregnancy within **6 to 12 months** and then try to lose weight to achieve a healthy weight before your next pregnancy. Breastfeeding can help you to lose weight.

Do not underestimate weight loss. It can **cure** diseases such as diabetes or hypertension (high blood pressure)!

BODY MASS INDEX

(www.la-calculatrice.com/calcul-imc.html | French only)

< 25 = normal

25 - 30 = overweight

30 - 35 = moderately obese

> 35 = severely obese

$$\frac{\text{Weight (kg)}}{\text{Height (m)} \times \text{Height (m)}}$$

Engage in physical activity

Moderate-intensity physical activity is recommended several times a week (goal: 30 to 60 minutes daily).

PHYSICAL ACTIVITY INTENSITY LEVELS

Low intensity: a comfortable and relaxed pace (e.g.: walking, stretching, housework)

- You feel your heart beating a bit faster, but you are breathing normally.
- You do not feel hot.
- You are able to speak during the activity.

Moderate intensity: you feel like you are working out (e.g.: speed walking, yoga, cycling)

- Your heart is beating faster and you are breathing faster.
- You feel hot and are perspiring.
- You want to speak, but you must catch your breath after a few sentences.

Vigorous intensity: you are working out really hard (e.g.: running, aerobics class, mountain biking)

- Your heart is beating rapidly and you are breathing rapidly.
- You are sweating.
- You have difficulty speaking.

Adapted from "The motHERS Program"

Adopt good nutrition habits

Canada's Food Guide recommends a diet that is healthy and varied, which generally corresponds to a **single plate filled half with vegetables**, a quarter with fibre, and a quarter with meat, fish, or poultry.

Following the Guide's recommendations is usually sufficient for most women to lose weight and to improve their health status.

Recommendations of *Canada's Food Guide*

Daily:

- 7 to 8 servings of fruits and vegetables
- 6 to 7 servings of grain products
- 2 servings of milk and alternatives
- 2 servings of meat and alternatives
- 2 to 3 tablespoons of unsaturated oils and fats.

Note: While breastfeeding, add an extra 2 to 3 servings to the basic Food Guide recommendations.

For chronic hypertension, adopt the DASH diet (Dietary Approach to Stop Hypertension):

- Eat less salt
- Eat more vegetables
- Avoid fats
- Eat red meat 2 times (twice) a week max
- Avoid sweetened beverages
- Drink water, or 0% or 1% milk.

Know your family's medical history

By giving your health care professional a detailed account of your family's medical history, he can better monitor you and try to **prevent** your family's medical issues.

Do not smoke

Smoking is a very significant risk factor for cardiovascular disease, and certainly the most important one that we can **modify**.

The birth of your child is one of life's greatest gifts. You can fully benefit from kicking the habit by staying healthy. Furthermore, you will protect your child by preventing exposure to **second-hand smoke**. What a great opportunity to give your family a life without smoke!

Visit your health care professional regularly

Yearly or biyearly visits enable your professional to measure your blood pressure and cholesterol levels, and screen for diabetes. You can also get help to lose weight or to stop smoking.

If you have any questions about high blood pressure, speak to your health care professional at your next consultation.

If you have not succeeded in changing your eating habits and in engaging in regular physical activity by the time your baby is 6 months old, you should ask for assistance (health professional, nutritionist, trainer, support group, etc.).

Useful references

- Canada's food guides | www.canada.ca/en/health-canada/services/canada-food-guides.html
- La Société québécoise d'hypertension artérielle | www.hypertension.qc.ca (French only)
- Hypertension Canada | www.hypertension.ca
- Heart & Stroke Foundation | www.heartandstroke.ca
- CBC/Radio-Canada, web site "Live right now" | www.cbc.ca/liverightnow/tools
- Dietitians of Canada | www.dieticians.ca
- Quit smoking | www.defitabac.qc.ca/en and www.iqitnow.qc.ca

Notes

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