
Samuelle Simard photographie Lifestyle

The stages of pregnancy


Mélissa Martin

Of all the life-changing events we experience, pregnancy is certainly one of the most remarkable.

Pregnancy brings about a whole series of changes that prepare you to bring a new life—your baby—into the world. For mothers and fathers, it is a gratifying and uniquely human experience full of excitement and promise. It also comes with questions, doubts, and worries.

This section on pregnancy is rooted in the belief that having a baby is a highly personal experience for future parents. It is designed to answer your questions about pregnancy and serve as a companion through the weeks and months as you prepare to welcome your new baby. It's also meant to bolster your confidence and help ensure the experience lives up to your hopes and expectations.

Menstrual cycle

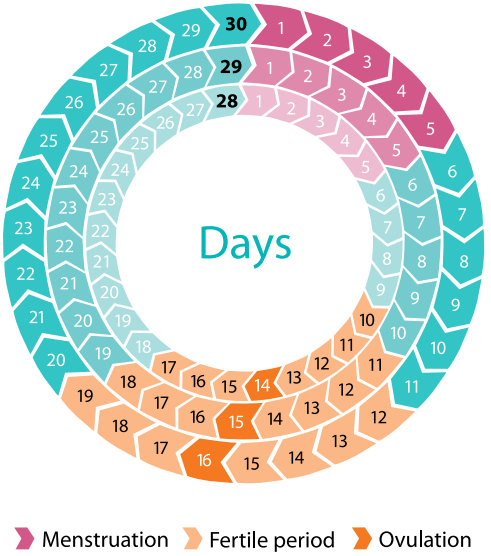


Illustration: Les Publications du Québec

Before pregnancy

Women

Menstrual cycle

Your body prepares for pregnancy during every menstrual cycle.

Menstruation is a stage of the menstrual cycle. Menstrual cycles begin at puberty around the age of 12 and continue until menopause, which typically occurs around age 51.

To determine the length of your menstrual cycle, count the number of days from the beginning of your period to the day before your next period starts. Menstrual cycles can last anywhere from 21 to 35 days, but are usually between 28 and 30 days long.

During a menstrual cycle, your body goes through a number of changes. Many interactions take place between your brain and your pituitary gland, a hormone-secreting organ. These interactions trigger the release of hormones that stimulate ovulation, which in turn prepares your body for **fertilization**.

Ovulation

Women are born with all the **eggs** they will ever have. They have about 400,000 eggs at puberty, and by menopause, all of them are gone.

Ovulation occurs when an ovary releases an egg. Once an egg is released, it is drawn into the fallopian tube. It may then come into contact with **sperm**, at which point fertilization may occur (see Fertilization, page 28).

To estimate when you will ovulate, count backwards 14 days from the end of your menstrual cycle. Women with regular 28-day cycles usually ovulate around the 14th day of their cycle. For women with irregular cycles, however, it is more difficult to predict the day or period of ovulation.

Female reproductive system

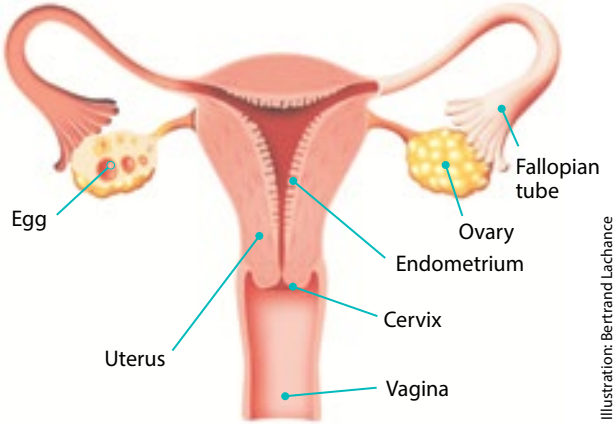


Illustration: Bertrand Lachance

Ovulation period (or fertile period)

Since ovulation does not always occur on the expected day, we use the term ovulation period or fertile period. This is when a woman is most likely to ovulate. If a man and a woman have intercourse during the fertile period, there is a one in four chance (at age 20) and a one in twenty chance (at age 40) that **fertilization** will occur.

An **egg** must be fertilized within 12 hours. If it doesn't come in contact with a **sperm** during this period, it disappears through vaginal discharge. At this point, the glands in the brain will stop producing hormones. This triggers menstruation, and the cycle starts all over again.

Men

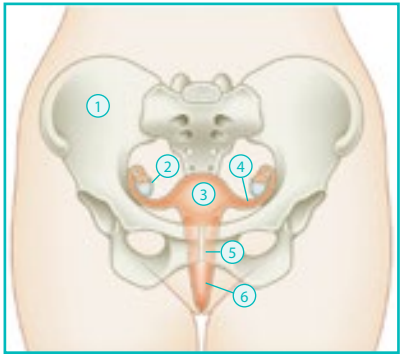
Throughout their lives, men produce **sperm**. Sperm production begins at puberty and continues until death.

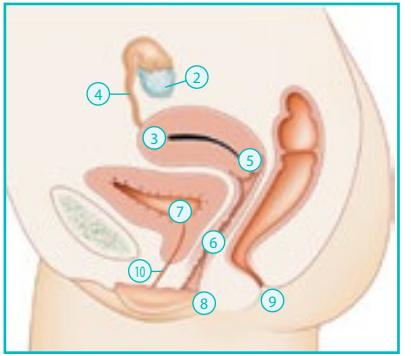
Sperm are produced in the testicles (see Male anatomy, page 27), where they go through a number of stages. It takes about two and a half months before they are ready for **fertilization**. Once they are ready, they are stored in the seminal vesicles.

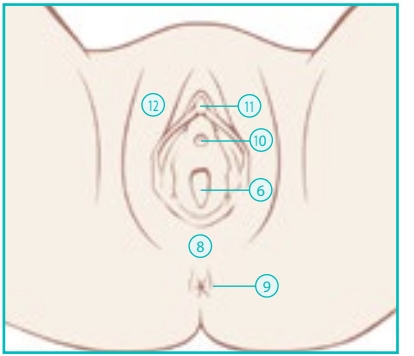
When a man ejaculates, sperm from the seminal vesicles are mixed with fluids from the prostate and other glands of the male reproductive organs. This is known as semen.

The semen from a single ejaculation usually contains between 20 million and 200 million sperm cells. Sperm can live 72 to 120 hours in a woman's genital tract, but only a few seconds outside it.

Female anatomy







(1) **Pelvis** Bone that supports the organs in the mother's abdomen.

(2) **Ovary** The two ovaries produce **eggs** and female hormones.

(3) **Uterus** Muscular organ the size of a small pear that grows as the pregnancy progresses. This is where the **embryo** develops.

(4) **Fallopian tube** The Fallopian tubes connect the uterus and the ovaries. They transport eggs and are necessary for fertilization.

(5) **Cervix** Bottom part of the uterus connected to the vagina. During menstruation, blood flows from the cervix, which is almost closed. During **labour**, the cervix dilates to let the baby through.

(6) **Vagina** A roughly 8 cm long passageway between the uterus and the vulva. The vagina is flexible and elastic so it can stretch during intercourse and delivery.

(7) **Bladder** Organ that holds the urine produced by the kidneys.

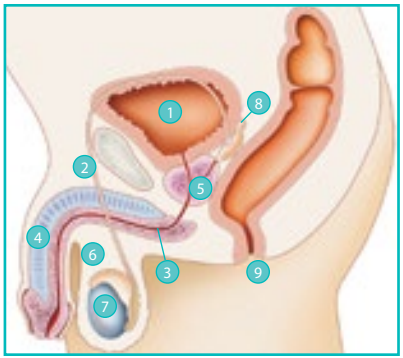
(8) **Perineum** Viewed from the exterior, the region between the anus and the vulva. The muscles of the perineum form a sort of internal "hammock" that supports the genital organs and bladder.

9 **Anus** Opening through which feces are expelled.

10 **Urethra** Tube that carries urine from the bladder to the outside of the body. It is part of the perineum.

11 **Clitoris** Sensitive, erogenous organ that plays an important role in female sexual pleasure.

12 **Vulva** All external genitalia, including the labia and clitoris.



Illustrations: *The Pregnancy Book*
Adapted by Bertrand Lachance with the permission of the Department of Health, UK

Male anatomy

1 **Bladder** Organ that holds the urine produced by the kidneys.

2 **Vas deferens** Tube that carries sperm from the testicles to the prostate.

3 **Urethra** Tube that carries urine from the bladder and out the penis. It also carries semen from the prostate and out the penis.

4 **Penis** Male genital organ. Its sponge-like tissue swells with blood during erections.

5 **Prostate** Gland that secretes seminal fluid, one of the substances composing semen.

6 **Scrotum** Sac of skin that protects the testicles.

7 **Testicle** The testicles (or testes) are the organs that produce sperm.

8 **Seminal vesicle** Located above the prostate, the seminal vesicles are reservoirs that store sperm that are ready for fertilization.

9 **Anus** Opening through which feces are expelled.

Fertilization

Fertilization occurs when a **sperm** and an **egg** meet. For this to happen, the sperm must cross the outer layer of the egg. The egg and the sperm then fuse to form a single cell.

The fertilized egg starts to develop and slowly descends toward the uterus to form an **embryo**. It will implant itself in the lining of the uterus, which is called the endometrium. Implantation takes place about seven days after ovulation.

Most women take a pregnancy test when they realize their period is late. If the test is positive, it means that fertilization has occurred.

In about one out of every six pregnancies, the embryo will not develop or the baby's heart will stop beating relatively early on. The uterus will then stop growing and expel its contents, ending the pregnancy in **miscarriage** (see Miscarriage, page 160).

Length of pregnancy

The length of a pregnancy is calculated from the first day of a woman's last menstrual period because it's virtually impossible to know the exact moment of **fertilization**.

Health professionals will most likely refer to your pregnancy in terms of weeks. When they say you are "20 weeks pregnant," for example, it means 20 full weeks have gone by since the first day of your last menstrual period. The reason is simple: it is more accurate to talk about weeks than calendar months.

Your baby will be considered at term as of 37 weeks and could be born anytime between 37 and 42 weeks after your last menstrual period. Most babies are born between 39 and 41 weeks.

The 42 weeks of pregnancy (maximum length) are further divided into three trimesters of 14 weeks each. Each trimester corresponds to specific stages in the development of the **fetus** (see Development of the fetus, page 31).

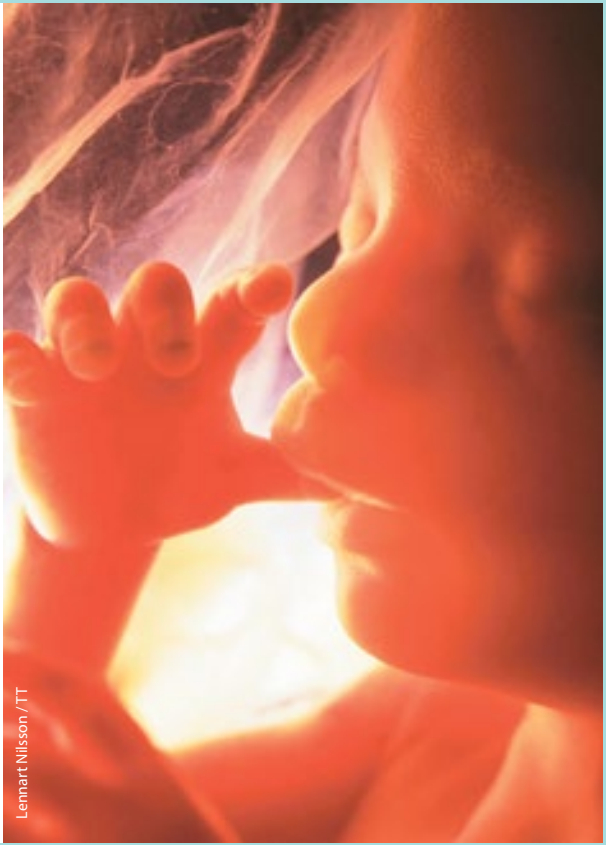
Due date

One of the first things you'll want to know on learning you are pregnant is when the baby is due. When will the big day be?

To estimate your due date, count 280 days, or 40 complete weeks, from the first day of your last period. The expected due date is therefore only an approximate date.

An **ultrasound** (see Ultrasound, page 128) performed before 20 weeks of pregnancy will give you a good idea of the due date, plus or minus 7 to 10 days.

The fetus



Lennart Nilsson / TT

Development of the fetus

Your baby is constantly growing and must go through several stages before he's ready to live outside the uterus. These stages, or key moments, are outlined below. The number of weeks associated with each stage (based on last menstrual period) is only an approximation and may differ from one woman to the next.

First trimester: from conception to 14 weeks

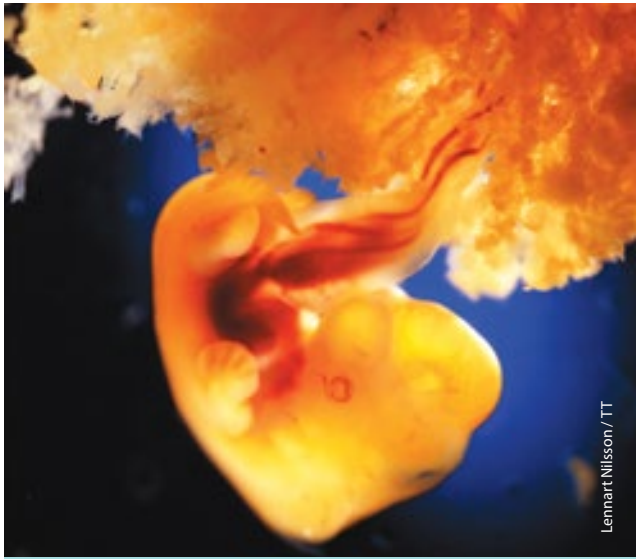
At 5 weeks, the embryo's heart begins to beat, although it cannot yet be heard during a medical exam.

At 6 weeks, the embryo measures 5 mm.

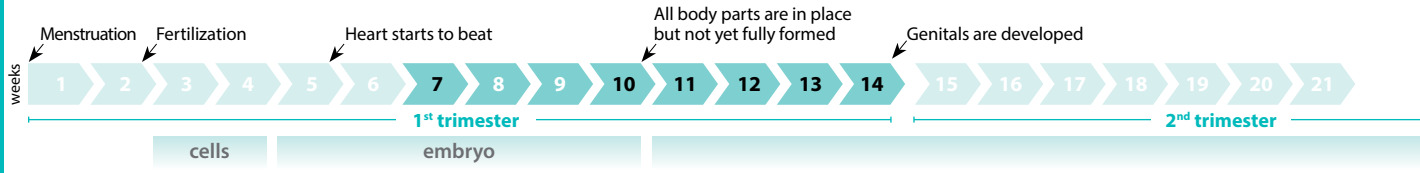
At 7 weeks, the **embryo**'s head is much bigger than the rest of its body. Its arms begin to form as the elbows and hands appear. The fingers are still fused together. The eyes are now quite visible.

At 10 weeks, the embryo already has a human appearance: its eyes, nose, and mouth are recognizable. Its eyelids are closed. The fingers have now separated and the toes are beginning to form. Your baby begins to move his limbs, but you won't feel any movement yet.

He has now progressed from embryo to **fetus**: all the body parts are in place, but are not yet fully formed. They will continue to grow and develop throughout the pregnancy.



Embryo at 40 days (7 weeks after the first day of the last menstrual period).



Fetus at the end of the first trimester.

Between 10 and 14 weeks, the fetus gets bigger and the skeletal bones begin to form.

At 14 weeks, the fetus measures around 8.5 cm. Your baby's genitals, while not yet fully formed, are developed enough to determine their sex. Usually you can find out the sex of your baby between 16 and 18 weeks when an **ultrasound** is performed.

Birth

22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 weeks

3rd trimester

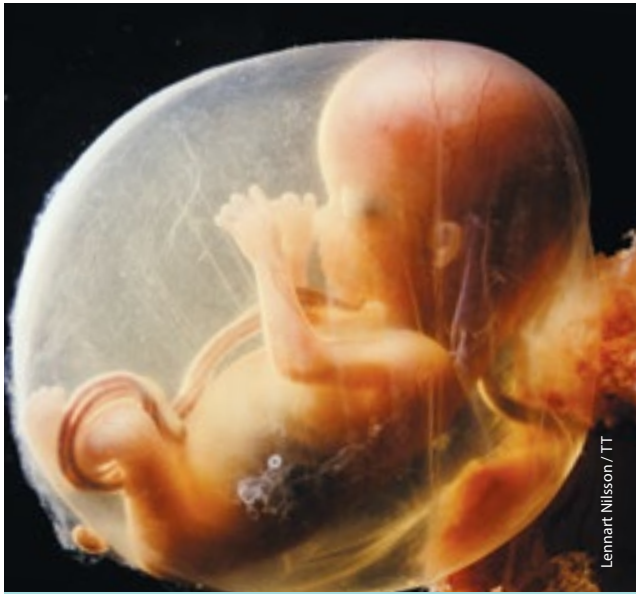
fetus

Second trimester: 15 to 28 weeks

At 16 weeks, the baby's head is still disproportionately large compared to the rest of his body, but his trunk, arms, and legs are beginning to lengthen.

Around 20 weeks, your uterus is level with your belly button. Your baby's movements are now strong enough that you can feel them. Some women feel these movements a little earlier or a little later in their pregnancy. Your baby is coated in a whitish cream known as ***vernix caseosa***, which protects his skin.

At 22 weeks, your baby measures around 19 cm. His hair begins to grow, and his body is covered in a fine downy fuzz known as lanugo.



Fetus at the beginning of the second trimester.

Fetus at the end of the second trimester.

Between 23 and 27 weeks, your baby puts on weight and his head becomes better proportioned to his body.

At 24 weeks, he can hear low frequency sounds from outside the uterus.

Around 26 weeks, his eyebrows and eyelashes are visible.

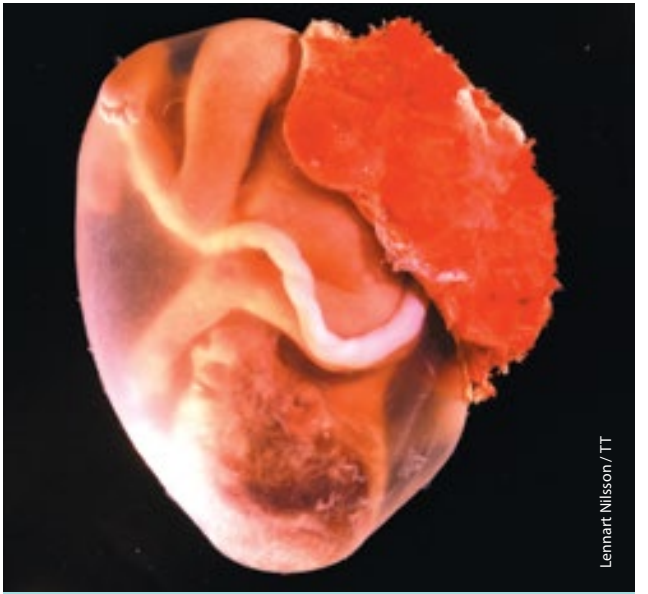
Around 28 weeks, your baby's eyes begin to open. They will become sensitive to light at around 32 weeks.

Third trimester: from 29 weeks to birth

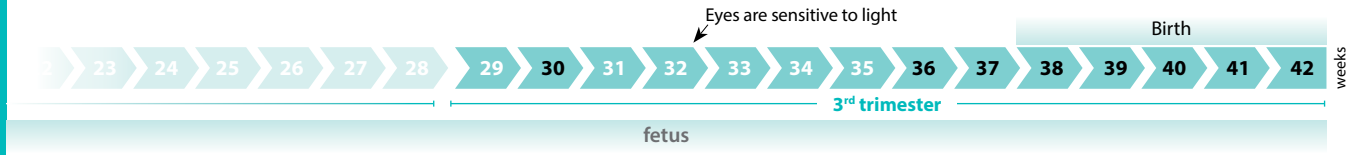
At 30 weeks, your baby measures around 28 cm.

At 36 weeks, your baby's skin is pinkish, and the downy hair on his body begins to disappear, although it can remain until after the birth. Your baby is bigger because of the fat reserves he is building up.

Between 37 and 41 weeks, he's ready for the big day!



Fetus at the end of the third trimester.



Fetus's environment

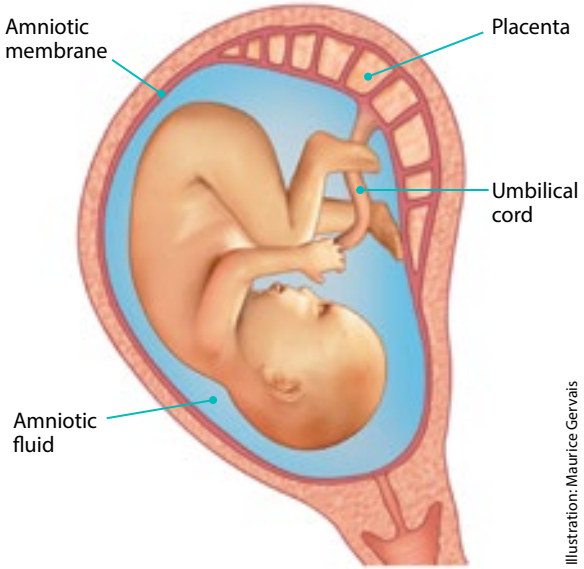


Illustration: Maurice Gervais

Amniotic fluid

The amniotic fluid surrounding your baby is essential to his growth and development. Among other things, it

- Keeps your baby at the right temperature
- Protects him against shocks from outside the womb
- Provides space for him to move and develop his muscles and lungs

The fluid is contained in a kind of pouch that surrounds the baby (amniotic sac or "membrane"). The membrane actually consists of two layers, which is why you will often hear it referred to as "the membranes."

Just before or during **labour**, the sac will break, causing the amniotic fluid to leak out. This is what's known as "breaking the water."

Placenta and umbilical cord

The placenta starts to grow as soon as the fertilized **egg** embeds itself in the uterus. It is connected to the baby by the umbilical cord.

At four weeks of pregnancy, blood begins to flow between you and the **embryo**.

The umbilical cord and placenta carry the oxygen and **nutrients** your baby needs to grow. They also help get rid of your baby's waste by returning it to your body, which then eliminates it.

The placenta secretes into the mother's blood the hormones required to maintain the pregnancy and help the **fetus** grow. It also acts as a barrier between the mother's blood and the blood of the fetus.

But the placenta does not filter everything. Certain substances that are harmful to the fetus can get through, including alcohol, certain drugs, and certain medications.


Liane Comeau

Everyday life during pregnancy

Physical changes

Pregnancy is a period of rapid changes in your body. Most of these changes are temporary and will gradually disappear after your baby is born. Some of them are pleasant, while others can cause a certain amount of discomfort.

Heart, blood vessels and lungs

During pregnancy, your heart rate can increase by up to 10 beats per minute. Your heart shifts slightly within your rib cage as the baby grows and your uterus expands. The volume of your blood increases to meet the needs of the **fetus**.

Pregnancy also brings about changes that can affect your breathing. Many women feel a little short of breath when they're pregnant. Shortness of breath comes on gradually and remains mild. It can start as early as the first months of pregnancy.

Hair

Head and body hair growth can change during pregnancy. Some women may experience increased hair growth on their bodies and have a thicker, fuller head of hair. A few months after the birth, it is not uncommon to experience more hair loss than usual.

Skin

Changes in hormone levels during pregnancy stimulate the skin and scalp, causing a noticeable effect in some women. Changes to your skin and scalp shouldn't be cause for concern, as most will diminish or disappear altogether in the months following the birth.

Hyperpigmentation

Most pregnant women will find that their skin darkens. This condition is known as hyperpigmentation. Hyperpigmentation tends to be localized, usually appearing as a thin dark line between the belly button and the pubis. It can also occur as a darkening of the **perineum**, anus, neck, armpits, the **areola** on your breasts, or the skin around the belly button.

The pregnancy mask some women get is a result of hyperpigmentation. It is characterized by the appearance of brown patches on the face.

Hyperpigmentation and pregnancy mask can be aggravated by sun exposure. To protect yourself, you can use sunscreen (see Sunscreen, page 58).

Hyperpigmentation and pregnancy mask clear up after the birth of the baby and generally disappear altogether within a year.

Stretch marks

Stretch marks can also develop during the second half of pregnancy. They are mainly visible on the tummy, breasts, and thighs, but also in the armpits or on the lower back, buttocks, and arms. Stretch marks form when a deeper layer of skin stretches as the body changes. They are initially a pinkish or purple colour, and gradually become less apparent over time.

There is no proven method for effectively preventing or treating stretch marks. The massaging motion used to apply moisturizing cream may help reduce them somewhat, although the ingredients of the cream themselves appear to have little effect.

Other changes

Some women develop acne, which usually disappears after the pregnancy.

Hormonal stimulation of the skin can result in the appearance of acrochordons (skin tags)—tiny benign skin growths that are most common in skin folds such as around the neck and armpits.

Some women may develop angiomas between the second and fifth months of pregnancy. Angiomas are little red patches on the skin formed by blood vessels. Most angiomas will disappear on their own within three months of giving birth.

Bladder and kidneys

Bladder function changes during pregnancy. The kidneys increase in volume and filter more liquid. This can trigger a more frequent or urgent need to urinate. Later in pregnancy, the uterus expands as the baby grows, putting pressure on the bladder. This increases the urge even more.

You will probably feel the need to urinate more often at night, too. During the day, your body tends to accumulate water in your tissues. When you go to bed these water reserves are sent to your kidneys and you feel the urge to go—again!

Stomach and intestines

Digestion often slows down during pregnancy due to hormonal changes. This can cause heartburn (see Heartburn and acid reflux, page 143) and constipation (see Constipation, page 144).

Breasts

Your breasts may become more sensitive and increase in size. The blue veins that crisscross their surface may become more visible.

Your nipples and **areolas** prepare for breastfeeding by growing slightly. They may also become darker. Little bumps form on the areolas. These bumps are glands. They produce oil that will help keep your skin moisturized and protected during breastfeeding.

Beginning at 16 weeks, the breasts start producing colostrum. Colostrum is the first milk produced for a newborn baby. Some women may leak colostrum during pregnancy. This is completely normal.

Uterus

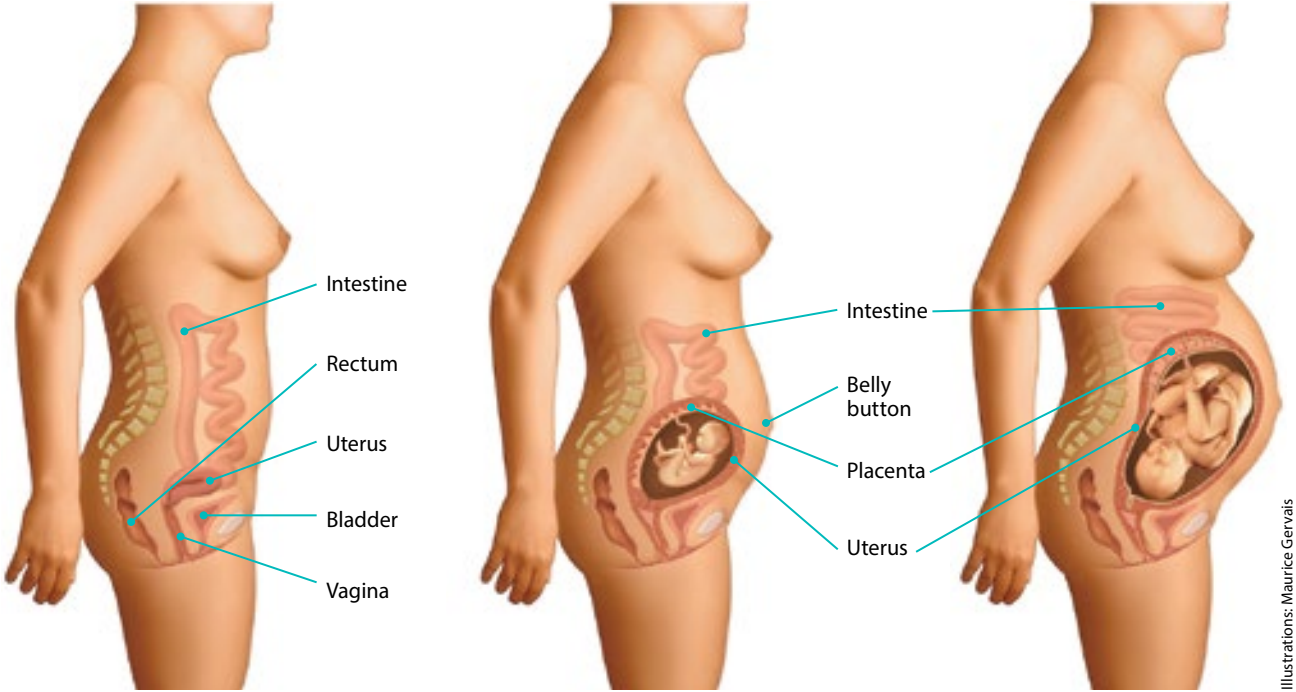
Before pregnancy, your uterus is the size of a small pear. As your pregnancy advances, it expands to meet the needs of the **fetus** and changes shape and position in your abdomen.

The increasing weight of the uterus moves your centre of gravity further forward. This can cause your posture to change. That's why some women walk differently than they did before becoming pregnant.

Vaginal discharge

Women often have more vaginal discharge during pregnancy due to hormonal changes. The discharge is usually whitish in colour, slick, and odorless.

Growth of the baby in the uterus



Before pregnancy

Around 20 weeks

Around 32 weeks

Illustrations: Maurice Gervais

Ligaments and joints

Pregnancy hormones tend to make the ligaments supporting your joints loosen up gradually, especially in the pelvic area. For some women, this can cause pain during physical activity, or even while resting.

Fat reserves

Women accumulate fat reserves throughout pregnancy, especially in the tummy, back and thighs. These reserves store energy and are necessary to ensure that the pregnancy and breastfeeding go well.

Weight gain

Women gain weight during pregnancy because their baby is growing and their bodies are changing.

The weight gain corresponds to the weight of the growing baby, but also the weight of the uterus, the placenta, and the amniotic fluid. The breasts, maternal fat reserves, blood, and extravascular fluids also contribute to weight gain (see Distribution of weight gain during pregnancy, page 47).

Weight gain during pregnancy is normal and allows you to lead a healthy pregnancy.

Adequate weight gain helps you lead a healthy pregnancy, but it's not the only factor. A healthy diet (see Eating well, page 77), and regular physical activity (see Physical activities, page 60) will also have a positive effect on you and your baby's health.

Distribution of weight gain during pregnancy

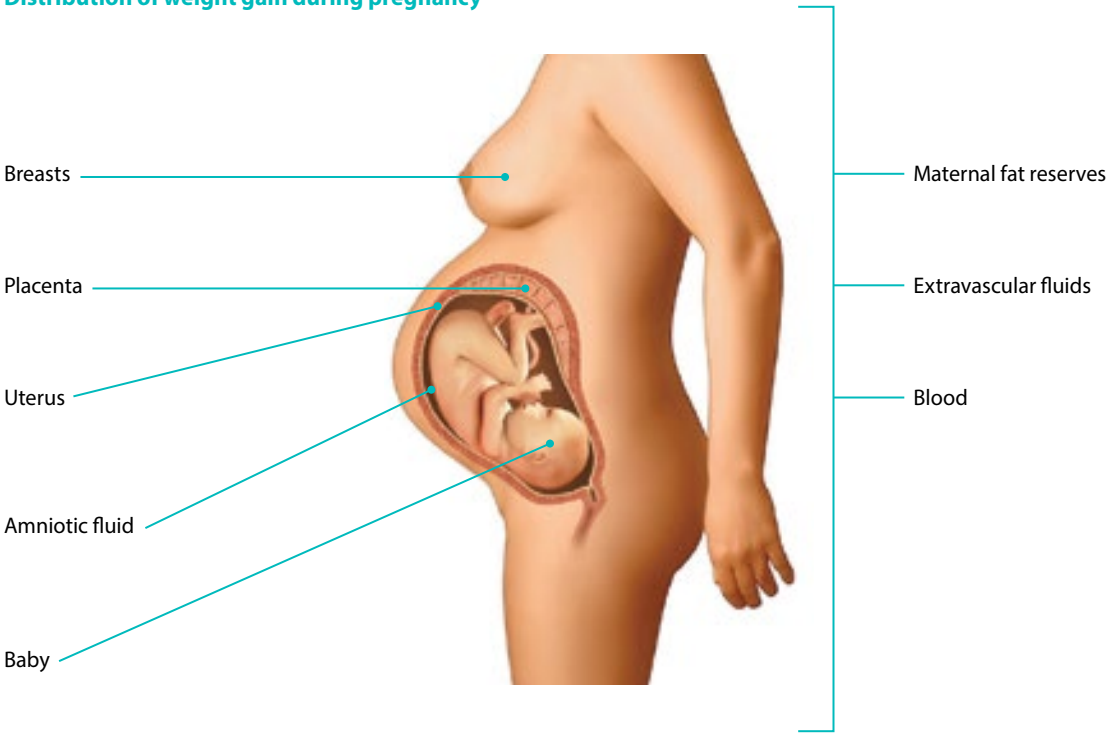


Illustration: Maurice Gervais

Changes in weight during pregnancy

You will put on weight gradually.

At the beginning of pregnancy, your appetite may vary depending on whether you have morning sickness (see Nausea and vomiting, page 141) or pregnancy cravings (see Appetite, cravings, and aversions, page 80). Some women gain more weight; others lose weight. Your weight will adjust as the months pass.

By the end of the first trimester, you can expect to have gained between 500 g and 2 kg (1 to 4.5 lb). Most weight gain occurs during the second and third trimesters, as your baby starts to grow faster. During these two trimesters, you can expect to gain between 225 and 500g (½ to 1 lb) per week, depending on your pre-pregnancy weight.

Weight gain can vary greatly from one woman—and one pregnancy—to another.

There's no need to weigh yourself at home. Your prenatal care provider will monitor your weight on a regular basis. If you're worried about your weight gain, don't hesitate to let your care provider know.

Women carrying more than one baby (e.g., twins, triplets) will gain more weight. If this is the case for you, your prenatal care provider will take this into account.

Living with the changes

Every woman experiences pregnancy differently, but the transformations affecting your body can have an impact on the way you see yourself.

Some women are comfortable with the physical changes. Like their growing belly, they may see them as signs of the baby developing inside of them and the future addition to the family.

Other women find it harder to accept their changing bodies and new image. The day-to-day symptoms and discomforts of pregnancy can make this even more difficult.

If you're experiencing discomfort or dissatisfaction, don't hesitate to express your feelings or talk it over with someone you trust.

Pregnancy transforms women's bodies. Give yourself time to adapt to the changes. They're proof of your body's amazing ability to give life!

Emotional changes

For the pregnant woman

Along with the physical changes, pregnancy can also trigger emotional, psychological, and social changes. Preparing for motherhood and the arrival of a baby can give rise to numerous questions and cause stress for some women. Take the time you need to adapt to these new realities (see Being a mother, page 738).

For many women, the changes associated with pregnancy can give rise to what may seem like conflicting emotions. For example, you may find yourself swinging between joy, worry, denial, excitement, even sadness. The important thing is to acknowledge your emotions rather than fight them. Let your emotions come and let yourself feel them.

Talking about your emotions with those close to you can do you good and help you get the support you need.

You can also talk to other pregnant women or those who have recently given birth. This can help you realize that you are not alone in experiencing some of the changes and emotions you are going through. Most regions have places where pregnant moms-to-be can meet (see Prenatal activities, page 123).

You may also notice that you don't share the same emotions or concerns as others. Remember, every woman—and every pregnancy—is unique.

To adapt to these changes, some women prefer doing activities by themselves, such as meditating or walking. Try to find what is most helpful or does you the most good.

Pregnancy can be a very emotional time. Don't hesitate to share what you're feeling with people you trust. If you need more support, talk to your prenatal care provider.

During pregnancy, women may attract more attention. Family, friends, and even strangers will often make comments, sharing remarks on your weight or appearance or offering all sorts of advice.

Some women are comfortable with and appreciate the extra attention. Others may feel pressure and prefer to avoid the comments. If you feel this way, don't hesitate to say so and set your limits. You can always choose not to respond to questions and comments about your pregnancy.

Some women experience the changes and emotions of pregnancy more intensely and may be affected by depression during this period. About one in ten women will experience depression during pregnancy.

If you find yourself feeling sad or irritable most days or lose interest and enthusiasm for your daily activities over more than two weeks, or if you or your loved ones are worried, talk to your prenatal care provider.

For the future father or partner

Future fathers and partners also face their share of changes during a pregnancy. Some wonder if they will be able to live up to expectations. Others have questions about their new family situation or worry they won't agree with their partner about the level of involvement each will have with the child.

The simple fact of knowing that your partner is carrying a child may not be enough to make the pregnancy tangible for you. Attending prenatal checkups and **ultrasound** appointments, listening to the baby's heartbeat, and feeling his first movements are events that can help you start building a relationship with your baby.

Your relationship will become more real if you talk to and touch your baby through his mother's belly. Even so, some partners only become truly conscious of their new reality when the baby is born.

If you know other new or expectant fathers or parents, don't hesitate to ask them about their experiences. These conversations can provide answers and help you embrace your new role. Participating in prenatal sessions can also help make you more confident in your abilities.

For more information, see the section Being a father, page 730.

For the couple

Going from a two-person to a three-person relationship or expanding your family brings its share of changes and adjustments. You and your partner both have concerns but they won't necessarily be the same and may not come at the same time.

Your relationship as a couple is important because it's the foundation of your family to be.

You may wonder how your partner will react if you talk about your fears or share your doubts. Regardless of what you're feeling, it's important to communicate. Communicating allows you both to express your emotions and points of view so you can stay united on the path to parenthood. Your relationship as a couple is important as it forms the basis of your family-to-be.

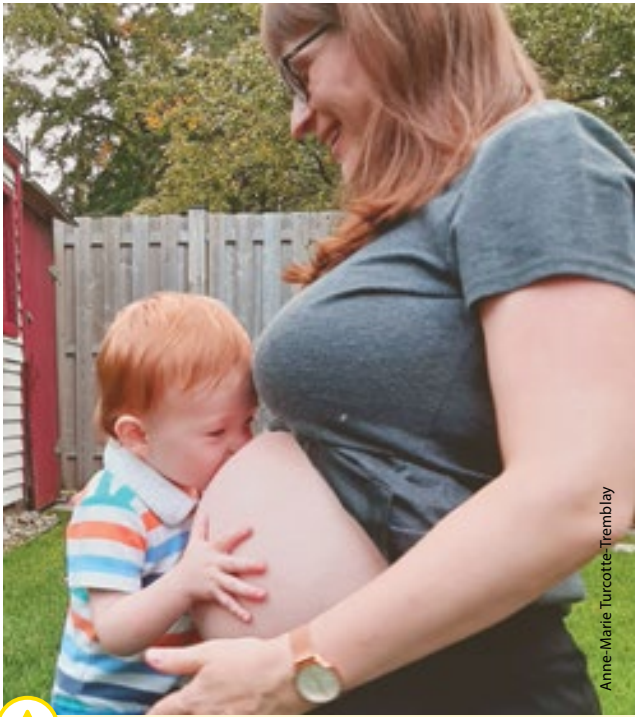
For the family

If you already have children, you may have the impression you are neglecting the older ones. Fatigue and the discomforts of pregnancy may change the way you look after them. You may feel guilty or wonder how you'll be able to love all your children and give each one the attention he or she deserves.

For your partner, family and friends, your pregnancy can be a special opportunity to build stronger ties with your older children.

Your other children, regardless of their age, may feel jealous or even angry at the idea of welcoming a new member into the family. They may be worried about where they will fit in during the pregnancy and after the birth of their brother or sister.

Reassure them and help them accept the baby on the way by talking to them about the upcoming birth. You can get them actively involved in preparations for baby's arrival—by helping decorate the baby's room or drawing baby a picture, for example. It's a good idea to tell them that you still love them and demonstrate it by showing your affection.



Have your children touch your belly when the baby is moving.

Kathy Poulliot, studio Lollipop photo

Sexual relations can continue throughout pregnancy without any problem, as long as you respect each other's needs, limits, and comfort zone.

Sexuality

Pregnancy can have an impact on an individual or couple's sex life. Sexual desire and the frequency of sexual relations may increase, decrease, or vary during pregnancy. The changes in the woman's body or the new perception you have of yourself and your partner as parents rather than lovers can create feelings that affect sexual desire.

Various factors, including medical contraindications, discomfort, personal limits, a greater desire for simple tenderness, or a growing belly, may lead you to set aside certain sexual practices or try new ones.

Pleasure, whether physical or psychological, may be experienced differently by each partner during pregnancy. For example, you and your partner may not have the same ability to reach orgasm, the same degree of sensitivity, or the same feeling of closeness.

You may have some concerns about sexual activity while pregnant, but you can have sex without worry: neither vaginal penetration nor orgasm cause **miscarriage** and they will not lead to premature labour or hurt your baby. The baby is well protected inside the amniotic sac in the uterus.

In some situations, however, you may be advised not to have sexual intercourse; for example, if you have bleeding, abdominal pain, or problems with the placenta, or if there is concern about premature **labour** or a rupture of the amniotic membranes. Your prenatal care provider will tell you if this is the case and advise you about what precautions you should take.

During pregnancy, it is important to protect yourself against **sexually transmitted infections (STIs)**. Use a condom if you have sexual relations where there is a risk of contracting an STI. This will prevent the infection from being transmitted and avoid the complications it can cause you and your baby.

Personal care

Cosmetics and creams

Most cosmetics (creams, makeup) can be used during pregnancy. Face cream and hand and body creams that do not contain any medicinal ingredients can be used safely. If you use a medicated cream, your doctor or pharmacist can check to see if you can continue using it while pregnant.

Hair products and treatments

Hair products and treatments including dyes, colouring shampoos, highlights, and perms are not dangerous to pregnant women or their **fetus**. However, if you use hair products as part of your work, discuss the matter with your health professional (see Health and safety at work, page 72).

Sunscreen

You are advised to use sunscreen when you go out in the sun. This is especially important during pregnancy because the sun can increase hyperpigmentation and pregnancy mask (see Hyperpigmentation, page 42). Use sunscreen with a sun protection factor (SPF) of at least 30 that protects against both UVA and UVB rays. Be especially careful to protect your face.

Insect repellent

If you are unable to avoid situations where you will be exposed to insects and you are obliged to use insect repellent, it is best to use one that contains DEET, icaridin, or soybean oil.

DEET- and icaridin-based products protect against both mosquitos and ticks, but soybean oil–based products do not protect against ticks.

If you are pregnant, do not use products containing more than 30% DEET, 20% icaridin, or 2% soybean oil. Be sure to read the label to know how long the protection will last. Reapply only as needed.

A few precautions
There is no scientific proof that the use of these insect repellents by pregnant women presents a risk to the health of the baby they are carrying. But it is important to apply the product to exposed skin only and to wash off any excess.

To limit your exposure to these products, you can apply them to your clothes rather than directly onto your skin. Wearing long pants and light colours is another way to help protect against insect bites.

The use of citronella oil or lavender oil–based products during pregnancy is not recommended. Their effect is short-term so you have to reapply often, thereby exposing yourself to the product in large amounts.

Laser hair removal and electrolysis

There have been no scientific studies done on the risk of electrolysis and laser hair removal for pregnant women and their unborn babies. As a precaution, it is recommended that you avoid these hair removal methods until after you give birth.

Tanning salons

Even though ultraviolet rays cannot reach the **fetus**, tanning salons are not recommended for pregnant women. The extreme heat you are exposed to during tanning sessions can significantly increase body temperature and harm your baby. Many tanning salons require pregnant customers to provide written authorization from a health professional.


Marie-Hélène Giguère

Physical activity is good for your pregnancy. If you're not used to being active in your everyday life, start slowly and gradually add more.

Physical activities

Being physically active during pregnancy is good for your physical and mental well-being. Women who are active during pregnancy cope better with the physical changes of pregnancy, have more energy, and are less short of breath.

Practicing regular and varied physical activities throughout pregnancy is beneficial and safe. It prevents and relieves constipation, eases back pain (see Discomforts of pregnancy, page 139), and prevents certain pregnancy complications, such as gestational diabetes (see Gestational diabetes, page 164). Better physical fitness may also help you recover more easily after giving birth.

Being active day to day

Physical activity, even in small quantities, is good for your pregnancy! If you're not used to being active in your everyday life, start slowly and gradually add more. Getting around on foot, going for walks, and playing with your kids are some of the activities you can work into your daily routine.

Pregnant women can aim for a total of 150 minutes of moderately intense physical activities per week, spread over several days. Moderate intensity means you can talk while exercising, but you can't sing.

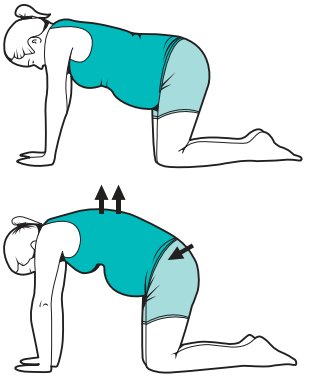
Choice of activities

Choose your activities based on your fitness level and what you feel like doing. You can continue many of the activities you enjoyed before becoming pregnant. However, you may have to adapt some of them depending on your stage of pregnancy. For example, you can reduce the intensity, or change certain movements.

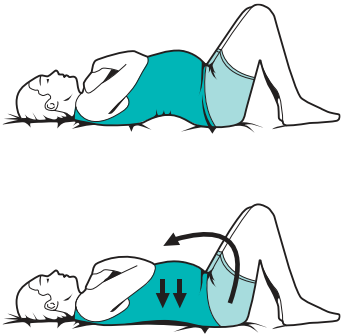
Sports like power walking, swimming, aquafitness, stationary biking, and snowshoeing are examples of activities you can do. You can also add strength and mobility exercises (see Examples of mobility exercises, page 62), yoga, and gentle stretching to your daily routine.

Examples of mobility exercises

Round back stretch



Pelvic tilts



Illustrations: Luz Design + Communications

Fatigue and some discomforts of pregnancy may prevent you from being as active as you like, especially at the beginning and end of your pregnancy. Listen to your body, exercise less intensely, or get some rest, then resume physical activity when its comfortable for you.

A few precautions

Don't worry—exercise doesn't increase the risk of **miscarriage** or of problems for your baby. Your prenatal care provider will tell you if your health situation prevents you from doing physical activities.

However, scuba diving, sports and activities that can expose you to falls, physical contact, impacts, or injury are not recommended during pregnancy. It is also best to avoid sit-ups and other similar movements, as well as activities in hot, humid environments or at high altitudes (> 2,500 m).

Listen to your body and respect your limits.

If you feel discomfort during physical activity such as shortness of breath, urinary leakage from effort, or a sensation of heaviness in the vagina, don't hesitate to change activities or ease off on intensity. You can also ask your prenatal care provider for advice in these situations, or if you don't feel capable of participating in physical activity.

Good to know...

Exercise raises your body temperature and makes you lose water by sweating. It's important to hydrate properly before and during physical activity (see Drinks, page 97).

Women athletes who wish to continue training intensively during pregnancy should do so under the supervision of a physician.

Tobacco and electronic cigarette

Tobacco

Pregnancy is a good time to quit smoking. The dangers of tobacco for the **fetus**, baby, and mother are real. The more cigarettes smoked, the greater the risks for the baby but there's no safe level of cigarette use during pregnancy.

Pregnant women are advised not to smoke cigarettes or expose themselves to second-hand smoke (from other smokers).

During your pregnancy, your prenatal care provider will ask you some questions about whether you smoke, drink alcohol, or use drugs. You may feel guilty or uncomfortable or worry about being judged if you use any of these products. Rest assured, however, that the purpose of these questions is to give you an opportunity to get the information you need, talk about your concerns, receive prenatal care that takes your situation into account, and seek help if you want to quit.

Smoking harms the development of the fetus and can impact the pregnancy and the period after the birth in the following ways:

- It increases the risk of placental abruption (detachment of the placenta), premature rupture of the amniotic sac, and premature birth.
- It can slow fetal growth and result in lower birth weight.
- It increases the risk of having a stillborn baby or a baby who dies in the days following birth.
- It also increases the risk of **sudden infant death syndrome**.

If you have friends and family who smoke, ask them to smoke outdoors so that you and your baby won't be exposed to tobacco smoke.

It's never too late to quit smoking. Your baby will benefit, regardless of when during your pregnancy you actually quit.

For most smokers, smoking is an addiction that can be hard to kick. Reducing the number of cigarettes can be a first step before quitting smoking altogether. Talk to your health professional, he can help.

A telephone helpline, website, and numerous quit-smoking centres offer their services free of charge to the public. To access the helpline service and find the centre nearest you:

iQuitnow
1-866-527-7383
tobaccofreequebec.ca/iquitnow

Electronic cigarette

Use of electronic cigarettes (aka e-cigarettes, vapes, or vaping products) during pregnancy is not recommended, as very few studies have been conducted to assess their effects on pregnant women and the fetus.

For pregnant women who want to quit tobacco cigarettes, there are effective options that are safer than electronic cigarettes. Don't hesitate to talk to a health professional.

Alcohol

Pregnant women are advised not to drink alcohol throughout their pregnancy.

Pregnant women are advised not to drink alcohol during their pregnancy. Even a small amount of alcohol can have adverse effects. And the more alcohol consumed, the greater the potential harm to the baby. Binge drinking and regular consumption of alcohol are especially harmful.

The effect of alcohol on the baby is the same, regardless of the type of drink—beer, wine, or spirits.

Alcohol can have numerous harmful effects during pregnancy: it can result in miscarriage and cause hypertension (see High blood pressure (hypertension) during pregnancy, page 164) and placental abnormalities.

Alcohol can also negatively affect organ development in the fetus and cause birth defects and health problems. The brain is the organ most sensitive to fetal alcohol exposure. Alcohol can cause damage to the baby's brain, leading to learning and behavioural disorders. These disorders can have a significant impact throughout a child's life. Since the brain develops throughout pregnancy, it is recommended not to drink alcohol, regardless of the trimester.

The placenta does not filter alcohol: it lets alcohol through to the baby.

If you do drink alcohol while pregnant or did so before you knew you were pregnant, don't hesitate to talk to your health professional.

A few tips
Explain to your partner, family and friends that it's important for you to not drink alcohol. This will help them support you better.

Use your pregnancy as an opportunity to try out non-alcoholic drinks and mocktails:

- Sparkling water flavoured with sliced fruit or cucumber, fresh herbs, syrup (e.g., grenadine, ginger, grapefruit), or juice
- Homemade iced tea or chilled fruit infusions
- Virgin (alcohol-free) versions of your favourite cocktails (mocktails)

Most bars and restaurants offer a selection of mocktails. Ask your server.

For more information on the risks of using alcohol during pregnancy and a list of resources, visit the FASD – Alcohol-Free Pregnancy website at fasd-alcoholfreepregnancy.ca.

Take advantage of your pregnancy to try different non-alcoholic drinks and cocktails.

Cannabis and other drugs

Cannabis

Pregnant women are advised not to use cannabis or expose themselves to second-hand smoke.

Cannabis can interfere with the growth of the **fetus**, which can result in lower birth weight. It may also affect brain development in the baby, leading to problems later during childhood and adolescence.

Cannabis affects the baby regardless of how it is used: smoked, vaped, eaten, or consumed in some other form.

Even though cannabis may relieve nausea in some patients, it is not a solution for pregnant women. You will find advice on relieving pregnancy nausea in the table Nausea and vomiting, page 141.

It isn't always easy to stop using. Ask for advice or help from a health professional.

Other drugs

Pregnant women are advised not to use any drugs.

The effects of drugs on an unborn baby depend on a number of factors: the type of drugs used, the amount consumed, their potency, and the moment and way the drugs are taken.

What's more, there is no way of knowing the exact composition of drugs sold on the black market. They are sometimes cut with other substances that can increase the risks associated with their use.

Cocaine, for example, can cause bleeding or placental detachment in pregnant women, which can, in turn, lead to the death of the fetus or premature birth. Babies whose mothers took drugs during pregnancy may develop drug withdrawal symptoms at birth.

If you have questions or concerns about your use of cannabis or other drugs or you need help to quit, alk to your health professional or contact:

Drogs, Help and Referral
514-527-2626
1-800-265-2626
aidedrogue.ca/en/

Household products

Cleaning products

Pregnant women can safely use common household cleaning products like dishwasher detergent, laundry detergent, window cleaner, and all-purpose cleaning products.

Corrosive products such as bleach and oven cleaners can irritate (and even burn) the respiratory tract, but do not harm your baby if inhaled in low concentrations.

Heavy-duty cleaning products and air fresheners that contain solvents release toxic substances. As a precaution, you should only use such products when absolutely necessary.

It is important to always read and follow product instructions.

Paint and paint remover

Most interior paints are latex based, which means they are thinned with water. Latex paints are considered safe during pregnancy if you are only exposed to them on an occasional basis.

Avoid using oil-based paints as they contain solvents that are harmful to the **fetus**. It is unlikely, however, that you will harm your baby by spending a short period of time (up to a few hours) in a room that has been freshly painted, especially if the room has been well ventilated.

Avoid stripping paint using a sander or paint remover. You could expose yourself to lead contained in old paint or to the toxic chemical products contained in paint remover.

Cats

Got a cat at home? That's not a problem, except that your four-legged friend could be carrying the toxoplasma parasite. Cats can contract this parasite by eating contaminated meat like mice or uncooked meat. The parasite then ends up in the cat's feces.

To reduce the risk of being infected, have someone else clean the cat's litter box. If no one else is available to clean it, wear plastic gloves and wash them after use before removing them. Wash your hands thoroughly after taking off the gloves.

You can also reduce the risk of transmission if the litter box is cleaned at least once a day, since parasites present in cat feces take 1 to 5 days before becoming infectious.

Keep pets away when preparing food. Don't let your cat climb up on kitchen counters or the dining table. Other precautions are listed in Preventing food-borne infections, page 104.

If you don't have a cat and would like to get one, consider waiting until after you give birth.

Gardening

Cats and other animals may have buried their feces in your garden. To avoid contact with the toxoplasma parasite (see Cats, page 71), wear gloves when gardening and when handling soil and sand. Wash your hands well after gardening and thoroughly wash all vegetables and fruit that may have been in contact with soil. Other precautions are listed in Preventing food-borne infections, page 104.

Health and safety at work

If you are pregnant or breastfeeding and your working conditions are potentially dangerous to your health or that of your baby, or if you simply have concerns about this matter, discuss it with your prenatal care provider. Depending on your work situation, certain measures may be available.

For example, most workers in Québec are eligible for the For a Safe Maternity Experience (PMSD) program from Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST). An occupational health team in your area will assess your situation and submit their findings to your prenatal care provider. CNESST will then determine whether you are eligible for the program. If so, your employer may have to adapt your position or working conditions, or you may be reassigned or remove you from the workplace with financial compensation.

Workers employed by companies under federal jurisdiction have slightly different provisions that may be included in their employment contract. In such cases, the rules of the *Canada Labour Code* apply. You can ask your employer or union for more information.

For information about the For a Safe Maternity Experience program, visit cnesst.gouv.qc.ca/en/life-events/i-am-expecting-child.

For information about the Canada Labour Code, visit canada.ca/en/services/jobs/workplace/federally-regulated-industries/canada-labour-code-parts-overview.html.

Travel and trips

Car safety

The *Highway Safety Code* stipulates that all occupants of a vehicle must wear a seat belt.

A properly-worn seat belt can prevent injury in the event of an accident. It protects the mom-to-be and is the best protection for the **fetus**.

Air travel

Pregnant women can travel by air. There are no international regulations preventing them from being on board a plane. However, each airline has its own rules, so it's a good idea to check with the airline you wish to fly with before buying your ticket.

You must wear your seat belt throughout your pregnancy. The lap belt should be worn snug around your hips, below your belly.

Bring a signed note from your health professional with you to the airport indicating your due date and a brief overview of your health and pregnancy status, as the airline may require you to present it.

Overseas travel

Before planning a trip abroad, you should talk to your prenatal care provider about your destination, how long you plan to stay, and any vaccines that may be required. Your prenatal care can be adjusted as needed.

Your health professional may also refer you to a travel health specialist.

For more information on safe travel and destination specific advice: travel.gc.ca/travelling/advisories.

Before planning a trip abroad, you should talk to your prenatal care provider.

Zika

Before traveling abroad, get information on the risk of infection by the Zika virus. It is recommended for pregnant women to postpone travel to Zika-affected areas.

The Zika virus is transmitted through bites from infected mosquitoes. It can also be transmitted between sexual partners via the sperm or vaginal fluid of an infected individual. Most people who are infected don't realize it because they don't have any symptoms.

Zika infection during pregnancy poses a serious threat to the baby. It can cause birth defects like microcephaly (abnormally small head), resulting in serious mental retardation.

Women who are pregnant or planning to become pregnant and their sexual partners must take precautions if they are staying in a Zika-affected area. That means using a condom, for instance, or abstaining from sexual contact until the risk of transmission has passed.

For information on the duration of the transmission period and recommendations on the Zika virus, consult your health professional and the following websites: quebec.ca/en/health/health-issues/a-z/zikavirus/ and canada.ca/en/public-health/services/diseases/zika-virus.html.

Check back often because these sites are updated regularly to keep up with the latest scientific research.

Insurances

Check that your insurance policy covers your medical costs in the event you have to be hospitalized or give birth in another country. Also check before you leave that your baby is insured too.

This coverage is even more essential in the event of a premature birth, as a stay in intensive care can be very expensive.

Régie de l'assurance maladie du Québec reimburses an amount equivalent to the cost of the care you would have received in Québec. Since such care can be more expensive outside of Canada, you (if you and your baby are not insured) or your insurer could end up with a big bill to pay.

Nutrition during pregnancy

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Eating well

Eating well means opting for meals and snacks made up of vegetables and fruits, whole grain foods, and protein-rich foods, especially plant-based ones.

Trying new flavours, varying your dishes and cooking methods, and sharing meals with others are all ways to make eating well a pleasure.

General advice on eating well applies at every stage of life and to all members of the family. But during pregnancy, women have special nutritional requirements.

Eating well during pregnancy

To eat well and meet your and your baby's needs during pregnancy, it is recommended that you

- Eat a variety of foods and add lots of colour to your plate
- Plan meals to include vegetables and fruits, whole grain foods, and protein foods
- Take a daily multivitamin with folic acid and iron
- Eat regularly (i.e., at least three times a day) according to your appetite
- Add one or two snacks between meals according to your appetite
- Drink mostly water when you're thirsty, supplemented by nutritious drinks such as milk or fortified soy milk
- Avoid restrictive diets
- Take the necessary precautions to avoid food-borne infections

The following pages will help you better understand your nutritional needs during pregnancy and adjust your diet to meet them.

The general advice presented here may not apply to you if you have a health problem, food intolerances, allergies, or other special needs. Talk to your health professional. He or she can evaluate your situation and adapt the advice, or refer you to a nutritionist.

Advice for women with gestational diabetes or multiple pregnancies can be found in the section Special needs, page 100.

Nutritional needs of pregnant women

The foods you eat during pregnancy contribute to your baby's health by providing the **nutrients** she needs to develop and get a good start in life.

Your baby relies on you for nourishment. The food you eat provides the nutrients she needs to develop and get a healthy start in life.

Eating well also ensures that you meet your own needs during pregnancy. The physical changes you undergo (see Physical changes, page 41) increase your body's need for liquids and many **nutrients**. What's more, a proper diet helps you build the energy reserves you need for pregnancy and breastfeeding.

Starting in the second trimester of pregnancy, your baby will develop faster and you will need to eat a little more. An extra snack or light meal during the day will usually be enough to meet your and your baby's growing requirements.

Eating regularly

To eat regularly, you can have three meals a day plus a few snacks, or five or six smaller meals. Try different options to find what works best for your day-to-day routine and your appetite.

Eating regularly during pregnancy helps keep you energized throughout the day and prevents or reduces some of the discomforts of pregnancy, including nausea (see Nausea and vomiting, page 141) and heartburn (see Heartburn and acid reflux, page 143).

Appetite, cravings, and aversions

Appetite may vary from one woman or pregnancy to another, and even from day to day.

The physical changes you undergo can affect your appetite. Early in the pregnancy, hormonal changes can increase your appetite, even if your needs haven't changed. As the pregnancy progresses, your uterus will compress your stomach, slowing digestion and reducing appetite.

Some of the discomforts of pregnancy (see Discomforts of pregnancy, page 139) may also increase or reduce your appetite, especially during the first few months.

Cravings

During pregnancy, most women have cravings—a strong desire for a particular food. You may find yourself longing for chocolate, salty snacks, ice cream, or candy. Sometimes, cravings are for more nutritious foods, such as fruit or dairy products.

Eating regularly can help reduce cravings. But regardless of what kind of foods you hunger for, the important thing is to eat well overall.

Aversions

During pregnancy, you may also find yourself avoiding foods you enjoyed before you became pregnant. Even if you stop eating a particular food, you can still get the **nutrients** you need from other sources. For example, if you don't feel like meat or poultry, you can opt for other protein foods like legumes, eggs, or fish.

Aversions are most common in the first trimester of pregnancy. If you stop eating certain foods, you can always try them again later in your pregnancy.

If your cravings and/or aversions happen very frequently, bother you, or make eating complicated, don't hesitate to raise the issue with your prenatal care provider or a nutritionist.

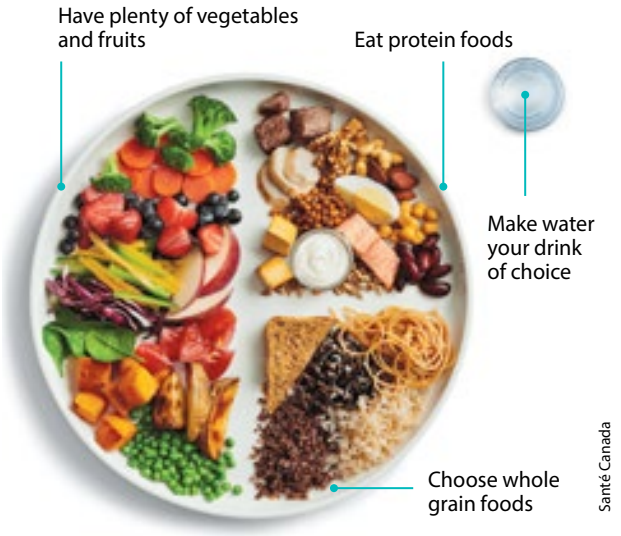
On the menu: variety, colours, and flavours

Enjoy filling your plate with a variety of colourful and flavourful foods.

Vegetables, fruits, whole grain foods, and protein foods are all important parts of a healthy diet during pregnancy. Each of these food groups provides different nutritional benefits, providing you with energy, helping your baby develop, or keeping you healthy throughout your pregnancy.

The *Food Guide Snapshot* can serve as an example when you're preparing your meals. The food groups in the guide are presented in the following pages. For more information, go to food-guide.canada.ca/en/food-guide-snapshot/.

Food Guide Snapshot



Vegetables and fruits

Colourful vegetables and fruits make a crunchy and flavourful addition to your meals. It's recommended that you incorporate them into all your meals and snacks.

You can get your veggies and fruits in different forms: fresh, frozen, canned, dried, or in sauces and compotes. They're easy to steam, stir-fry, or cook in the oven, and they go great in soups, cooked dishes, smoothies, and desserts.

Veggies and fruits are also rich in **nutrients**, including fibre (see Fibre, page 96), folic acid (see Folic acid, page 93), and vitamin C. Their colour indicates what kind of nutrients they contain. That's why it is recommended to eat a variety of different coloured veggies and fruits.

To make the most of their benefits, try to eat one dark green and one orange vegetable every day: e.g., broccoli, spinach, romaine lettuce, carrots, sweet potatoes, and winter squash.

A few tips

- If you're not used to eating veggies and fruits at every meal, start by adding them in small quantities. Choose the ones you like the most first, then try new ones and find different ways to cook them.
- Some veggies and fruits may be more affordable to purchase frozen or canned, especially in winter. Choose the ones that have less salt and sugar.
- Vegetable and fruit juices often contain a lot of salt and sugar, and no fibre. It's better to get your veggies and fruit in other forms.

Good to know...

Most of the fibre, vitamins, and minerals in potatoes are found in the skin. Brush them clean with a vegetable brush, cook them, and eat them with the skin on!

Choose vegetables and fruits in a variety of colours, as they are rich in different nutrients.

iStockphoto

Whole grain foods supply the energy you need to stay on your toes throughout the day.

Whole grain foods

Whole grain foods are one of the main sources of food energy. That's why they're recommended with every meal.

Whole grain foods include whole grain bread, pasta and breakfast cereal; oatmeal; brown rice; and any food made from whole grain flour. There are all kinds of whole grains you can try that can add variety to your meals, such as hulled barley, buckwheat, rye, millet, quinoa, wild rice, spelt, and kamut.

Whole grain foods are rich in **nutrients**, including carbohydrates, fibre (see Fibre, page 96) and many vitamins and minerals.

A few tips

- If you're not used to eating whole grain foods, add them gradually to your diet. To start, you can aim to make half of the grain products you eat whole grain.

When you choose whole grain foods, check the ingredients. The first item on the list must include the words “whole” or “whole grain.”

Protein foods

During pregnancy, proteins help the baby’s organs and muscles develop. Protein foods also help you keep you energized between meals and throughout the day. That’s why it’s important to include them in every meal and snack.

Many foods contain proteins. These foods are described in the following pages. Choose plant-based protein foods on a regular basis, including legumes, nuts, seeds, and soy products like tofu.

Dairy products

In addition to proteins, dairy products like milk, cheese, and yogurt contain calcium and phosphorus, which are vital to building your baby’s bones and teeth.

Milk also contains vitamin D, which helps your body absorb and use calcium.

Milk and dairy products are easy to add to meals and snacks. For example, you can

- Supplement meals and snacks with milk, yogurt, or cheese, based on what you like best
- Enjoy milk or yogurt in your cold cereal at breakfast or at snack time
- Replace water with milk when preparing hot cereals such as oatmeal or cream of wheat
- Use milk and dairy products in cream soups, gratins, salads, blancmange, béchamel sauce, omelettes, puddings, tapioca, and smoothies

Opt for dairy products with less fat, sugar, and salt.

Dairy products and fortified soy beverages help make bones strong.

Are you lactose intolerant?

Lactose-free milk, yogurt, and cheese are available in most grocery stores. You can also find tablets and drops that help digest dairy products. Ask your pharmacist for advice. You can also opt for fortified soy beverage, which doesn't contain lactose.

Fortified soy beverages, tofu, and other soy products

Fortified soy beverages contain calcium and vitamin D, and just as much protein as milk. Opt for plain or unsweetened fortified soy beverages.

Most other plant-based beverages (e.g., almond, hemp, or rice beverage) contain little or no protein.

Soy products like soybeans (edamame) and tofu are a good way to add variety to your diet. For example, you can use tofu like meat or poultry in most recipes.

Legumes, nuts, and seeds

Legumes, nuts and seeds are nutritious foods that are appealing for their flavour and variety. These plant-based protein foods are also rich in fibre.

Legumes such as lentils, chickpeas, and beans are also inexpensive and can be regularly included in your diet. They make an easy addition to soups, salads, and stewed dishes, for example.

Legumes like lentils, chickpeas, and beans are affordable and nutritious foods.

Eggs

Eggs are nutritious, practical, and inexpensive. In addition to protein, they also contain choline, which helps develop your baby's brain and tissues, and vitamin D.

Meat, game, and poultry

In addition to protein, meat, game and poultry are a good source of iron, which contributes to blood formation and the growth of the baby and placenta.

A few precautions

- While liver is an excellent source of iron, it is not recommended for pregnant women because it is too high in vitamin A.
- If you eat wild game, it's preferable to eat meat from game killed with lead-free ammunition. Lead can negatively affect children's development.

Fish and seafood

Eating fish and seafood during pregnancy provides important nutrients, including protein, vitamin D, magnesium, and iron. Oily fish such as fresh, frozen, or canned salmon, mackerel, herring, sardines and lake whitefish are also high in omega-3 fatty acids, which contribute to the development of your baby's brain and eyes.

Good to know...

Two meals of oily fish per week provide you with all the omega-3s you need to meet you and your baby's needs.

A few precautions

Some species of fish contain contaminants such as mercury. Women who are pregnant or plan to become pregnant, women who are breastfeeding, and young children can still enjoy fish if it is chosen carefully.

To limit exposure to contaminants

- Opt for fish and seafood that are low in mercury and other contaminants: shad, smelt, trout (except lake trout), Arctic char, Atlantic tomcod, salmon, lake white fish, haddock, anchovies, capelin, halibut, pollock (Boston bluefish), herring, mackerel, hake, flounder, sole, sardines, redfish, canned light tuna, tilapia, oysters, mussels, clams, scallops, crab, shrimp, and lobster
- Limit your consumption of
  - Certain marine fish (fresh or frozen tuna, shark, swordfish, marlin, and orange roughy) to 150 grams of cooked fish per month (75 grams per month for children 1 to 4 years old)
  - Canned white tuna to 300 grams per week (about two normal-sized cans). Canned light tuna is a better choice. For children, see Fish, page 551.
- Avoid regular consumption of fish most vulnerable to contamination: bass, pike, walleye, muskellunge, and lake trout.

Protein foods are nutritious and help keep you energized throughout the day. Vary them from meal to meal, and don't hesitate to give new ones a try.

Nutritious snack ideas

Eating snacks between meals can help you get all the **nutrients** you need. When you choose a snack, try to combine different foods, like in these examples:

- Veggies or fruits with cottage cheese or a piece of cheese
- Greek yogurt with fruits, granola, or nuts
- A slice of bread with peanut butter and banana
- Whole-wheat pita with hummus (chickpea spread)
- A bowl of cereal with milk, a fortified soy beverage, or yogurt
- Vegetable and soybean (edamame) salad
- Mixed nuts, seeds, and dried fruits
- Crackers with salmon spread
- A fruit smoothie
- A hardboiled egg with bell pepper slices and crackers

For more snack ideas, go to food-guide.canada.ca/en/tips-for-healthy-eating/healthy-snacks/.

Marie-Ève Caplette

Essential nutrients

Vitamin and mineral supplements

Pregnancy significantly increases your requirements for **nutrients** such as iron and folic acid.

Food is by far the best source of nutrients, even during pregnancy. But since it's hard to meet all of your requirements for iron and folic acid through diet alone, it is recommended that you take a prenatal multivitamin supplement.

It is recommended that you start taking a multivitamin containing folic acid two or three months before getting pregnant, and that you continue throughout pregnancy and after giving birth. The prenatal multivitamin should contain at least

- 0.4 mg of folic acid

AND

- 16 to 20 mg of iron

Some women's needs may differ. Your health professional will suggest an appropriate multivitamin for you.

A few tips

- Talk to your pharmacist or health professional before taking any vitamin or mineral supplements other than those that have been recommended to you.
- Some women may find it easier to take chewable or gummy prenatal multivitamins. Make sure they contain the recommended quantities of folic acid and iron.

Folic acid

Folic acid is an important vitamin for all pregnant women, especially at the beginning of pregnancy. It helps your baby's brain develop and reduces the risk of a **neural tube** defect such as **spina bifida** and other **birth defects**.

Foods containing folic acid include

- Legumes: lentils, Roman and white beans, soybeans (edamame), chickpeas
- Dark green vegetables: asparagus, spinach, broccoli, romaine lettuce, Brussels sprouts, okra, avocados
- Orange fruits: papaya, oranges
- Sunflower seeds
- Enriched pasta
- Enriched flour and bread made from enriched wheat flour

Even if you regularly eat foods that contain folic acid, it is recommended that you take a supplement containing at least 0.4 mg of folic acid throughout your pregnancy (see Vitamin and mineral supplements, page 92).

Iron

Iron is necessary for increasing blood volume and for the growth of the baby and placenta. Iron intake during pregnancy also allows your baby to build up important reserves for the first months of life. That's why you need more iron during pregnancy than at any other stage of life.

Iron deficiency can cause health problems for the baby and lead to **anemia** in the mother.

Here are some foods that contain iron:

Animal-based foods

- Meat: beef, lamb, pork, veal, game
- Poultry: chicken, turkey, ptarmigan
- Fish: sardines, salmon, trout (except lake trout), halibut, haddock
- Seafood: shrimp, oysters, mussels, clams
- Seal and other marine mammals, wild duck, moose, caribou
- Blood sausage

While liver is an excellent source of iron, it is not recommended for pregnant women because it is too high in vitamin A.

Even if you regularly eat foods that contain iron, it is recommended that you take a supplement containing at least 16 to 20 mg of iron throughout your pregnancy (see Vitamin and mineral supplements, page 92).

Plant-based foods

- Legumes: dried beans, lentils, chickpeas
- Medium or firm tofu
- Iron-fortified breakfast cereals
- Certain vegetables: pumpkin, green peas, potatoes, spinach, and other leafy greens
- Cashews, almonds, pistachios, and their butters
- Sesame seeds, sunflower seeds, pumpkin seeds, and their butters
- Iron-fortified pasta and bread

Iron from animal sources is absorbed better than iron from plant sources.

To more effectively absorb the iron contained in plant-based foods, add foods rich in vitamin C to the same meal: e.g. kiwi, citrus fruits, peppers, cloudberry, broccoli, strawberry, pineapple, Brussel sprouts, snow peas, mango, or cantaloupe. Also, avoid drinking coffee or tea with meals and in the hour that precedes or follows a meal.

Calcium and vitamin D

Calcium plays an essential role in building baby's bones and teeth and keeping them healthy. To effectively absorb calcium from food, you also need vitamin D.

Here are some good dietary sources of calcium, vitamin D, or both:

Calcium and vitamin D

- Milk
- Fortified soy beverages
- Yogurts fortified with vitamin D

Calcium

- Yogurt and cheese
- Tofu with calcium sulphate
- Canned fish with bones: sardines, salmon
- Calcium-fortified foods

Most legumes and dark green vegetables also contain small amounts of calcium, as do almonds and certain nuts and seeds.

Vitamin D

- Oily fish like fresh, frozen, or canned salmon, mackerel, herring, sardines, and lake whitefish
- Eggs
- Margarine

If you don't consume a lot of dairy products or fortified soy beverages, make sure your multivitamin also contains calcium and vitamin D.

Omega-3s

Omega-3 fatty acids contribute to the development of your baby's brain, nervous system and visual system. That's why it's important to make them a regular part of your diet during pregnancy.

Fish are the best source of omega-3s. Opt for oily fish like fresh, frozen, or canned salmon, mackerel, herring, sardines, and lake whitefish (see also Fish and seafood, page 88).

You will also find small quantities of omega-3s in other foods such as

- Canola, flaxseed, and nut oils, and vinaigrettes and soft margarine (non hydrogenated) made with these oils
- Ground flaxseed, chia seeds, walnuts
- Foods fortified with omega-3s (e.g., some milks and eggs)

By regularly eating foods containing omega-3s, you can usually meet your requirements through your diet. However, if you decide to take an omega-3 supplement, consult a pharmacist or other health professional (see Natural health products, page 139).

Fibre

Fibre is necessary to ensure your intestines work properly. It helps regulate digestion and prevent constipation (see Constipation, page 144).

Fibre is found in various categories of foods:

- Whole grain foods
- Vegetables and fruits
- Legumes, nuts, and seeds

Try to make these foods a regular part of your diet. It is also important to stay well hydrated when you increase your intake of high-fibre foods.

Drinks

During pregnancy, your fluid needs increase by about 50%. Drink often, especially water, to stay well hydrated. Proper hydration helps your intestines do their job and reduces the risk of constipation, fatigue, and headaches.

Water and nutritious drinks

Water is the ideal drink when you're thirsty. It's easier to make it your drink of choice when you have it close at hand, e.g., in a water bottle you always carry with you. For an original touch, feel free to add some fruit, herbs or cucumber slices to give it some flavour.

You can also opt for nutritious beverages such as milk or fortified soy beverages. Not only do they help you stay hydrated, they also provide **nutrients** like protein, calcium, and vitamin D.

Nutritious drinks like these are practical when you're not feeling very hungry. You can also use them to make smoothies. Just add yogurt and some fruit.

Drink often, especially water, to stay well hydrated. For an original touch, feel free to add some flavouring.

Coffee and caffeinated beverages

During pregnancy, you are advised not to exceed 300 mg of caffeine per day. That means no more than two cups of coffee (one cup equals 237 ml or 8 oz.) or three espressos of approximatively 30 ml/1 oz. each, provided you don't get any caffeine from other sources. Caffeine is also found in tea, iced coffee and tea, chocolate, and some soft drinks and medications.

Energy drinks are not recommended during pregnancy. They can contain as much caffeine as coffee, and sometimes a lot more.

They also contain products such as ginseng and taurine, which have not been proven safe for pregnant women.

Decaffeinated products are safe for consumption during pregnancy.

For more information, go to canada.ca/en/public-health/services/pregnancy/caffeine.html.

Herbal teas

Certain plant-based products can have a negative effect on pregnant women, by triggering contractions, for example. For others, there isn't enough scientific evidence to determine whether they are safe for pregnant women.

According to Health Canada, the following herbal teas are generally safe when consumed in moderation (no more than two or three cups a day): orange or other citrus peel, ginger and rosehip.

Vary your herbal teas rather than drinking the same kind every day. Another tasty option is to add lemon juice or ginger slices to hot water.

! Some mixed teas and herbal teas contain ingredients that are not recommended during pregnancy. Pay special attention to the ingredients when you buy such products.

Artificial sweeteners

To reduce their sugar intake, some people prefer to use artificial sweeteners or opt for "diet" foods and drinks containing artificial sweeteners, such as certain yogurts, beverages, jams, and chewing gum.

Sweeteners (e.g. aspartame, sucralose, sorbitol) found in processed foods or used for cooking are considered safe by Health Canada, even during pregnancy.

Cyclamate (e.g. Sugar Twin brand), a sweetener sold only in individual packets, should not be used unless recommended by a doctor.

Special needs

During pregnancy, you may find yourself in a situation where you have special dietary needs (e.g., a health problem related or unrelated to the pregnancy). If you have any questions, don't hesitate to raise them with a nutritionist or your prenatal care provider.

Gestational diabetes

Women with gestational diabetes should eat vegetables and fruits, whole grain foods, and protein foods, just like other pregnant women.

Eliminating any of these food groups is not recommended, because you and your baby might not get all the **nutrients** you need.

However, it is advisable to avoid sugar-rich products (e.g., juice, soft drinks, cakes, ice cream, sugar added to your food like in coffee or milk) or to consume them only in small quantities.

To help stabilize your blood sugar level (blood glucose), it's important to eat regularly (see Eating regularly, page 79). The *Food Guide Snapshot* presented on page 82 can help guide you with meal preparation. Eating foods high in fibre (see Fibre, page 96) and protein (see Protein foods, page 85) will also help you control your blood sugar.

For more information on gestational diabetes, Gestational diabetes, page 164.

Twin or multiple pregnancies

Women carrying more than one baby need to eat a little more than women carrying a single child.

If you have a multiple pregnancy, adding a few extra snacks or light meals to your usual diet may help you meet your needs (see Nutritious snack ideas, page 90). Your health professional may also recommend special vitamin and mineral supplements.

Discomforts of pregnancy such as morning sickness pressure on the stomach from the uterus, slower digestion, and physical discomfort are often greater for women with multiple pregnancies. These problems can really affect your appetite.

You can adapt what you eat by opting for more nutrient-rich foods or drinking nutritious beverages like smoothies, fortified soy beverages, and milk more often.

For more information on twin or multiple pregnancies, see Multiple pregnancies (twins, triplets, etc.), page 166.

Diets

Vegetarianism and veganism

If you're vegetarian, it's entirely possible for you to lead a healthy pregnancy. Be aware, however, that some **nutrients**, such as iron and omega-3s, are harder to get from a vegetarian diet. Pay special attention to these nutrients and let your prenatal care provider know about your dietary preferences.

If you're a vegan, it's also possible for you to lead a healthy pregnancy, but you're at greater risk of developing deficiencies in several nutrients. Iron, calcium, vitamin D, zinc, vitamin B_{12}, iodine, choline and omega-3 are more difficult to obtain with a vegan diet. Talk to your prenatal care provider about your dietary preferences.

Dieting

Going on a diet during pregnancy is not advisable, unless recommended by your health professional. Starting a new diet could put you and your baby at risk, because you may not get all the nutrients necessary for your baby's development and your health. Talk to your prenatal care provider if you want to go on a diet or are already on one.

Preventing allergies

Excluding foods from your diet doesn't reduce the risk of food allergies in your newborn. By eliminating certain foods, you run the risk of depriving yourself of some of the nutrients you and your baby need. If you are worried about allergies, discuss the matter with your health professional.

Preventing food-borne infections

There's no such thing as a world without germs. They are in the air, water, and soil, in animals, and in fertilizers and gardens. Therefore, they can also be found in the food and water we consume. Germs can cause food-borne infections.

However, most of the germs found in food aren't dangerous, and your digestive system and **immune system** are there to defend you. What's more, basic hygiene habits can help protect you against food-borne infections.

Prevention tips for the whole family

On the following pages, you'll find advice on how to choose, store, handle, and cook food to prevent food-borne infections. These measures are applicable at all times by everyone involved in food preparation.

Some foods pose a greater risk to pregnant women. You'll find specific advice related to pregnancy in the section Prevention tips for pregnant women, page 110.

Cleanliness

- Wash your hands thoroughly with soap before and after handling food (see How to do a good hand washing, page 640).
- Use hot soapy water to wash all plates, utensils, cutting boards, surfaces, and sinks used to prepare food.
- Disinfect everything that has been in contact with raw meat, poultry or fish using a commercial kitchen disinfectant or a solution containing 5 ml (1 tsp.) of bleach in 750 ml (3 cups) of water. Rinse well. Material can also be disinfected by washing it in the dishwasher.
- Wash your refrigerator and your reusable grocery bags and boxes regularly. Use a separate bag for meat and poultry.
- Change or wash your kitchen towels several times a week. When scrubbing dishes, opt for a washable sponge or cloth.

Storage, and preservation

- Make sure that your fridge is set at 4°C (40°F) or colder, and the freezer at -18°C (0°F) or colder.
- Do not leave foods that should normally be kept cold or hot at room temperature for more than two hours. In very hot weather, the maximum time should be one hour.
- Store raw meat, poultry, and fish on the bottom shelves of the fridge to prevent their juices from leaking onto other foods.
- Use refrigerated perishable foods by the best-before date, which applies before the package or container is opened. After opening, refer to the *Thermoguide* for information on how long you can safely store the product. The *Thermoguide* is available at mapaq.gouv.qc.ca/SiteCollectionDocuments/ConsommationPortail/Thermoguide_imprimable_8.5x11.pdf (in French only).
- Refrigerate leftovers without delay. Don't keep them any longer than four days in the fridge, or freeze them right away.

Handling

- Wash all fruits and vegetables (including leafy greens sold in unsealed packages) under running potable water, whether they are to be eaten raw or cooked and with or without the peel. A vegetable brush can be used for fruits and vegetables with a firm peel, such as carrots, potatoes, melons, and squash.
- Cut away and discard any damaged or bruised parts of fruits and vegetables, because bacteria may develop there. Cut products must be refrigerated, frozen or used right away.

- Don't defrost foods at room temperature. Instead, put them in the fridge or microwave, or defrost them in the oven while cooking.
  - Items that are too big to be defrosted in the refrigerator (e.g., turkey) can be immersed in cold water in their original wrapping. Change the water every 30 minutes, to ensure it stays cold.
- Cook food right away after thawing in the microwave.
- Do not refreeze foods, unless you cooked them after thawing.
- Don't let raw foods like meat, poultry and fish come into contact with cooked or ready-to-eat foods. For example, make sure ready-to-eat foods don't come into contact with dishes or utensils previously used for raw meat.
- Follow food label instructions on food preparation and storage.

Cooking and serving

- To make sure food has been cooked safely, you can use a digital food thermometer to check their internal temperature. The table on page 108 shows the minimum safe temperatures for destroying germs by food category.
- Frozen vegetables must be cooked, even if they are eaten cold. Follow the cooking instructions on the package, then cool the vegetables in cold water if necessary.
- Serve food hot (above 60°C) or cold (4°C or less).

Safe internal cooking temperature

	Minimum safe temperature	Characteristics	
Beef, veal, lamb • Whole cuts (e.g., roasts) or pieces (e.g., steaks, chops)	63°C (145°F)	Medium rare	Mechanically tenderized beef and veal must be turned at least twice during cooking.
	71°C (160°F)	Medium	
	77°C (170°F)	Well done	
Ground meat or meat mixtures (beef, veal, pork, lamb) • E.g., hamburgers, sausages, meatballs, meatloaf, casseroles	71°C (160°F)	The centre of the meat and the juice that flows from it must not be pink.	
Pork • Whole cuts or pieces (e.g., ham, loin, ribs)	71°C (160°F)		
Poultry (chicken, turkey, duck, and game birds) • Ground or in pieces (e.g., legs, breasts, drumsticks)	74°C (165°F)		
• Whole bird	82°C (180°F)	Juice should run clear, and meat should easily separate from the bone.	

	Minimum safe temperature	Characteristics
Wild or farmed game meat (e.g., deer, rabbit, boar) • Whole cuts, pieces, or ground	74°C (165°F)	
Fish	70°C (158°F)	
Seafood	74°C (165°F)	The shells of shellfish (e.g., oysters, mussels, clams) must open during cooking.
Smoked sausages (hot dogs)	74°C (165°F)	Make sure that liquid from sausage packages doesn't leak onto other foods or cooking equipment.
Egg and cheese-based dishes, stuffing	74°C (165°F)	It is preferable to cook stuffing separately from poultry.
Leftovers	74°C (165°F)	Soups, sauces, and dishes with sauce must be reheated to the boiling point. Never reheat leftovers more than once.

Prevention tips for pregnant women

A woman's **immune system** changes during pregnancy. As a result, pregnant women are more vulnerable to certain infections, such as listeriosis.

Infections like listeriosis and toxoplasmosis can also be more severe in pregnant women and cause serious problems for the **fetus** or newborn.

Toxoplasmosis

Toxoplasmosis is an infection transmitted by a parasite. It can be found in raw or undercooked meat, but also in cat feces. You will find more information on this infection in the sections Cats, page 71 and Gardening, page 71.

Listeriosis

Listeriosis is caused by a bacteria called *Listeria monocytogenes*. It is a rare disease, and often relatively harmless for healthy adults. During pregnancy, however, the risk of contracting the disease is higher, and it can have serious consequences.

In pregnant women, the symptoms of listeriosis are often similar to those caused by the flu: fever, shivering, fatigue, headache, and muscle or joint pain. More rarely, listeriosis causes digestive problems (eg., vomiting, nausea, cramps, diarrhea, headaches, and constipation).

However, the bacteria that causes listeriosis can pass through the placenta and trigger a **miscarriage** in the first trimester. If contracted later on in pregnancy, it can cause premature delivery, stillborn birth, or serious infections in the baby (e.g., blood poisoning, meningitis).

Listeriosis and foods

The bacteria that causes listeriosis is present in the environment and can also be found in facilities where food is processed. It survives and can develop in cold temperatures, for example in household refrigerators or the refrigerated section at the grocery store.

It can contaminate certain raw foods, but it can also contaminate cooked or pasteurized foods through cross contamination due to contact with raw food. It is important to note that foods contaminated by the *Listeria monocytogenes* bacteria look, smell, and taste normal.

To destroy the bacteria that causes listeriosis, food must be cooked or reheated to a safe temperature (see Safe internal cooking temperature, page 108).

Foods most likely to transmit listeriosis are low-acid foods containing a lot of water and not very much salt that

- Have not been cooked or industrially processed to destroy the bacteria

or

- Are already cooked or pasteurized, but
  - are at high risk of being contaminated during handling or storage after cooking or pasteurization
  - are ready-to-eat foods kept for a long time in the refrigerator
  - are eaten without being cooked again

The table on page 112 presents Safer choices and choices to avoid for pregnant women.

Safer choices and choices to avoid for pregnant women

	Safer choices	Choices to avoid during pregnancy
Meat, game, poultry	• Meat, game, and poultry cooked or reheated to a safe internal temperature (see page 108)	• Raw or undercooked cooked meat, game or poultry (e.g., tartare, carpaccio, rare ground meat)
	• Pâtés and meat spreads that do not need to be refrigerated until they are opened (e.g., canned products) • Homemade pâtés and meat spreads that are properly cooked and stored (see page 104)	• Refrigerated pâtés and meat spreads (e.g., country-style pâté, cretons)
	• Dried and salted deli meats that don't need to be refrigerated, like some salamis and pepperonis • Refrigerated deli meats (e.g., ham, turkey, sliced roast beef, bologna) reheated until steaming hot or used in a dish cooked to a safe internal temperature	• Refrigerated deli meats (e.g., ham, turkey, sliced roast beef, bologna) that are not reheated
	• Smoked sausages (hot dogs) reheated to a safe internal temperature or until steaming hot (see page 108)	• Smoked sausages (hot dogs) taken straight from the package and that have not been reheated

	Safer choices	Choices to avoid during pregnancy
Fish and seafood	• Fish and seafood cooked or reheated to a safe internal temperature (see page 109) • Fish and seafood that do not need to be refrigerated until they are opened (e.g., canned products)	• Raw or undercooked fish and seafood (e.g., tartare, sushi, ceviche, raw oysters)
	• Smoked fish and seafood that do not need to be refrigerated until they are opened (e.g., canned products) • Smoked fish and seafood (e.g., smoked salmon or trout) that is sold refrigerated or frozen and cooked or reheated to a safe internal temperature (see page 109)	• Smoked fish and seafood that is sold refrigerated or frozen (e.g., smoked salmon or trout) and is not cooked or reheated to a safe internal temperature

	Safer choices	Choices to avoid during pregnancy
Eggs and egg-based products	• Eggs that are well-cooked, with firm yolks and whites (e.g., omelet, boiled, scrambled)	• Raw or runny eggs (e.g., sunny side up, soft-boiled, poached)
	• Pasteurized vinaigrettes, mayonnaise, and salad dressing • Pasteurized eggs and egg whites for raw egg–based recipes • Egg-based dishes cooked to a safe internal temperature, like quiche (see page 109) • Homemade eggnog heated to 71°C (160°F)	• Recipes made with raw or undercooked eggs (e.g., unpasteurized mayonnaise or Caesar salad dressing, homemade eggnog, mousse, cookie or cake dough eaten raw, some sauces)
Vegetables and fruits	• Pasteurized fruit juice • Unpasteurized fruit juice that is brought to a boil, then cooled	• Unpasteurized fruit juice
	• Fresh fruits and vegetables that have been thoroughly washed	• Unwashed fruits and vegetables
	• Cooked or canned sprouts	• Raw sprouts (e.g., alfalfa, clover, radish, mung bean, and bean sprouts)

	Safer choices	Choices to avoid during pregnancy
Milk and dairy products (excluding cheeses)	• Pasteurized milk and dairy products made from pasteurized milk	• Unpasteurized (raw) milk and dairy products made from unpasteurized milk
Cheeses	• Any cheese used in cooked dishes that is brought to a safe internal temperature (e.g., sauces, casseroles, or au gratin) • All hard cheeses (e.g., Parmesan and Romano) • The following cheeses, made from pasteurized milk: – Firm cheese (e.g., cheddar, Gouda, Swiss) – Cheese curds – Cottage cheese or ricotta – Cream cheese – Processed spreadable cheese (in jars, wedges, or blocks) – Processed cheese slices	• All of the following cheeses, whether made from pasteurized or unpasteurized (raw) milk – Soft cheeses (e.g., Brie, bocconcini, Camembert, feta) – Semi-soft cheeses (e.g., Saint-Paulin, Havarti) – Blue cheeses • Firm cheeses made from unpasteurized (raw) milk

For more information

For more information on how to prevent food-borne infections, see canada.ca/content/dam/canada/health-canada/migration/healthy-canadians/alt/pdf/eating-nutrition/healthy-eating-saine-alimentation/safety-salubrite/vulnerable-populations/pregnant-enceintes-eng.pdf.

For more information on safe food preparation and preventing food-borne infections, go to mapaq.gouv.qc.ca/fr/Consommation (in French only).

You can keep track of food recalls by checking the following pages:

Canadian Food Inspection Agency
ecalls-rappels.canada.ca/en. Click "Advanced Search" and select the "Food recall warning" category.

Ministère de l'Agriculture, des Pêcheries et de l'Alimentation
quebec.ca/sante/alimentation/rappels-aliments, section "Consultez les avis de rappels d'aliments" (in French only)

Resources

To find out more about nutrition during pregnancy, you can go to canada.ca/en/public-health/services/pregnancy/healthy-eating-pregnancy.html.

During your pregnancy, it is usually possible to meet with a nutritionist who can guide you on changing your eating habits. Ask your CLSC or prenatal care provider about the services available in your region.

Olo support program

If you have a low income, you may be eligible for the OLO program. This program offers personalized support beginning at 12 weeks of pregnancy. It gives expectant mothers access to prenatal multivitamins and redeemable food vouchers. Support is usually provided by a nutritionist or nurse, and includes advice on nutrition and healthy eating.

Olo support services are offered in almost every part of Québec by CLSC staff and by certain community organizations. Contact your CLSC to find out if you're eligible for Olo support.

Other support programs may be available in your region, for example, if you live in Nunavik region or in the Cree Territory of James Bay. Ask your CLSC or your health professional for more information.

To find the CLSC in your area
Go to sante.gouv.qc.ca/en/repertoire-ressources/clsc

Fondation Olo
fondationolo.ca/en/

Food banks and other resources

You can find a food bank or community kitchen in most regions in Québec.

To find the food banks in your area
Go to banquesalimentaires.org/en/

To find the community kitchens in your area
Go to rccq.org/en/

Prenatal care


Élise Laurin

Professionals and services

Health professionals

Throughout your pregnancy you have access to a variety of health professionals who will help care for you and your baby. There is also a whole range of services available that can help you through this important period of your life.

Where to find information about services

Access to health professionals, hospitals and birthing centres, doulas, and prenatal classes and activities varies by region. For information about the services available in your area, contact a health professional at a local hospital, clinic, or CLSC.

Health professionals who can provide prenatal care include midwives, obstetrician/gynaecologists, some family doctors, and primary health care nurse practitioners. With the exception of primary health care nurse practitioners, these professionals can also attend deliveries.

In addition, you will be in contact with nurses at your prenatal classes and your CLSC, in medical clinics or hospital high-risk pregnancy clinics (GARE clinics), and during your **labour** and delivery.

If you're thinking about giving birth with a midwife at home, at a birthing centre, or in hospital, contact your local CLSC at the start of your pregnancy to find out if midwife services are available in your area.

Many health professionals work as a team. You can ask your health professional how his or her team works and who will be there for the birth of your baby. It is important that you trust and feel supported by your health professional. Feel free to ask even the most basic questions.

You can change healthcare professionals at any time during your pregnancy. If you do so, make sure to have your file transferred so you and your baby receive seamless, quality care.

Other health professionals who are not directly involved in providing prenatal care may also be of help, such as nutritionists, pharmacists, psychologists, social workers, and physiotherapists.

Doulas

Doulas help future parents during pregnancy and delivery. They can provide additional support and information, even if they are not technically health professionals. They can also provide assistance after your baby is born.

If you would like to have a doula, it is important to choose someone you and your partner trust and feel comfortable expressing your needs to during your pregnancy and delivery.

It is best to inform your health professional if you intend to have support from a doula. Keep in mind that doulas often charge for their services. Fees vary by organization and may also depend on your financial resources.

CLSCs

CLSCs (Centres locaux de services communautaires) are a gateway to health and social services for everyone. They offer a wide range of services to pregnant women and parents. Services may vary by region.

CLSCs can also inform you about the services available in your region. If you have questions regarding your health and well-being, your CLSC can provide answers or refer you to the appropriate service. A few days after the birth, a CLSC nurse may contact you to make sure everything is going well for you and your baby.

Your CLSC works in collaboration with childcare centres known as centres de la petite enfance (CPEs) to provide any help you may need. It also works with community organizations that support families. It can refer you to resources in your community as required.

To find the CLSC in your area
Visit sante.gouv.qc.ca/en/repertoire-ressources/clsc.

CLSCs offer a variety of services and can also refer you to other organizations.

After your baby has arrived, your CLSC can also help you adjust to parenthood by providing access to various services. Contact your CLSC for information on the services available in your area.

Info-Santé and Info-Social

Info-Santé and Info-Social are available in most regions throughout Québec. These free, confidential hotline services are provided through the health system. You can talk with a professional specializing in health or psychosocial support at any time of day and night, 7 days a week.

Info-Santé can respond to concerns you may have about your health or that of your baby and give you advice.

Info-Social can respond to your concerns about psychological and social problems and provide support for you or your family (e.g., anxiety, parental roles, couples issues, financial difficulties).

Simply dial 8-1-1 to access these two services.

Info Santé and Info-Social are confidential services. They are available throughout Québec, except in certain remote regions. In these areas, your prenatal care provider will tell you the local number to call.

Prenatal classes

Prenatal classes are designed to answer your questions about things like pregnancy, **labour**, delivery, breastfeeding, and newborn care. This information is generally provided during group meetings, and fathers or partners are encouraged to attend. Classes are also an opportunity to talk with people who are going through the same things you are.

To find out what is available in your area, ask your health professional or contact your CLSC.

Prenatal activities

Yoga, aerobics, aquafitness, and other classes are great opportunities to have fun, get moving, meet other parents-to-be, and obtain useful information during your pregnancy. Many CLSCs and community and private organizations offer activities for expectant mothers.

Approaches, start dates, length, the number of participants, and costs vary from one organization to the next. Some activities are for pregnant women only, while others are open to couples.

To find out what is available in your area, ask your health professional or contact your CLSC.

For more resources, see Resources for parents, page 774.

Prenatal care

Prenatal care includes

- Regular appointments with your health professional (see Regular appointments, page 125)
- Blood tests, urine analyses, and vaginal swabs (see Blood tests and urine analyses, page 127 and Vaginal swabs, page 128)
- **Ultrasounds** (see Ultrasound, page 128)
- Genetic screening tests, in some cases (see Screening tests, page 129)

Regular appointments allow you to check that your pregnancy is going well and to get screened for potential problems. These appointments also give you the opportunity to get answers to your questions and help you prepare for delivery and the arrival of your newborn.

How often?

The frequency of prenatal appointments may vary. If you have a specific health problem, more frequent appointments may be necessary, but generally appointments will be scheduled as follows:

- During the first 11 weeks of pregnancy: first appointment
- Between 12 and 30 weeks: one appointment every 4 to 6 weeks
- Between 31 and 36 weeks: one appointment every 2 to 3 weeks
- From 37 weeks until the baby is born: one appointment per week

To prepare for your next appointment, you can write down questions you want to ask your health professional as you think of them so you don't forget.

If you have questions at any time, you can call Info-Santé by dialing 8-1-1.

Starting at 20 weeks of pregnancy, it is often possible to contact your hospital or birthing centre if you have questions about your pregnancy.

Pregnancy checkups are a good opportunity to ask any questions you might have.

Good to know...

At prenatal appointments, you can at any time

- Ask for an explanation of any tests or examinations your health professional wants to perform
- Seek a second opinion from another health professional if you have any concerns
- View your file

Regular appointments

First appointment

Usually the first prenatal appointment will take place between 8 and 11 weeks of pregnancy.

This first appointment is generally longer than subsequent appointments. Your health professional will take the time to ask questions about your health history and will also offer to perform a physical exam.

Type of questions to expect
At your first prenatal appointment, your health professional will probably ask about the following:

- The date of your last menstrual period and the length of your cycle in order to determine how many weeks pregnant you are and estimate your due date
- Your health before and since the start of your pregnancy. For example, you may be asked about health problems, medication, allergies, operations, problems related to anaesthesia, and depression
- If you have ever been pregnant before, including any **miscarriages** or abortions you may have had
- Your family history and the family history of the baby's father, i.e., any diseases that run in your family and the father's family
- If you have ever had gynecological problems, such as cervical surgery, or if you or your partner have herpes
- Your living conditions (sources of income, family situation, support network)
- Your lifestyle (diet, physical activity, tobacco, alcohol, drugs)
- Your religious beliefs and practices
- If there are any sources of stress in your life, and if so, what kind
- What type of work you do in order to determine if it poses any risks during pregnancy

Do you have questions? Are you hesitant to have some tests done? Do you think other tests might be helpful? Now is the time to talk these things over with your health professional so you can make informed decisions.

Some exams, such as genetic screening, for example, should ideally be performed between 11 and 13 weeks of pregnancy (see Screening tests, page 129). If you want to have these exams, your first prenatal appointment is a good time to talk about it.

Physical exam

Your health professional will offer to perform a full physical exam, which may include a gynecological exam.

He or she will check your weight and blood pressure and may listen to your baby's heartbeat.

A PAP test to screen for cervical cancer will be suggested. This exam can also be performed later during the pregnancy, or after the birth.

You may notice light bleeding within 24 hours of the gynecological examination. Don't worry, the bleeding is from the cervix, which is more sensitive during pregnancy.

Subsequent appointements

Subsequent appointements are usually shorter.

During the appointments, your health professional will ask how your pregnancy is going and check:

- Your weight
- Your blood pressure
- The height of your uterus (starting around 20 weeks)
- The baby's heartbeat

Your baby's heart starts to beat five weeks after the start of your last menstrual period. Usually, it cannot be heard until 10 to 12 weeks into the pregnancy.

Blood tests and urine analyses

During your appointments, your health professional may prescribe blood tests and urine analyses to determine

- If you are **anaemic**
- If your blood sugar level (blood glucose) is normal
  - Between 24 and 28 weeks of pregnancy, your health professional will suggest a screening test for gestational diabetes (see Gestational diabetes, page 164). This test measures your blood sugar after you drink a sugary liquid.
- If you have a disease that you could transmit to your baby (such as syphilis, HIV/AIDS, or hepatitis B)
- Your blood type and **rhesus factor (Rh factor)**:
  - If you are Rh negative, some precautions must be taken. You may be given anti-Rh immunoglobulin (also called WinRho®) at 28 weeks of pregnancy, and sometimes after the delivery. You may also be given WinRho® if you have a **miscarriage**, undergo **amniocentesis**, or you have bleeding.
- If you have anti-rubella **antibodies**
- If you have bacteria in your urine, even if you don't have any symptoms
- If you have protein in your urine

Depending on your condition, additional tests may be suggested at different times during your pregnancy.

Vaginal swabs

It is also recommended that pregnant women be tested for certain **sexually transmitted infections (STIs)** like chlamydia and gonorrhoea. Many of these diseases can go undetected and affect your health and that of your baby. STI screening is completely confidential.

If you think you may have had contact putting you at risk for an STI after your initial screening, don't hesitate to talk to your health professional about repeating the tests.

Your health professional will suggest a vaginal and anal swab to check for Group B Streptococcus at around 36 weeks. This type of bacteria poses no problems for the mother, but can in rare cases harm the baby if it is not treated. If it is present, you will be treated with antibiotics during **labour**.

Ultrasound

Ultrasound is a type of exam that will be offered by your health professional. Ultrasound enables your health professional to:

- Determine how far along you are and when your due date is
- Check that your baby is the right size for his/her age
- See most of your baby's organs (heart, liver, kidneys, stomach, bladder, brain, etc.) and limbs
- Confirm how many babies there are
- Determine the location of the placenta

At the time of the ultrasound, it is often (but not always) possible to determine your baby's sex, although there is a slight risk of error. If you want to keep the baby's sex a surprise, tell the technician and your doctor to avoid any misunderstanding.

Screening tests

Screening tests for **chromosomal anomalies** may be offered to you as part of your prenatal care.

Prenatal Screening Program of Québec

At your first prenatal appointment, your health professional will ask if you want to take part in the Prenatal Screening Program of Québec. This program screens for **trisomy** 21 but may also detect trisomy 18 or 13.

Prenatal screening is not mandatory. It is up to you to choose whether or not to do the screening tests and whether or not to use their results. The decision is yours at every step. The steps are:

1. Biochemical test, with or without **ultrasound** (see page 130)

2. A genomic test (fetal DNA test) or a diagnostic test (see page 131) if the biochemical test shows the probability is high

The genomic test may also be offered right away if you meet one of the following criteria:

- You will be over 40 years old at the time of the birth
- You have already had a pregnancy with trisomy 21, 18, or 13
- You are pregnant with twins
- You recently had a prenatal genetic consultation where the test was recommended to you.

In Québec, most of the tests under the screening program are free for women who choose to participate.

These tests are described on the following pages.

Before you have these tests, think about the decision you will have to make if you find out the baby has a trisomy.

Biochemical test
The biochemical test involves testing your blood during pregnancy.

The test takes into account your age and the blood test results to determine whether your probability of having a baby with **trisomy** 21 is low or high. Depending on the results, the test may also indicate a high probability of your baby having trisomy 18. At this stage, it isn't possible to distinguish between trisomy 18 and trisomy 13.

If your probability of having a baby with trisomy 21 or 18 is high, you will be offered the genomic test (fetal DNA test). In certain specific situations, you may be offered a diagnostic test right away.

Good to know...

If the results of the biochemical test, with or without ultrasound, show a high probability, this does not necessarily meant that your baby will have trisomy 21 or trisomy 18.

Ultrasound
Along with the biochemical test, you may be offered an **ultrasound** between weeks 11 and 13 of your pregnancy. There may be a fee charged for this test.

This ultrasound is used to measure nuchal translucency, i.e. the space between the skin of the neck and the spine of the **fetus**. A higher than normal measure of nuchal translucency may indicate a high risk of trisomy 21, other **chromosomal abnormalities**, or fetal malformations.

Genomic test
The genomic test is designed to screen for trisomy 21, 18 and 13. If the biochemical test shows a high risk of trisomy 21 or 18, the genomic test can also be used to better determine the risk level before offering a diagnostic test.

This test is offered because it is reliable and safe. It is done by a blood test on the pregnant woman.

Diagnostic test
If the genomic test shows that risk is high, a diagnostic test will be offered to you.

The diagnostic test is a reliable way to determine whether the baby has a **chromosomal anomaly**, but it does carry some risk of complication, including **miscarriage**.

If you are faced with the difficult choice of continuing or terminating your pregnancy after completing these tests, you may need help. Don't hesitate to discuss this with your loved ones or the healthcare professional who is monitoring your pregnancy.

It is normal for you and your partner to feel anxious if you choose to have these tests done. Be sure to ask for all the information you need and take your time to decide.

You may also want to contact **trisomy** 21 parent groups. They can help you better understand their reality and make the decision that is best for you. To find groups in your area, contact your CLSC.

For information about the program, visit quebec.ca/en/health/advice-and-prevention/screening-and-carrier-testing-offer and click on Québec Prenatal Screening Program.

Other screening tests

After the birth, you will be given the option of testing your baby's blood and urine for diseases that are rare, but require early monitoring or treatment (see Neonatal screening, page 244).

Other types of care

Dental care

You can see a dentist during pregnancy, but be sure to let him or her know you're expecting.

Generally speaking, there is no problem with receiving dental care during pregnancy. However, your dentist may suggest that non-emergency treatments be postponed until after delivery.

Eye care

Hormonal changes during pregnancy can make your eyes dry and cause discomfort. Your optometrist can recommend the appropriate treatment.

Your vision can also fluctuate while you are pregnant, which means your glasses or contact lenses may no longer be suitable for your vision. If this is inconvenient, you can consult an optometrist to obtain a temporary prescription.

Your vision will stabilize in the months after the birth. It is advisable to wait six to nine months after delivery or until you stop breastfeeding before obtaining a new prescription.

However, if you experience sudden vision loss, or if your vision suddenly becomes double or blurry, you should see a doctor promptly (see Severe headaches, upper abdominal pain, or sudden changes in vision, page 154).

X-rays

You may occasionally require x-rays during pregnancy. If you need to have an x-ray, be sure to tell your doctor or dentist that you are pregnant. He or she will be able to determine whether the benefits of the x-ray outweigh the risks for you and your **fetus**. If you do have an x-ray, tell the medical technician that you are pregnant so that he or she takes all possible safety precautions, like having you wear a lead apron, for example.

At your first prenatal appointment, let your health professional know if you had any x-rays before learning you were pregnant.

Vaccines

Flu (influenza) vaccine

Pregnant women in the second and third trimester are more likely to suffer flu complications or be hospitalized. They may also transmit the flu to their baby. That is why it is recommended that you get the flu vaccine if you are 13 weeks pregnant or more. If you have a chronic health condition, you should get the flu vaccine as soon as possible, regardless of your stage of pregnancy.

Pertussis (whooping cough) vaccine

Pertussis (whooping cough) is a **contagious disease** of the respiratory tract that can be serious for young babies. It is recommended that pregnant women be vaccinated against pertussis. The vaccine is usually given between 26 and 32 weeks of pregnancy. It protects you and your baby during the first few months of baby's life. The vaccine must be repeated for each pregnancy.

Depending on your condition, other vaccines may be recommended to you during your pregnancy or after delivery.

Contact with people with a contagious disease

Some pregnant women may come into contact with people, especially children, who have contagious diseases. For healthy adults and children, many of these diseases will go undetected or have no serious consequences. However, they can affect pregnant women, the pregnancy, or the fetus.

To reduce the risk of contracting a contagious diseases, see Preventing infections, page 638.

If you feel sick or have any physical signs that suggest you've caught one of these diseases, see a doctor promptly. As a precautionary measure, inform the healthcare facility before you arrive.

If you don't feel sick but you think you have been in contact with someone who has a contagious disease, read the next pages for some advice.

COVID-19

If you think you have been in contact with someone who has COVID-19 and have questions, call Info-Santé (8-1-1).

Pertussis (whooping cough)

If you've been in contact with someone who has pertussis (whooping cough) in the 4 weeks before your due date, see a doctor.

Cytomegalovirus (CMV)

CMV can cause a number of problems in unborn children. It is mainly transmitted by young children, even if they don't appear to be sick. You can reduce the risk of infection by following the guidelines on page 638. For more information, visit cmvcanada.com.

Fifth disease (also known as erythema infectiosum or parvovirus B19 infection)

About half of the adults in North America contracted fifth disease in their youth, which protects them against reinfection later in life. If an unprotected pregnant woman contracts fifth disease, there is a chance the fetus may become infected. In rare cases, a miscarriage may occur as a result of this infection.

The risk of complications is greatest before 20 weeks of pregnancy. The risk is much lower after. If you come into contact with someone with fifth disease, talk to your health professional. He or she will be able to assess your situation.

Rubella (German measles)

Thanks to vaccination, rubella is very rare in Québec. If contracted, however, rubella can cause complications for the pregnancy and the fetus. If you think you have been in contact with someone with the disease, see a doctor.

Measles

Measles is a highly **contagious disease**. Pregnant women with measles can have a more serious form of the disease. They also are at greater risk of miscarrying or not carrying their baby to term.

If you think you have measles or have been in contact with a person with measles, promptly call your doctor, CLSC, or Info-Santé (8-1-1) to have someone assess your situation.

Chickenpox

Thanks to vaccination, pregnant women in Québec have little exposure to chickenpox. When chickenpox is contracted, it can cause complications for the mother and baby. Here is what you should do if you come into contact with a person with chickenpox:

- If you are vaccinated against chickenpox or have already had the disease, your baby is generally not at risk.
- If you are not vaccinated and have never had chickenpox (or aren't sure if you have), see a doctor within 48 hours. They will be able to assess your situation.

Other contagious diseases

If you come into contact with a person with one of the following contagious diseases, there is no particular danger for your pregnancy or your baby: roseola, hand-foot-mouth disease and scarlet fever. If needed, consult a doctor.

If you are worried you had sexual relations that put you at risk of **sexually transmitted infection (STI)** during your pregnancy, don't hesitate to tell your health professional (see Vaginal swabs, page 128). STI screening is confidential.

At all times, Info-Santé (8-1-1) can advise you on what to do.

Health during pregnancy


Leyla Stiten

Medication and natural health products

If you are pregnant or want to get pregnant and you take prescription or over-the-counter medication or natural health products, talk to your health professional. You can ask whether you should continue, stop, or change what you are taking.

Care should be exercised when considering taking any prescription or over-the-counter medication or natural health product during pregnancy. Some may be ineffective, dangerous during pregnancy, or harmful for your baby, while others may be necessary for you and our baby's health.

If you have questions about prescription or over-the-counter medication or natural health products, talk to a pharmacist, a doctor, or your prenatal care provider.

Prescription medication

You want to get pregnant

If you want to get pregnant and are taking medication for a specific condition such as anxiety, epilepsy, hypertension, hypothyroidism, depression, asthma, or diabetes, talk to your doctor. Your medication may need to be adjusted.

You are pregnant

If you get pregnant and are taking medication, talk to a doctor or pharmacists right away to find out whether you should continue, change your medication, or stop your treatment.

It is very important not to stop treatment without consulting a professional. This could cause complications for you and your baby.

If you get sick during pregnancy, it's good to know that most illnesses can be treated even while you're pregnant. Don't hesitate to talk to your health professional. Medication suitable for your situation may be prescribed.

Over-the-counter medication

Some over-the-counter medications can sometime be taken for short periods during pregnancy. Others may cause complications. Talk to a pharmacist or other health professional before using over-the-counter medication. They can

- Suggest ways you can minimize discomfort without medication
- Give advice on what kinds of over-the counter medication you can use during pregnancy
- Check whether the over-the-counter medication can be used with the products you are already taking
- Explain how to use the medication

Natural health products

Be just as careful with natural health products (plants, essential oils, supplements, vitamins, and minerals) as with conventional medication. Some of these products, or their ingredients, may be dangerous during pregnancy. What's more, their effects during pregnancy are not always well known, and their exact contents are not always clearly indicated on the packaging.

Plants used for cooking, like parsley, basil, and garlic, are generally harmless. But when sold as natural health products in the form of capsules, tablets, tinctures, extracts, or essential oils, they can be more concentrated than when they are used in food. This may present risks for the pregnancy.

Some teas and herbal teas may also represent a risk during pregnancy. For suggestions on herbal teas you can use while pregnant, see Herbal teas, page 99.

Ask a pharmacist or other health professional before using natural health products.

Discomforts of pregnancy

Your body changes throughout your pregnancy (see Physical changes, page 41). These changes sometimes cause discomforts that are generally harmless, but can sometimes be hard to bear.

The tables that follow outline some common discomforts of pregnancy as well as tips for relieving them.

If these tips don't help you feel better, if your condition worsens, or if you have any concerns, call a health professional right away.

Fatigue

Description

- When:
  - Common from the beginning of pregnancy until the end of the 1st trimester
  - May come back in the 3rd trimester
- Likely causes:
  - Hormonal changes
  - Poor sleep caused by:
    - Frequent waking to urinate
    - Back pain (see page 148)
    - Heartburn and acid reflux (see page 143)
    - Leg cramps (see page 142)
    - Difficulty finding a comfortable position
    - Emotions or anxiety
  - Diminished nutrition due to nausea and vomiting
  - Insufficient iron intake
  - Decreased caffeine intake
  - Insufficient hydration

Some suggestions

If possible, you can

- Sleep longer at night (8–10 hours) or take naps
- Relieve the problems interfering with the quality of your sleep
- Adapt your diet to take your nausea into account (see page 141)
- Increase your iron intake (see page 93)
- Increase your daily water intake (see page 97)
- Ask for help with your everyday tasks.

Not feeling better?

- Contact Info-Santé (8-1-1). A nurse will be able to advise you.
- Talk to a health professional.

Nausea and vomiting

Description	Some suggestions	Not feeling better?
• When: – Generally appears between 3 and 8 weeks of pregnancy – Often peaks around 8 weeks of pregnancy – Rare after 20 weeks • Frequency: – Nausea: 75% of pregnant women – Vomiting: 50% of pregnant women • Likely cause: hormonal changes.	If possible, you can • Eat a little bit before you get up in the morning, for example crackers or toast • Get out of bed slowly • Try to rest during the day • Avoid going a long time without eating • Eat smaller amounts more often (small meals and snacks) • Adjust your diet: – Choose foods that you tolerate and feel like eating – Avoid strong odours and food textures that make you queasy – Eat cold foods or food in liquid form • Drink between meals instead of during meals • Get information about **acupressure** • Ask your pharmacist if there are any products that may relieve your discomfort	Talk to your health professional if • The nausea or vomiting is interfering with your daily life • You are losing weight See a health professional right away if • You show signs of dehydration: feeling of thirst; dry mouth, lips, and nose; less urine than usual or dark urine; dizziness and weakness • You have severe, persistent vomiting

Leg cramps

Description	Some suggestions
• When: during the second half of pregnancy • Frequency: over 50% of pregnant women • Cause: acid build-up (lactic and pyruvic acids) in the leg muscles. This build-up causes harmless but extremely painful cramps. • Distinctive feature: they occur mostly at night.	When you have a cramp, you can • Stretch your leg by pointing your toes upward • Massage the affected muscles • Get out of bed • Walk around Don't worry if you feel a little discomfort or soreness the next day; it is nothing serious.
	Not feeling better?
	• Talk to your health professional. • See a doctor right away if you have intense, persistent pain accompanied by swelling.

Heartburn and acid reflux

Description	Some suggestions
• When: from the start of pregnancy. Symptoms can get worse as the pregnancy progresses. • Likely cause: hormonal changes associated with pregnancy. These changes slow digestion, causing stomach fluids to move up into the esophagus.	You can • Avoid eating or drinking before going to bed • Sleep with your head elevated • Wear loose clothing • Eat in a seated position • Adapt your diet: – Eat smaller amounts more often (small meals and snacks) – Eat protein-rich foods at each meal (see page 85) – Reduce your intake of fatty foods – Reduce your intake of citrus fruits, tomatoes (and tomato products), and spices if these foods irritate you – Reduce your caffeine intake (see page 98) – Drink between meals instead of during meals • Ask your pharmacist if there are any products that may relieve your discomfort
	Not feeling better?
	• Consult your prenatal care provider if – Symptoms persist – Your symptoms are accompanied by fever, nausea and vomiting, or severe headaches

Constipation

Description	Some suggestions
• When: mostly in the 2nd and 3rd trimesters of pregnancy • Frequency: up to 40% of pregnant women • Likely causes: – Pregnancy-related hormonal changes that slow digestion – Iron supplements – Expansion of the uterus, which puts pressure on the intestine	• Gradually increase your intake of fibre-rich foods: – Whole grain foods – Fruit and vegetables (fresh, dried, frozen, or canned) – Legumes, nuts, and seeds • Increase your daily water intake (see page 97) • Get regular physical activity (see page 60) • Go the bathroom as soon as you feel the need • If you have hemorrhoids that cause pain when you have a bowel movement, see Hemorrhoids, page 145.
	Not feeling better?
	• Talk to a pharmacist or other health professional, who may suggest you take fibre or psyllium supplements. If you do, make sure to drink plenty of fluids to avoid making the constipation worse • Talk to your healthcare professional if constipation persists or gets worse

Hemorrhoids

Description	Some suggestions
• When: mostly in the 2nd and 3rd trimesters of pregnancy • Frequency: 30% to 40% of pregnant women • Likely causes: – Expansion of the uterus puts pressure on the veins near the anus, which makes them swell – Constipation can make symptoms worse	• You can take sitz baths • If you also are constipated, follow the recommendations on page 144 • If you have pain, your pharmacists can suggest a product to provide relief
	Not feeling better?
	• See a doctor or your prenatal care provider

Varicose veins and swelling

Description

- Likely causes:
  - Increased volume of blood and pressure from the uterus
  - Restricted blood circulation, which can cause fluid retention in the legs
- Distinctive features: varicose veins are primarily found on the legs, vulva, vagina, and anus

Some suggestions

You can

- Elevate your legs when possible
- Sleep on your left side
- Get regular exercise (see page 60)
- Avoid sitting or standing for long periods without moving
- Wear compression socks

Varicose veins on the anus are called hemorrhoids. Tips on treating them are presented on page 145.

Not feeling better?

- Talk to your health professional
- See a doctor right away if:
  - You have swelling in one leg only
  - The swelling is accompanied by intense, persistent pain
  - The swelling spreads (legs, hands, and face)

Numbness and pain in the hands

Description

- When: in the 2nd and 3rd trimesters
- Frequency: about 33% of pregnant women
- Likely causes: fluid retention in the body (oedema or swelling), which pinches the median nerve in the wrist
- Distinctive features:
  - Often affects both hands
  - Mostly occurs at night
  - Goes away after the birth

Some suggestions

- You can try an orthotic device or a wrist protector like the ones worn for rollerblading. Wear them for a few hours a day or at night whenever you feel pain or numbness. If necessary, seek advice from a pharmacist or other health professional.

Not feeling better?

Talk to your doctor if

- You experience weakness in your hand
- The problem persists after the birth of the baby

Back pain

Description	Some suggestions
• Frequency: about 50% of pregnant women • Likely causes: – Lordosis, i.e., arching forward of the spine due to abdominal weight – Ligamentous hyperlaxity, i.e., loose ligaments (see page 46)	Regular and varied physical activity can help relieve back pain during pregnancy (see page 60). For example, you can • Do pool exercises like aquafitness or swimming • Do yoga or mobility exercises (see page 62) You can also • Wear shoes that provide good support • Keep your back straight and bend your knees when you lift things • Put a plank under your mattress if it's too soft • Choose chairs that have good lumbar support or use a small cushion • Sleep on your side with a pillow between your knees for better support
	Not feeling better?
	• If the pain persists, increases, or spreads to your legs, talk to your health professional • If you are at the end of your pregnancy and you are having back pain that spreads to your abdomen or comes and goes regularly, you may be experiencing your first contractions (see page 206).

Pregnancy gingivitis

Description	Some suggestions
• When: starting in the 2nd month of pregnancy • Frequency: up to 100% of pregnant women • Likely causes: hormonal changes make gums more sensitive, i.e., more likely to swell or bleed	To prevent the swelling and bleeding from getting worse, you can • Brush your teeth at least twice a day • Use dental floss every day. Don't worry; it's normal for your gums to bleed more when you floss Normally, the swelling and bleeding will diminish about one month after you give birth.
	Not feeling better?
	• If necessary, see a dentist

Common health problems

When you're pregnant, you may also experience health problems that are unrelated to your pregnancy, such as headaches, colds, gastroenteritis, and other types of infections. Some of these illnesses may be more frequent or troublesome while you are pregnant.

Even if you are pregnant, most common health problems can be treated. Talk to a pharmacist or other health professional first, however, before taking any medication.

Don't hesitate to talk to a health professional if you're worried about changes in your health or if your symptoms interfere with your activities.

See a doctor right away if your overall condition deteriorates or you notice any of the warning signs described (see Warning signs, page 151).

An Info-Santé nurse (8-1-1) can advise you on what steps to take at any time.

Warning signs

Some problems during pregnancy require immediate attention from a health professional for evaluation. You can also contact your birthing centre or your hospital's obstetrics department directly.

Some of the warning signs listed in the red box are explained on the following pages.

See a health professional right away if your overall condition deteriorates or if you have any of the following problems:

- Vaginal bleeding
- Loss of consciousness (fainting)
- Severe headaches, upper abdominal pain, or sudden change in vision
- Swelling that spreads (legs, hands, and face)
- Fever
- Lack of baby movement after 26 weeks of pregnancy
- Contractions before 37 weeks of pregnancy
- Loss of amniotic fluid
- Heavy blow to the belly
- Severe abdominal (belly) pain
- Chest pain and sudden shortness of breath
- Pain and swelling in one leg only

Vaginal bleeding

Before 14 weeks of pregnancy

Pregnant women often experience bleeding at the beginning of their pregnancy.

Bleeding may be related to the changes in the body at the start of pregnancy, i.e., implantation of the **embryo** in the uterus. In such cases, bleeding is light and is no cause for concern. Often, the cause of the bleeding is unknown, it does not last, and the pregnancy proceeds normally.

However, half of all women who bleed early in their pregnancy have a **miscarriage** (see Miscarriage, page 160).

When to consult a health professional
You may have light bleeding after a gynecological exam because the cervix is more fragile during pregnancy. In this case, you don't need to be evaluated.

In all other cases, if you experience bleeding during the first trimester, have a health professional evaluate the situation. Women whose blood is **Rh** negative, for example, may need to receive immunoglobulin (WinRho®) if they have bleeding.

Go directly to the emergency room if you have heavy bleeding (vaginal bleeding that soaks two regular sanitary pads or one maxi-pad per hour for two or three hours straight) or if bleeding is accompanied by weakness, dizziness, or severe abdominal pain.

An Info-Santé nurse (8-1-1) can advise you on what steps to take at any time.

After 14 weeks of pregnancy

It is not normal to have vaginal bleeding after the first trimester of pregnancy (i.e., the first 14 weeks). If you do, see a health professional right away for an evaluation.

The bleeding may come from the placenta, for example, or be a sign of a **miscarriage** or the start of **labour**. Bleeding does not always mean the pregnancy is at risk, but you should be evaluated to make sure everything is all right.

Note that you may experience light bleeding after a gynecological exam, because the cervix is more fragile during pregnancy. In this case, you don't need to be evaluated.

Loss of consciousness (fainting)

Loss of consciousness (fainting) can be normal during pregnancy. But if you experience dizziness or fainting, it's best to see a health professional.

Go directly to emergency if you lose consciousness and have other symptoms at the same time, such as bleeding, severe abdominal pain on one side, chest pain, shoulder pain, or palpitations.

Also see a health professional if you have suffered a blow to the head or belly.

Severe headaches, upper abdominal pain, or sudden changes in vision

Contact your health professional right away if you are experiencing any of the following symptoms:

- Severe headaches
- Upper abdominal pain
- A sudden change in vision
- A general feeling of being unwell

Also consult your health professional if you notice that your blood pressure is high (more than 140/90).

Fever

Fever is an increase in body temperature above the normal level. It is the body's way of defending itself against infection.

An adult has a fever if their body temperature (taken orally) is 38°C or higher.

If you have a fever while you are pregnant, it could be dangerous for your pregnancy or indicate that you have an infection that needs to be treated.

When to consult a health professional
If you have a fever of 38 to 38.4°C and your overall condition is good, you can wait a while to see how the situation evolves. You can take acetaminophen to lower your temperature and relieve pain.

However, you should see a doctor or your prenatal care provider if

- Your fever of 38 to 38.4°C lasts more than 24 hours
- You have a fever of 38.5°C or higher
- You feel unwell or have any other concerns

If you think you have COVID-19, call Info-Santé (8-1-1).

You can contact an Info-Santé nurse for advice at any time by calling 8-1-1.

If you need to take acetaminophen (Tylenol®), choose a product that contains only acetaminophen. Your pharmacist can advise you.

Don't confuse acetaminophen (Tylenol®) with ibuprofen (Motrin®, Advil®) or with aspirin. And don't take ibuprofen or aspirin during pregnancy unless recommended by your health professional.

Only take acetaminophen for a short period. If you need to take acetaminophen for a longer period or for other reasons, talk it over with your health professional.

Lack of baby movement after 26 weeks

At around 20 weeks, your baby's movements increase and are strong enough to be noticed. Some women feel movement a little sooner, others a little later. At the end of your pregnancy the baby's movements may feel different, but they are still present.

Your baby is more active at certain times of day. You might not notice his movements if you are more active or distracted than usual. You also may not be able to feel all his movements, even if he is active. Remember the movements you saw on the **ultrasound** that you couldn't feel.

After 26 weeks of pregnancy, if you can't feel your baby move or he is moving less than usual, rest and see what happens. If you count fewer than six distinct movements over two hours, contact your birthing facility or health professional right away or go to the hospital to make sure your baby is all right.

If you are worried or unsure, you can also contact your hospital's obstetrics department or your birthing centre.

Contractions before 37 weeks of pregnancy

Throughout your pregnancy, it is normal to feel contractions that are unrelated to **labour**. Known as Braxton Hicks contractions, they are irregular and may or may not be painful. They can be caused by sudden changes in your position, standing for long periods, or sexual activity.

You may also feel small "electric shocks" in your cervix or menstrual-like cramps that last a few seconds. If this happens, these are not contractions; they are usually reactions to the baby's movements.

However, if you feel your uterus harden regularly and are experiencing pain, you may be having real contractions. Sometimes the pain of the first contractions is similar to menstrual cramping.

Good to know...

Real contractions last at least 20 seconds. If they come and go at regular intervals, this could indicate the start of labour.

To help tell the difference between contractions and other abdominal pain, see the table Telling the difference between contractions and other abdominal pain, page 157.

If you are experiencing regular or frequent contractions (more than seven in one day) before 37 weeks, you may be going into premature labour, especially if you also have more abundant vaginal discharge. Contact your health professional or hospital so they can determine what is happening. Premature labour can sometimes be stopped if it is caught early enough.

After 37 weeks, the same symptoms may indicate that labour is starting. In this case everything is perfectly normal because your baby is no longer considered premature (see The start of labour, page 204).

Telling the difference between contractions and other abdominal pain

Problems	Symptoms
Heartburn	• Pain in the upper abdomen • Burning sensation caused by excess acid
Intestinal cramps	• Pain throughout the abdomen that may be due to diarrheal or constipation
Urinary tract infection	• Pain in the lower abdomen and sometimes the back • Frequent need to urinate small amounts • False urge to urinate and sense of urgency • Leaking urine • Burning sensation when urinating • Persistent urge even after urinating • Blood in the urine (sometimes)
Ligament pain	• Stretching sensation or pain in the lower abdomen, especially when you move, exert yourself physically, walk for a long time, or turn over at night (ligament pain is more common during second pregnancies and poses no danger to you or your baby)
Uterine contractions	• Painful hardening of the uterus • The first contractions are sometimes like menstrual cramps • Pain lasts at least 20 seconds • When **labour** begins, the pain will come and go at regular intervals

Loss of amniotic fluid (breaking of the waters)

Most pregnant women have vaginal discharge during their pregnancy (see Physical changes, page 41). Sometimes, however, other fluids such as urine or amniotic fluid may be discharged.

The table Telling the difference between the types of discharge, page 159 can help you determine what type of discharge you are having.

Loss of amniotic fluid can indicate the start of **labour**.

If your waters break before 37 weeks, it can pose a risk for the baby. If you think you are losing amniotic fluid, or if you are unsure, call your midwife or your birthing facility or go to the hospital.

If you your waters break at or after 37 weeks, you need to go to the hospital or birthing centre.

Telling the difference between the types of discharge

Type of discharge	Description	Amount
Vaginal discharge	• Heavier and runnier in the final months of pregnancy	• Can dampen underwear, but doesn't overflow • Can soak a panty liner
Urine	• More common after physical exertion, movement, coughing, and sneezing	• The flow stops when the bladder has been emptied
Amniotic fluid (waters)	• Continuous loss of a clear, odourless fluid, which happens when the baby moves or the mother changes position	The amount of discharge is another factor that can help you determine if you are leaking amniotic fluid. To estimate the amount • Wear a sanitary pad (not a panty liner) • Check the pad after 30 minutes If your waters really are breaking, the pad will be soaked and heavy

Miscarriage and mourning

Miscarriage

Pregnant women often experience bleeding at the beginning of their pregnancy. Bleeding may be related to changes associated with the start of pregnancy, i.e., the implantation of the **embryo** in the uterus. However, half of all women who bleed in early pregnancy have a **miscarriage**. In some cases, miscarriage can occur without any symptoms or bleeding.

Good to know...

Women whose blood is **Rh** negative may need to receive immunoglobulin (WinRho®) if they have bleeding or a miscarriage. Your health professional will tell you if this is the case for you.

About one in six pregnancies ends in miscarriage. Most miscarriages occur in the first 12 weeks of pregnancy and are caused by major **genetic abnormalities**. The embryo doesn't develop, or the baby's heart stops beating. At this point, the uterus generally stops growing and will expel its contents.

The abnormalities that cause miscarriage occur at random. They do not mean that a woman is infertile or has a health problem.

However, the risk of **miscarriage** does increase with age. For women age 35 and over, one in four pregnancies end in a miscarriage. For women age 40 and over, it is one in two.

If you want to get pregnant again after a miscarriage, it's best to wait until you have had at least one normal menstrual cycle. It may be helpful to consult with a health professional if you have had several miscarriages. Keep taking your folic acid supplement.

Even after a miscarriage, it is possible to have a healthy pregnancy in the future.

In rare cases, the **embryo** implants itself outside the uterus. This is called an **ectopic or extra-uterine pregnancy**. An ectopic pregnancy cannot continue to term. A medication or surgical abortion is usually necessary.

In very rare cases, a baby may die later during pregnancy, for reasons that cannot always be explained.

Grieving: when your pregnancy ends unexpectedly

After a **miscarriage**, you and your partner may feel sad and distressed, and even go through a period of mourning. You may also experience feelings of anger, denial, and confusion.

Some women feel guilty about things they did or did not do early in the pregnancy because they think they caused the miscarriage.

Miscarriage is not related to stress, fatigue, physical or sexual activity, diet, or lifting heavy loads.

If you have had an **ectopic pregnancy**, it is also normal to grieve for a time and to perhaps need help. If you are concerned about your chances of getting pregnant again, feel free to bring it up with your health professional.

The grieving process

The loss of an unborn child is a deeply personal experience. The grief a person may feel is influenced by circumstances. Some people start establishing an emotional bond with their child from the moment they start planning the pregnancy. For others, the loss of the baby represents the loss of their identity as a parent or an end to their plans for a family.

Generally speaking, men and women don't grieve the same way. In addition, individuals may go through the different stages of grieving at different times. Whatever your situation, give yourself time to grieve and work through your emotions at your own pace.

If you and your partner don't know how to break the news to your children or family and friends, you can talk to someone who has been through the same situation or ask a health professional for help. Resources also exist to help your family and friends understand what you're going through and provide support through this difficult time.

The death of an unborn baby can trigger grieving the same way as any human death. It should not be minimized.

If your baby dies after 19 weeks of pregnancy or after being born, you may also be entitled to benefits under the Québec Parental Insurance Plan.

Québec Parental Insurance Plan
1-888-610-7727
rqap.gouv.qc.ca/en/wage-earner/death/death-of-a-child

Here are a few resources to help you during your grieving process:

SOS Grossesse
Telephone helpline for questions about pregnancy and termination of pregnancy
1-877-662-9666
sosgrossesse.ca (in French only)

Info-Santé and Info-Social
8-1-1

Revenir les bras vides (CHU Sainte-Justine)
A series of free videos on perinatal grief (in French only).
chusj.org/en/Care-Services/C/Pregnancy-Complications/Perinatal-bereavement

High-risk pregnancies

Some pregnancies are considered to be at higher risk than others. Examples include cases involving high blood pressure (hypertension), gestational diabetes, or multiple pregnancies. If your pregnancy is considered high-risk, you will be followed more closely and undergo additional exams. You may also be referred to a clinic that specializes in high-risk pregnancies (GARE) for prenatal care.

High blood pressure (hypertension) during pregnancy

Hypertension is when your blood pressure is higher than normal. Some women develop hypertension during pregnancy. In this case, health professionals generally recommend blood work and a urine sample, as well as treatment to lower blood pressure. They may occasionally recommend hospitalization.

Depending on the stage of pregnancy and the condition of the mother and baby, it may be necessary to induce **labour**. In such cases, the medical team will determine the best time for the birth.

Gestational diabetes

Gestational diabetes is an increase in the blood sugar (blood glucose) level caused by certain hormones produced by the placenta. Regular blood sugar monitoring is recommended for women with gestational diabetes.

The most common consequence of gestational diabetes is having a bigger baby. This can result in a caesarean birth or make for a more difficult delivery for both mother and baby. The baby may also have low blood sugar (hypoglycaemia) and breathing problems at birth.

To prevent complications from gestational diabetes, it is recommended to eat a balanced diet and stick to a regular meal schedule (see Special needs, page 100). Regular exercise such as a daily walk is also recommended (see Physical activities, page 60). These recommendations on diet and physical activity apply to all pregnant women, but are especially important for those with gestational diabetes.

An individual or group meeting with a nutritionist is a good way to learn more about the kind of diet that promotes a healthy pregnancy and baby's development.

It may not always be possible to control blood sugar levels, even with a proper diet and good exercise habits. If this is the case, the prenatal care team will prescribe appropriate treatment.

Additional tests may be necessary to ensure the baby is doing well during the final weeks of pregnancy. Special monitoring may also be carried out during delivery.

For more information, you can call the Diabetes Québec InfoDiabetes helpline.

Diabetes Québec
514-259-3422 / 1-800-361-3504
diabete.qc.ca/en/

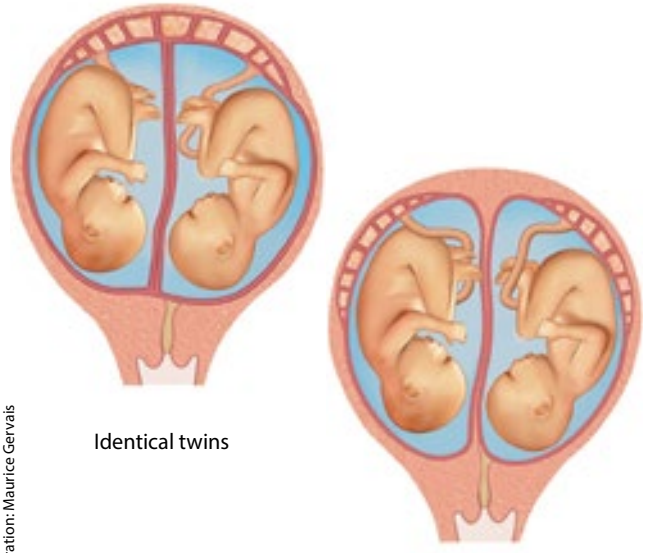
Multiple pregnancies (twins, triplets, etc.)

For many women and their partners and families, a multiple pregnancy can come as a shock. They say having a baby changes your life forever, so imagine when you're expecting more than one! You'll need to make adjustments to plan for prenatal care, the birth, and the way you organize family life once your newborns arrive.

Types of twins

There are two types of twins: identical twins and fraternal (non-identical) twins. Identical twins come from the same egg and the same sperm. They have the same genetic makeup, are of the same sex, and usually share the same placenta. Fraternal twins come from separate eggs fertilized by different sperm. They develop side by side in the uterus, but have a different genetic makeup and their own placenta, and may not be of the same sex.

Two types of twins



Identical twins

Fraternal twins

Illustration: Maurice Gervais

For women with multiple pregnancies, the physical changes associated with pregnancy (see Physical changes, page 41) happen faster and are more intense. These rapid changes can result in increased fatigue and more discomfort (see Discomforts of pregnancy, page 139). If the discomfort bothers you, don't hesitate to talk to your prenatal care provider.

Women carrying more than one baby also have greater nutritional requirements (see Special needs, page 100).

Multiple pregnancies come with a higher risk of complications during pregnancy and delivery. Women with multiple pregnancies will have more frequent checkups, especially at the end of the pregnancy. This is to ensure that each of the babies is developing well.

Preterm **labour** is the most common risk for a multiple pregnancy and can lead to premature birth. Premature babies require more care than full-term babies (see Care of premature babies, page 246).

Even if you are carrying twins, a vaginal birth is often possible.

During the pregnancy, it can be helpful to talk with other parents who have had similar experiences. For example, there are associations for parents of twins in some parts of Québec and resources for future and new parents of twins and triplets, such as Mamans pieuvres.

Mamans pieuvres
mamanspieuvres.com (in French only)

Contact your CLSC to learn about services and organizations in your area.

Domestic violence during pregnancy

Most couples settle disagreements through discussion and negotiation without either partner resorting to physical or psychological abuse. But in some relationships, one partner tries to control the other and uses violence to resolve conflicts.

Some women experience domestic violence during pregnancy. In fact, one in ten women report being victims of violence at least once during the period surrounding their pregnancy. In most of these cases, domestic violence continues after the baby is born.

Examples of domestic violence

Your partner

- Constantly criticizes your tastes and abilities
- Puts down your family and friends, or forbids you from seeing them
- Monitors your movements or your activities and communications (calls, text messages, emails)
- Forces you to have sex, even if you don't want to
- Pushes or shoves you
- Threatens to hurt you or your children
- Gives you no say in financial decisions or controls your spending

All forms of violence—psychological, verbal, physical, sexual, or economic—can have serious repercussions on your health and that of your child.

Shame or fear of being judged can keep some victims of violence isolated.

Since violence rarely stops on its own, it is important for your safety and the safety of your child to break your silence and talk to someone you trust who can provide support.

You can contact your CLSC or Info-Social (8-1-1, option 2) to get help from a health professional. They can provide psychological and social services or refer you to other resources in your area.

SOS violence conjugale
24/7 bilingual helpline
1-800-363-9010
sosviolenceconjugale.ca (in French only)

Preparing to breastfeed

Jean-François Dufour

Thinking about how you want to feed your baby is just as important as preparing for her birth and arrival. To help make a decision, many families want more information about breastfeeding, how to initiate it, and the potential challenges involved. The following pages provide useful information to help you prepare for breastfeeding.

Making the decision to breastfeed

Health professionals around the world over recommend that babies be fed breast milk exclusively for the first six months of life. The Canadian Paediatric Society, Dieticians of Canada, and Health Canada all echo this recommendation. Once babies have started eating solid foods, it is recommended that they continue breastfeeding until the age of two years or more.

Knowing the reasons why you want to breastfeed before your baby is born can help you cope with periods of hesitation and discouragement.

Women breastfeed for a variety of reasons. Some breastfeed because they like always having milk ready for their baby, while others see it as a way of strengthening the bond they developed with their baby during pregnancy. Still others decide to breastfeed because of the health benefits for the mother and baby.

Listing the reasons why you want to breastfeed will help you make your decision. Ask yourself what's important for you and your family in light of your values and your situation. And take time to think about your intentions and how you can prepare yourself for the challenges you may face on the way.

Regardless of your situation, remember to tell your family and healthcare professional about your decision. That way they'll know what to expect and be able to support you better. Trust yourself—you know best what your baby needs.

Breastfeeding and health

Breast milk contains **antibodies** and other substances that help baby's **immune system** fight off certain diseases. The more breast milk a baby gets, the more protection she has—protection that may even continue after she stops breastfeeding.

Breastfed babies are at lower risk of diseases such as diarrhea, ear infections, colds, and bronchiolitis. And when breastfed babies do get these illnesses, they are less severe. Breastfed babies are also at lower risk of **sudden infant death syndrome** and are better protected against certain chronic diseases such as obesity and diabetes.

Breastfeeding delays the return of menstrual periods. In the short term, women who breastfeed are therefore less likely to develop **anemia**. Over the long term, women who have breastfed have a lower risk of becoming diabetic or developing breast and ovarian cancer.

Most medications are compatible with breastfeeding. If you are taking medication, discuss it with your healthcare provider before your baby is born.

If you're sick, breastfeeding is still recommended. However, if you have a fever, cough, sore throat, or nasal congestion, you should take certain precautions. While your symptoms last, wear a medical mask, if possible, or a face covering while breastfeeding. Always wash your hands before feeding your child.

A learned skill

The start of breastfeeding also marks the start of your life with your new baby. Preparing for breastfeeding and the first few days with your baby can help you deal with the surprises and moments of discouragement you may face along the way.

Learning to breastfeed takes practice, both for you and your baby. Before baby arrives, you learn the theory. Then you put the theory into practice, and you realize it isn't always as easy as you thought.

Little by little, with each passing day and each feeding, you will both get more skilled. Then it all starts to come naturally, and everything feels easy! That's when it becomes enjoyable.

It can take four to six weeks for some women to feel comfortable breastfeeding. For others, it will take less time. During this learning period, you and your partner will develop your own ways of working as a team.

It's normal to need information, support and encouragement if you have questions or problems. Don't hesitate to seek help from people you can rely on in your circle of family and friends or from breastfeeding resources (see The importance of a support network, page 180).

It can be useful and comforting to have made initial contact with breastfeeding resources in advance in case you experience problems.

Starting milk production: the first few days

Breasts naturally prepare for breastfeeding throughout pregnancy (see Breasts, page 44). This preparation culminates at childbirth, when hormones send the signal to start milk production.

Breastfeeding itself doesn't change the appearance of your breasts; the changes are primarily due to carrying a baby and having your milk come in.

Whether you have small or large breasts, long or short nipples, they are designed to produce milk and feed your baby. There is nothing you need to do to prepare your breasts for breastfeeding. Whether your baby arrives early, on time or late, you will have milk for her.

Colostrum: your first milk

The first few days after your baby's birth are very important for initiating breastfeeding and starting milk production.

Your first milk (colostrum) is thick and yellowish in colour, and contains just what your newborn needs. You may feel like you're not producing much milk, but when your baby nurses, she gets small quantities that are ideally suited to her little stomach.

During this learning period, it's normal for your baby to nurse very often. She was nourished constantly when she was in your womb. As the days go by, she will get used to this new method of feeding.

Breast stimulation

Stimulating the breasts by nursing at least 8 times every 24 hours helps get milk production off to a good start. It also helps prevent your breasts from getting engorged (see Painful breast, page 487). If your baby isn't ready to nurse, you can stimulate your breasts by expressing milk manually or with a breast pump (see Producing a good supply of milk, page 420).

When your breast milk "comes in"

Between the second and fifth day after giving birth, milk production increases rapidly and the milk becomes clearer. This is known as having your milk "come in." It is caused by hormonal changes and happens in all women, whether they breastfeed or not. For more information on this increase in milk production, see When your milk comes in, page 419.

The composition of breast milk

Breast milk composition changes throughout the breastfeeding period to adapt to baby's needs and age.

Breast milk is made up of proteins, sugars, and all the fats a baby needs, including omega 3 fatty acids that support brain and eye development. It provides each baby with the exact amount of vitamins and minerals they need to develop, with the exception of vitamin D (see Vitamin D: Not your ordinary vitamin!, page 380). What's more, it contains enzymes that facilitate digestion.

Breast milk has antibodies that help baby fight infections and develop her immune system. It is also rich in good bacteria that are thought to provide her with lifelong protection.

To date, over 200 components have been identified in human milk. Certain factors influence the composition and taste of breast milk (see What influences the composition of milk, page 388).

Ways to make breastfeeding easier

The first feeding will be etched in baby's memory and will help her recall what to do next time.

Making skin-to-skin contact in the first hours after the baby is born

Placing the newborn right on her mother's chest, skin to skin, has a number of benefits for breastfeeding. The baby retains her heat better and is calmer. This contact also triggers her reflex to take the breast during the first hour of life, as well as later on (see Right after birth: Mother and child get acquainted, page 438).

It's good to take advantage of baby's first few hours of life to start breastfeeding. After these first few hours have passed, the baby will enter a rest and recovery period during which her reflexes will "hibernate" for a few hours.

If your baby isn't ready to start nursing, it's a good idea to stimulate your breasts as soon as possible after giving birth to help start milk production (see How to express milk by hand, page 454). You can **express** milk in a spoon and offer it to your baby, placing a few drops on her lips at a time.

Staying close to baby and being attentive to hunger signs

It's good to keep your baby near you day and night. Your newborn needs to be close and be reassured by your presence.

Being physically close to your baby allows you to get to know your baby and learn to detect the early signs of hunger (see Hunger signs, page 367). It's an ideal time to give your baby the breast because he will probably be calmer.

Being close to your baby also allows you to quickly provide for her needs, which helps build a bond of trust.

Bringing your baby to the breast
Getting a good latch helps prevent breastfeeding pain and most nipple injuries. In the first few days of life, mom and baby learn together how to establish a pain-free latch and good suction (see Bringing baby to your breast, page 426).

When your baby is sucking effectively, you can see her pause and swallow (see Ensuring your baby is sucking effectively and swallowing milk, page 429). The swallowing motion is harder to notice before your milk comes in, because your baby is only swallowing small amounts of colostrum.

Some women may be surprised by the sucking sensation at first. Some degree of sensitivity may be normal, but if nursing is painful, ask for help without delay.

Breastfeeding on demand or often enough to meet baby's needs
The frequency and length of feedings varies from one baby to another. In the first few days of life, it's normal for a newborn to nurse very often and to have feedings clustered together (see How often to nurse—and how long?, page 433). Frequent feedings stimulate milk production and reassure the baby during this important adaptation period. You can expect to nurse 8 times or more every 24 hours during this period, and afterwards as well.

Some babies frequently show hunger signs. Other babies don't always give cues that they want to feed. If your baby isn't showing signs of hunger or signs of wakefulness, you may need to wake her up to ensure she gets enough milk.

Information and precautions regarding bottles and pacifiers
If it's necessary to feed your baby using a method other than breastfeeding, she can be bottle fed with expressed milk.

However, sucking at the breast isn't the same as drinking from a bottle. Milk usually flows faster from a bottle than from the breast, and the baby's mouth movements are different. As a result, using a bottle, especially for a prolonged period of time, can lead to problems with breastfeeding.

A trained breastfeeding support person can show you an alternative to bottle-feeding, if you wish.

If your baby uses a pacifier, it can be difficult to recognize her hunger signs. Your baby may end up skipping a feeding, which can affect milk production. To maintain milk production at a level that meets your baby's needs, check first to see if she's hungry or needs to be changed or cuddled before giving her the pacifier.

Breastfeeding accessories

There is an ever-expanding array of breastfeeding accessories on the market—everything from breast pumps and nursing bras and pillows to nursing pads and more. None of them are essential, although reusable or disposable nursing pads can be useful if your breasts leak milk. A nursing bra isn't necessary either, but it can be very practical. If you do decide to wear one, it is best to get it toward the end of your pregnancy so that it fits your breast size.

Community groups are good sources of information when the time comes to choose a breast pump or other breastfeeding accessories.

Common concerns and possible problems

Despite the known benefits of breastfeeding, some women are still hesitant to nurse their baby. Common fears include being incapable of breastfeeding, not having enough milk, having sore nipples, not being able to eat everything they want, not giving the father the opportunity to help with the feeding, and having their breasts deformed from breastfeeding. Most of these concerns are based on popular misconceptions or myths. Talk them over with a trained breastfeeding support person.

The first few weeks of breastfeeding can be challenging nonetheless. Possible issues include engorgement, nipple pain or injury, frequent feedings (see Cluster feeding, page 434), difficulty positioning the baby at the breast, worries about milk production, and a crying baby. Most of these issues are temporary, and solutions exist (see Breastfeeding challenges, page 466).

Some women think that breastfeeding is meant to come naturally and easily and may feel flustered if they have problems. Don't worry, most breastfeeding issues are temporary, and solutions are available.

If you want to prepare yourself for breastfeeding or you have concerns, feel free to talk to a trained breastfeeding support person. You can contact a breastfeeding mentor or a professional at your local CLSC. That way, you'll be better prepared to overcome any challenges you may face.

The importance of a support network

Your pregnancy is a good time to talk about your impressions and expectations with your partner, family, and friends. It's also a good time to find out about the breastfeeding resources and community groups in your area.

The role of the partner

As a future father and partner, you can play an active part in the discussions and decision on breastfeeding your child. Your role is important.

You can make a real difference by working hand-in-hand with your partner while a breastfeeding routine is being established.

At the beginning, the mother often needs help getting the baby latched on to the breast. You can help by lending an extra hand to hold the baby, shifting a pillow, or sharing a word of encouragement. Little things like bringing your partner something to drink or making a snack are always appreciated.

You can also reassure your partner when she's feeling unsure of herself, shield her from negative pressure from friends and family, or seek out support if she needs it.

Helping care for your baby will also make breastfeeding easier for your partner and allow you to ease into your role as parent. You can work as a team, taking your turn holding your baby skin to skin between feedings, especially after your partner's milk has come in. You can change diapers, burp your baby, and rock her in your arms to soothe her or put her to sleep.

As soon as your baby is born, you can find ways to support your partner with breastfeeding. Your presence means a lot, especially during the adaptation period.

Support from family and friends

If you or your partner were breastfed, your families may be familiar with the practice. But you might also be the first in your family or your partner's family to breastfeed. In this case, you may want to let them know what your intentions are. Knowing your plans can help them support you in your decision.

Also, don't hesitate to ask them for a helping hand with things like meals, babysitting, errands, and housekeeping.

Breastfeeding resources

There are several types of resources that offer breastfeeding help and support. For more detailed information, see Getting help, page 416.

Breastfeeding resources

- Breastfeeding support groups and organizations
- Early childhood services at your CLSC
- Info-Santé: 24/7 telephone consultations at 8-1-1
- Certified lactation consultations (IBCLC) (private services)
- Breastfeeding clinics with medical specialists (available in some regions)
- Your midwife or doctor

Here are some resources:

Association québécoise des consultantes en lactation diplômées de l'IBLCE
514-990-0262
ibclc.qc.ca/en

Centres de référence des grandes régions de Montréal et de Québec
2-1-1
211qc.ca/en/

La Leche
1-866-255-2483
allaitement.ca (Quebec) (in French only)
lllc.ca (Canada)

Mouvement Allaitement du Québec
mouvementallaitement.org (in French only)

Nourri-Source
514-948-9877 / 1-866-948-5160
nourri-source.org/en/

Réseau des centres de ressources périnatales du Québec
rcrpq.com/english-version/

Remember that everyone's breastfeeding experience is a little different and that every baby is unique. If you or your friends have had difficult breastfeeding experiences in the past, that doesn't mean you will have trouble this time.

It's normal to need time to get used to breastfeeding. As you're learning, you may have moments when you question your decision. It's a good idea to know who to turn to for help and to have people around who can support you.

Breastfeeding a baby isn't always easy, but once breastfeeding is established, it can be very rewarding and nourishing for you and your baby. Trust yourselves and enjoy the pleasures of parenthood—one day at a time.

Preparing for the birth

Stéphanie Caron

Is your due date coming up soon? Check with your prenatal care provider about when you should go the hospital or birthing centre.

Some facilities allow you to contact the birthing unit directly with questions about your pregnancy starting at 20 weeks.

In the weeks prior to your due date, think about what you want to bring to the hospital or birthing centre and start preparing your bag. Knowing who will care for your other children when it's time to leave for the birthing facility will also take a load off your mind when your **labour** starts. Think about telling the person about your their routine and preferences.

Visiting the hospital or birthing centre

During your pregnancy you can find out about the different options available for giving birth (hospital, birthing centre), their services and their specific features (routine, rules, length of stay, and types of interventions).

Some hospitals and birthing centres allow you to visit their birthing rooms. But more and more of them offer virtual tours online. These video tours provide a detailed overview of what will happen during your stay and allow you to familiarize yourself with the surroundings. They also provide information on the type of equipment available during the birth (e.g., bathtub, shower, physio balls, birthing bar, cushions, benches).

Ask your health professional or prenatal class instructor about visiting opportunities.

What to bring to the hospital or birthing centre

Suggestions for the mother

- ☐ Your health insurance card and other proof of insurance (if you have any)
- ☐ Your hospital card
- ☐ Your pregnancy notebook and pregnancy follow-up forms (sheets 1, 2, 3, and 4) if you received any during your pregnancy checkups
- ☐ Your birth plan
- ☐ Your vaccination record
- ☐ A note pad and pen
- ☐ Comfortable clothes for the labour and delivery (if you don't want to wear a hospital gown)
- ☐ Comfortable clothes for day and night
- ☐ Slippers and warm socks
- ☐ Tissues (not always provided by the hospital)
- ☐ A change of clothes and underwear
- ☐ One or two nursing bras
- ☐ Going home outfit
- ☐ Super maxi pads (heavy flow)
- ☐ Your toiletry bag
- ☐ Your glasses and contact lens case, if you wear them
- ☐ Snacks (like muffins, cereal bars, dried fruit) and drinks
- ☐ Items you may want during labour, like massage oil, extra pillows, a hot water bottle, and music
- ☐ Reading material
- ☐ A watch
- ☐ Any medication you are taking
- ☐ Your *From Tiny Tot to Toddler* guide!

Suggestions for the partner

- ☐ Comfortable clothes and shoes
- ☐ Food and drinks
- ☐ A camera
- ☐ Reading material
- ☐ Your toiletry bag
- ☐ A bathing suit (if you want to get in the whirlpool with your partner during **labour**)
- ☐ Your pillow
- ☐ Pyjamas
- ☐ A change of clothes

Suggestions for the baby

- ☐ Diapers (if not provided by the hospital or birthing centre)
- ☐ Pyjamas
- ☐ Undershirts and bodysuits
- ☐ A blanket
- ☐ A hat
- ☐ Going home outfit (appropriate for the season)
- ☐ An infant car seat (required to go home by car, see page 673)

Vaginal birth after caesarean

Women who have had a caesarean (also known as a caesarean section or C-section) are often able to give birth to subsequent children vaginally. Approximately three in four women who prepare for a vaginal birth after a caesarean (VBAC) do give birth vaginally.

Advantages and risks of VBAC

There are many advantages to giving birth vaginally. There are no risks of complications from surgery, you get to hold your baby for as long as you want right after she is born, you are more mobile, and your recovery time is shorter.

However, vaginal birth after caesarean does carry a very low risk of **uterine rupture**. If this happens, an emergency C-section will be necessary. Uterine rupture is rare, but can have very serious consequences for both mother and baby.

A planned caesarean also carries the risk of complication (see Caesarean, page 235).

Decision to have a VBAC

If your last baby was delivered by C-section, you may be wondering how you will bring your baby into the world this time: vaginally or by C-section?

To help you make this decision, your doctor or midwife will assess your situation and tell you what factors could increase or decrease your chances of giving birth vaginally. When discussing this question, make sure to express your preferences and needs with respect to the options available.

In some cases, vaginal birth is contraindicated and will not be recommended.

Your plans may also change. For example, your decision to give birth vaginally may be re-evaluated during your pregnancy, and your healthcare provider may in the end recommend a caesarean. Conversely, if you are planning a C-section, your **labour** may begin before the date set for your caesarean and you and your doctor may decide that you can deliver vaginally.

Preparing for a VBAC

Preparing for a VBAC is no different from preparing for any other vaginal birth. For example, you can take prenatal classes or learn more about pain relief (see Techniques for coping with childbirth pain, page 211).

Having a friend or family member or doula at your side throughout labour and the birth can be helpful. Research shows that this kind of support makes delivery go more smoothly and reduces the risk of having a C-section. Also remember that you can have an epidural during labour.

Breech presentation

If your baby is positioned with his feet or buttocks facing downward (breech), your doctor or midwife may want to attempt to turn him at around 36 or 37 weeks. This technique, known as version, is used to move the baby into a head-down position and increases your odds of having a vaginal birth. The version procedure is performed at the hospital.

Your doctor or midwife will place her hands on your abdomen to try to move your baby into a head down position. Version is usually attempted after the baby's position has been verified through **ultrasound**. In some cases the procedure is not possible or is contraindicated, for example if there are low levels of amniotic fluid.

After the version procedure, a fetal non stress test (monitoring) will be done to make sure your baby tolerated the procedure without a problem. There are fewer risks associated with version than with a C-section.

If your baby cannot be turned, you can discuss the possibility of attempting a vaginal birth with your doctor or midwife.

Vaginal delivery of a breech baby requires a special evaluation and certain conditions must be met. Not every hospital may offer it. A caesarean will be considered in most cases of breech presentation. Talk to your healthcare provider about your options.

Breech presentation

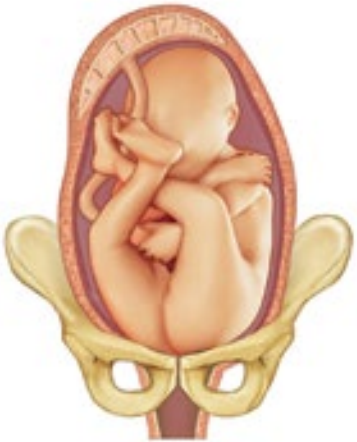


Illustration: Maurice Gervais

Dominic Morand

Birth plan

When your baby is born, you will have decisions to make as parents about the treatment and care mom and baby will receive. Keep in mind that no one knows ahead of time how the birth will go, and that you may change your minds during delivery.

Nonetheless, you will feel better prepared if you have taken the time during pregnancy to:

- Identify your wishes and concerns
- Share your thoughts with your partner and your family and friends
- Inform all the health professionals who will be assisting you, as well as anyone who will be with you at the birth, of your values, preferences, and wishes
- Find out about the services and features available at the hospital or birthing centre where you will have your baby

A birth plan is a tool that can help guide your thinking. It also lets you communicate your wishes, verbally or in writing, to health professionals and anyone else involved in the birth so they know what is important for you and your partner.

There are many sample birth plans available for your use. Ask for one from your health professional or at prenatal class, or see if your hospital or birthing centre has a version they use. You can also look for sample birth plans in books or online.

Your birth plan describes your ideal birth. Most births go well, but sometimes things can happen differently, for example, in the event of an emergency situation for you or your baby's health.

Keep an open mind about how things may go. Deliveries are unpredictable.

Be confident and remember that if you have any doubts or questions about decisions to be made, you can ask your health professionals for information. They can help you during the delivery.

No matter what type of plan you choose, a good birth plan should be:

- Clear and short (no more than one page)
- Discussed with your health professional before the birth
- Flexible

The following table can help you plan, as much as is possible, the birth of your child.

Things to think about when preparing your birth plan

Topic	Things to think about
Support during the birth (see Having someone with you during childbirth, page 210)	• Who do you want to be with you during **labour** and at the birth? • Do you want a doula to assist you? (see page 120). If so, it is preferable to let your health professional know. • Do you want to know in advance which medical staff will be present at your delivery (e.g., doctors, nurses, midwives and professionals in training)?
Methods for coping with pain (see Understanding and coping with pain, page 209)	• What methods would you like to use during labour to cope with or relieve pain or make it more bearable? (see page 209) • What kind of environment do you want during the birth? (see page 210) • Do you want to use any particular techniques to help relieve pain? (see page 211) • Do you want to use medication? (see page 232) • Which positions would you like to try during labour (see page 215) and pushing (see page 221)? • What kind of equipment and accessories are available to you at the hospital or birthing centre?

Topic	Things to think about
Interventions during childbirth (see Possible interventions during labour, page 226)	• What interventions are possible during childbirth at your hospital or birthing centre (e.g., induction and stimulation of **labour**, fetal monitoring, epidural, episiotomy)? If you wish, ask about: – The reasons for these procedures – Their effects on you and your baby • Which of these procedures do you want to have during delivery and which ones do you want to refuse? • How you plan to deal with unexpected developments? • Are you prepared for the possibility of a caesarean birth? (see page 235) Do you want someone to be with you during your caesarean, and if so, who?
First moments with your baby (see First moments with your baby, page 224)	• Do you want skin-to-skin contact with your baby right after giving birth? (see page 241) • How do you envisage rooming-in with your baby at the hospital or birthing centre? • Will it be possible to stay with your baby at all times? Is this encouraged at the hospital or birthing centre? • Do you want the person who is with you to be able to stay at all times? • If you are in a shared room, what measures are taken to help you room-in and enjoy private time with your baby? • What are the routines and procedures at the hospital or birthing centre during your stay? Are there times where you can ask not to be disturbed so you can rest or have privacy?

Topic	Things to think about
Exams and interventions after the birth (see Caring for your newborn, page 243)	• What exams, interventions, and medications will be suggested for you and your child after the birth? If you wish, ask about – The reasons – The possible consequences – The timing of these procedures • How do you want to deal with unexpected developments after your baby is born, for example, if your baby is premature and/or has to stay in hospital? (see page 245) • Do you want to have access to measures that make it easier to stay with your child at all times during hospitalization? • If you want to breastfeed your baby, what measures are available at the hospital or birthing centre to help you do so? Would you like to use breast milk banks?
Feeding your baby (see Feeding your baby, page 366)	• How do you want to feed your baby? • Have you thought about telling your family and the professional at your hospital or birthing centre about your decision to breastfeed? • Does your hospital or birthing centre have people familiar with breastfeeding who can help you if needed? • If you have a premature baby or things don't go as planned, how do you feel about using commercial infant formula or supplements for your baby?

Preparing for the baby's arrival

The arrival of a new baby brings major life changes for parents and the rest of the family. When you have a newborn, just taking a shower can become quite an adventure. For a while, you may not be able to manage your home household as you usually would.

It's a good idea to get ready ahead of time, for example, by organizing child care for your other kids, making meals you can freeze, and getting used to having a less tidy house. Ask yourself who you can turn to for help: family, friends, neighbours, a community group?

Are your friends and family asking what kind of gift you'd like when your baby arrives? Why not ask for ready-made frozen meals? Or request "help coupons" you can redeem for babysitting, meals, housework, and so on?

Think also about setting your limits. Long visits and unsolicited advice after the baby is born can be more tiring than helpful. Some parents will prefer to have peace and quiet to create a welcoming family space for the baby.

Don't hesitate to accept offers of help—if it's welcome, of course! There are also community groups that provide services and support to families, for example, a few hours of housework or childcare per week. Contact your CLSC to find out what is available in your area.

Some parents will prefer to have peace and quiet to create a welcoming family space for the baby.

A few tips to help get ready for baby's arrival at home

- When you cook, prepare extra quantities you can freeze in meal-ready portions. Friends and family can also help out by offering homemade frozen meals as a gift.
- Get the house ready for baby's arrival. You can borrow furniture, strollers, and clothes from friends and family, for example, or buy them new or used. Community organizations providing services to families are useful resources.
- If people offer to lend a hand, be clear about your needs. Make a list of things that would make your life easier (e.g., helping with errands, cleaning the house, making meals, picking up your other children at daycare).
- If people don't offer their help, don't hesitate to ask in advance for a helping hand in the weeks after your return home. A little extra assistance can help you catch your breath and make the most of your first days and weeks with your baby.
- Being flexible is the best approach for dealing with the new situations you will face.

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