Before you get pregnant

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

Pregnancy sets in motion a whole series of biological changes to 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. And though pregnancy comes with a host of questions, doubts, and worries, you have many weeks to get ready to welcome your new baby.

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, most important, to bolster your confidence and help ensure the experience lives up to your hopes and expectations.

**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, on average, until menopause at 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.

*Menstrual cycle:* The time between two menstrual periods.
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.

**Fertilization**: When a sperm penetrates an egg.  
**Egg**: Cell produced by the ovary. When the egg is fertilized, a baby may begin to form.
Ovulation occurs when an ovary releases an egg. Once an egg is released, it is drawn into the fallopian tube. If it comes into contact with sperm and is fertilized, a new cell is formed and starts to multiply. The new cells travel down the fallopian tube to implant themselves in the uterus and form an embryo.

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**

- **Sperm**: Cell produced by the man. When it fertilizes an egg, a baby may begin to form.
- **Embryo**: Name given during the first full 10 weeks of pregnancy to the human being developing in the mother’s abdomen.
Fertile period (or ovulation period)

Since ovulation does not always occur on the expected day, we talk about the fertile period or ovulation period. This is when a woman is most likely to ovulate. If a man and a woman have intercourse during the woman’s fertile period and she has a regular menstrual cycle, there is a one in four chance (at age 20) and a one in twenty chance (at age 40) that the woman will become pregnant.

If the egg is not fertilized by a sperm, 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 that can impregnate a woman. Sperm production begins at puberty and continues until death.

Sperm are produced in the testes. They go through a number of stages over a period of about two and a half months before they are ready to fertilize an egg. They are then stored in the seminal vesicles.

When a man ejaculates, sperm from the seminal vesicles are mixed with fluid from the prostate and the 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.
Fertilization

Fertilization occurs when a sperm penetrates the outer layer of the egg. An egg must be fertilized within 12 hours of ovulation. If it is not fertilized within that time, it dies and is absorbed by the body.

If the egg is fertilized, it 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 the egg was fertilized by a sperm.

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.

The risk of miscarriage increases with age. One in four pregnancies in women 35 and over ends in miscarriage; in women 40 and older, the risk is one in two.

In some rare cases (2% to 4% of pregnancies), the embryo implants itself outside the uterus. This is what is called an ectopic pregnancy.

▶ Miscarriage: A spontaneous abortion, which can have a variety of causes (e.g., a deformity or disease).
### Female anatomy

1. **Pelvis**  Bone that supports the organs in the mother’s abdomen.

2. **Ovaries**  The two ovaries produce eggs and female hormones.

3. **Uterus**  Muscular organ that grows as the pregnancy progresses. Normally, it is the size of a small upside down pear.

4. **Fallopian tubes**  Tubes connecting 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 during urination. 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.

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**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 sex organ. Its sponge-like tissue swells with blood during erections.

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

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

7 **Testes** Organs that produce sperm.

8 **Seminal vesicles** Reservoirs above the prostate that store sperm that are ready to fertilize eggs.

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

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Length of pregnancy

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? Your baby will likely be born anywhere between 38 and 42 weeks after your last menstrual period.

To estimate your due date, count 40 complete weeks from the first day of your last period, assuming that you have a regular 28 day menstrual cycle. The expected due date is therefore only an approximate date.

If you have an irregular cycle or don’t know the date of your last period, an ultrasound performed before your 20th week of pregnancy will give you a good idea of the due date, plus or minus 7 to 10 days.

There’s a practical reason for calculating the length of your pregnancy from the first day of the last menstrual period: that’s because it’s virtually impossible to know when the exact moment of conception occurs.

The number of weeks of pregnancy therefore includes the first two weeks following your last period, even if you weren’t yet pregnant at that point. So if you are “20 weeks pregnant,” for example, it means 20 full weeks have gone by since the first day of your last menstrual period.

Your health professional will most likely refer to your pregnancy in terms of weeks. The reason is simple: it is more accurate to talk about weeks than calendar months. The 42 weeks of pregnancy (maximum length) are further divided into three trimesters of 14 weeks each.

▶ Ultrasound: An examination using an ultrasound device that can see the embryo or fetus in the mother’s womb.
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. Remember, 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**—about 22 days after conception—the embryo’s heart begins to beat, although it cannot yet be heard during a medical exam.

**At 6 weeks,** the embryo is 5 millimetres in length.

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

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<th>Heart starts to beat</th>
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Pregnancy

The fetus

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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, but 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 the embryonic to the fetal stage: all the body parts are in place, but are not yet fully formed. They will continue to grow and develop throughout the pregnancy.

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

At 14 weeks, the fetus measures 8.5 cm.
Second trimester: 15 to 28 weeks

At 14 weeks, your baby’s genitals, while not yet fully formed, are developed enough to reveal whether it’s a boy or a girl. Usually between 16 and 18 weeks, he or she may let you in on the secret when an ultrasound is performed.

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 19 cm. His hair begins to grow, and his body is covered in a fine downy fuzz known as lanugo.

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 28 cm.

At 32 weeks, your uterus is level with the upper part of your belly, known as the epigastric fossa. Your intestines, liver, and lungs are pushed upwards. As the pregnancy advances and the baby gains weight, the uterus expands outwards, stretching the abdominal muscles and skin.

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 38 and 41 weeks, the baby has good muscle tone and may be active for longer periods at a time. He’s ready for the big day!
Amniotic fluid

The amniotic fluid surrounding your baby is essential to his growth and development. It helps:

- Keep your baby at the right temperature
- Protect the baby against shocks from outside the womb
- Provide space for the baby 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 your water.”

**Labour**: Process by which the baby passes from the uterus to the outside world, primarily through contractions of the uterus.
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.

By your fourth week 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 and certain drugs.

▶ Fetus: Developmental stage of a human being in its mother’s womb, from the start of the 11th week of pregnancy until birth.
Physical changes

Pregnancy is a time when your body undergoes dramatic changes. Many of these changes take place without you even being aware of them, while others can cause a certain amount of discomfort.

Heart and blood vessels

During pregnancy, your heart rate can increase by up to 10 beats per minute, and the volume of your blood by 40% to 45%, to meet the needs of the fetus. Your heart actually shifts slightly within your rib cage as your uterus expands.

In some women, the increased volume of blood and the pressure created by the expanding uterus can cause varicose veins. These are veins that become enlarged, hampering blood circulation. Varicose veins occur primarily on the legs, anus, vulva, and vagina.

Here are a few ways you can help prevent varicose veins in the legs:

- Elevate your legs
- Sleep on your left side
- Be physically active
- Avoid prolonged periods of sitting or standing
- Wear compression stockings
**Lungs**

Many women are more aware of their breathing when they’re pregnant, and may find their breathing more laboured, even when resting.

**Skin**

Pregnancy hormones stimulate the skin and scalp, causing a noticeable effect in some women. Changes in your skin shouldn’t be cause for concern, as most will diminish or disappear altogether in the months following the birth.

Most pregnant women experience hyperpigmentation (darkening of the skin). This 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 areola around the nipples or on the perineum, anus, neck, armpits, or the skin around the belly button.

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

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

Hormonal stimulation of the skin can also 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 small blood vessels that form little red patches on the skin. Most angiomas will disappear on their own within three months of giving birth.
In some cases, women may develop acne, which will disappear after the birth of the baby.

Stretch marks can also develop during pregnancy. They usually appear in the second half of pregnancy, mainly on the tummy, breasts, and thighs, but can also occur in the armpits or on the lower back, buttocks, and arms. Stretch marks are initially a pinkish or purple colour, and gradually become less apparent over time.

While there is no proven method for effectively preventing or treating stretch marks, application of a moisturizing cream with a massaging motion may help somewhat to reduce them, although the ingredients of the cream themselves appear to have little effect.

**Hair**

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

**Bladder and kidneys**

At the beginning of pregnancy, bladder function changes, which can trigger the need to urinate more urgently or more often. These sensations can also appear later in pregnancy when the uterus expands and the baby’s head puts pressure on the bladder.

During pregnancy the kidneys increase in volume. You will probably have to urinate more frequently at night. During the day, your body tends to accumulate water in your tissues, but when you go to bed these water reserves are sent to your kidneys and you feel the need to urinate—again!
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 breast-feeding by growing slightly and may also become darker. Little bumps form on the areolas; these are glands that produce oil that will help keep your skin moisturized and protected during breast-feeding.

Beginning at 16 weeks, the breasts start producing colostrum, the first food your baby will ingest after he is born. Some women may leak colostrum during pregnancy. This is normal.

Uterus

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

Stomach and intestines

Digestion often slows down during pregnancy due to hormonal changes. This can cause constipation or acid reflux in the esophagus.

Gait

The increasing weight of the uterus causes your posture to change and moves your centre of gravity further forward. That’s why the gait of some pregnant women may be somewhat different than usual.

★ Esophagus: Muscular tube that carries food from the mouth to the stomach.
Growth of the fetus in the uterus

Before pregnancy

Intestine
Rectum
Uterus
Bladder
Vagina

Around 20 weeks

Intestine
Belly button
Placenta

Around 32 weeks

Intestine
Belly button
Placenta
Uterus

Illustrations: Maurice Gervais
Weight gain

All pregnant women gain weight: it’s normal and even desirable. Provided you eat a healthy diet, eat as much as you need to satisfy your hunger, and are physically active, you should gain the weight you and your baby need.

Weight gain can vary greatly from one woman to the next. It also depends on your weight before the pregnancy.

- Women with a healthy weight before pregnancy can expect to gain between 11.5 and 16 kg, or 25 to 35 pounds.
- Women carrying more than one baby (e.g., twins, triplets) will gain more weight.
- Women who are overweight or underweight before pregnancy can ask their health professional or a nutritionist for advice on how to get the most from their diet.

At the beginning of pregnancy, weight gain varies from one woman to the next. Some women gain weight; others lose weight. Women who experience nausea may feel less or more hungry than usual (see Nausea and vomiting, page 102). Don’t be concerned about how much weight you gain in the early days of your pregnancy. Weight gain generally adjusts as the pregnancy progresses.

During pregnancy, you will gain weight gradually, at your own pace. Post-delivery weight loss is gradual and differs from one woman—and one pregnancy—to another.
Distribution of weight gain at 40 weeks pregnancy for a woman who has gained 12.5 kg (27½ lb.)

**Total weight gain:**
12.5 kg (27½ lb.)

**Maternal fat reserves:**
3,345 g (7¼ lb.) (27%)

**Uterus:**
970 g (2 lb.) (8%)

**Breasts:**
405 g (1 lb.) (3%)

**Placenta:**
650 g (1½ lb.) (5%)

**Baby:**
3,400 g (7½ lb.) (27%)

**Blood:**
1,450 g (3¼ lb.) (12%)

**Amniotic fluid:**
800 g (1¾ lb.) (6%)

**Extravascular fluids:**
1,480 g (3¼ lb.) (12%)
Emotional changes

For the mother

Whether you are on your own or in a relationship, pregnancy can trigger emotional, psychological, and social changes.

Many women experience what may seem to be conflicting emotions during pregnancy, even women who very much wanted to get pregnant. The arrival of a baby is a life-changing event, and even though the changes bring joy, they can give rise to numerous questions and worries. On the other hand, you may find that your life continues much as normal and that you adapt easily to the demands of the child you’re carrying.

The important thing is not to ignore your emotions or fight them, but rather to express and try to understand them. Sharing them with your partner and those close to you can help you feel less alone and get the support you need.

Take the opportunity to talk to other pregnant women or those who have recently given birth. You’ll realize that you are not alone in experiencing some of the changes you are going through. You may also notice that you don’t share the same emotions or concerns as others. Remember, every woman—and every pregnancy—is unique.

However, if you find yourself feeling sad or irritable most days, or lose interest and enthusiasm for your daily activities over a period of two weeks or more, see a doctor or psychologist to help understand what you’re going through. Pregnancy does not protect against depression, and some women may actually experience a depression episode while pregnant.

For the father

Since you aren’t the one carrying the child, you may not feel the impact of the pregnancy on your life as quickly as your partner does. The simple fact of knowing that your partner is carrying a child may not be enough to make the pregnancy tangible for you. In fact, the reality of it all may not hit home until later on.
Listening to the baby’s heartbeat, feeling his first movements, and being present at the ultrasound are events that can help you develop a sense of fatherhood. For some men, it’s only when the baby is born that they become truly conscious of their new role as a father.

Fathers-to-be also get caught up in the whirlwind of changes. Some worry about their partner’s reaction to their involvement with the child, and wonder if they will be able to live up to her expectations.

Remember that pregnancy is a good time to begin your relationship with your baby. Even if the baby isn’t born yet, this relationship, which starts in both your head and heart, will become more real if you talk to and touch your baby through his mother’s belly and take part in prenatal sessions.

**For the couple**

Going from a two-person to a three-person relationship, or expanding an existing family, brings its share of changes and adjustments. This is also true for parents who plan to adopt a child.

You and your partner both have concerns but they won’t necessarily be the same and may not come at the same time.

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 because it will allow you to express your emotions and understand the other person’s point of view. 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 because the discomfort of your pregnancy and fatigue prevent you from looking after them the way you did before. 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.

Your other children, regardless of their age, may feel jealous 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 and having them make contact with the baby by touching your belly when the baby is moving. You can help ensure they don’t feel left out by getting them actively involved in preparations for baby’s arrival—by helping decorate the baby’s room or drawing him a picture, for example. It’s a good idea to tell them that you still love them and prove it by showing your affection. Your family and friends can also help out by giving your children some extra individual attention.
Sexuality

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

Various factors, including a big belly, medical contraindications, discomfort, personal limits, or a greater desire for simple tenderness, 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.

Sexual relations can continue throughout pregnancy without any problem, as long as you respect each other’s needs, limits, and comfort zone.
You may have certain fears about being sexually active, but there is no need to 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 health professional will tell you if this is the case and advise you about what precautions you should take.

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

**Personal care**

**Cosmetics and sunscreen**

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

**Hair products**

Hair products and treatments including dyes, colouring shampoos, highlights, and perms are not dangerous to pregnant women or their unborn babies. However, if you use these products as part of your work, discuss the matter with your health professional.

**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.

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.
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.

Limit your exposure to these products by applying 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. It is therefore 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 greatly increase body temperature and harm your baby. Many tanning salons require pregnant customers to provide written authorization from a health professional.
**Nutrition during pregnancy**

Eating well during pregnancy helps ensure

- Your pregnancy advances normally
- Your baby grows, develops, and is healthy
- You stay healthy or improve your health

The physical transformations you undergo during pregnancy increase your body’s nutritional and energy requirements. That means you’ll need to eat a little more than usual, especially starting in the second trimester. Vary the dishes you eat and how you prepare them. Experiment with different flavours, colours, and ingredients. Pregnancy is a good opportunity to improve your diet, and that of those around you.

In addition to this section, you can also consult [www.canada.ca/en/public-health/services/pregnancy/healthy-eating-pregnancy.html](http://www.canada.ca/en/public-health/services/pregnancy/healthy-eating-pregnancy.html).

The following general advice may not apply in the following situations:

- You are a young mother under the age of 20
- You have a disease that requires a special diet
- You systematically avoid one or more food groups
- You have other special needs

Talk about your diet to your health professional. He or she can assess your situation, provide advice, or refer you to a dietician.
Eating regularly is important!

Your baby depends on you for food. Avoid going for long periods without eating. Eating regularly means three meals a day plus snacks between meals as needed. This allows you to

- Take in all the nutrients you need during pregnancy
- Avoid drops in your energy level during the day

On the menu: variety, colours, and flavours

Eating well during pregnancy means eating regularly and making sure you have a variety of colourful and tasty foods on your plate. Try to eat foods from each of the four food groups described in Canada’s Food Guide on a daily basis:

- Vegetables and fruit
- Grain products
- Milk and alternatives
- Meat and alternatives

If you’re not used to eating foods from each of the food groups every day, you might find the suggestions in this section helpful. You can also refer to Canada’s Food Guide for examples of recommended serving size and number of portions by visiting www.canada.ca/en/health-canada/services/food-nutrition/canada-food-guide/choosing-foods/advice-different-ages-stages/pregnancy-breastfeeding.html.
**Vegetables and fruit**

Vegetables and fruit are bursting with flavour, and should be part of every meal and snack. They contain important nutrients, including the following:

- Folic acid, which aids in the development of your baby’s brain and nervous system, her overall growth, and the formation of the placenta
- Vitamin C, which facilitates iron absorption
- Fibre, which helps the intestines to function properly and controls blood sugar levels

**Where to start?**

- Choose colourful vegetables and fruit, as they are rich in nutrients. Try to eat at least one dark green and one orange vegetable each day, e.g., broccoli, spinach, Romaine lettuce, carrots, sweet potato, winter squash.
- Include your favourite vegetables and fruits in your meals and snacks.
A few tips

- Eat veggies and fruit in various forms: fresh, frozen, canned, dried, in sauces or compotes, in soups, as juice, and in cooked dishes.
- Wash all fruit and vegetables under running potable water, whether you eat them raw or cooked, or with or without the peel (see Preventive measures for the whole family, page 73).
- Avoid unpasteurized juice (most juices are pasteurized).

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**Essential nutrients: folic acid**

Folic acid is an important vitamin for all pregnant women, especially at the beginning of pregnancy. It reduces the risk of certain birth defects. While a number of foods contain folic acid, you will be advised to take a folic acid supplement during pregnancy (see Vitamin and mineral supplements, page 75).

**What foods contain folic acid?**

- Legumes: lentils, Roman and white beans, soybeans, chickpeas
- Dark green vegetables: asparagus, spinach, broccoli, Romaine lettuce, Brussels sprouts, okra
- Sunflower seeds
- Enriched pasta and flour
- Bread made from enriched wheat flour
- Orange-coloured fruit: papayas, oranges and orange juice
**Grain products**

Grains like oats, barley, buckwheat, rye, millet, quinoa, and others can add variety to your menu. Grain products contain the following:

- Starch and sugar, which help produce energy
- Group B vitamins, iron, zinc, magnesium, vitamin E, and fibre, which play a role in the development and proper functioning of the nervous, cardiovascular, and digestive systems

Contrary to popular belief, pasta, bread, and rice don’t cause weight gain as long as you don’t load them up with fatty foods like butter and rich sauces.

Grain products include pasta, rice, bread, and much much more!
Where to start?

- Add grain products that contain whole grains to your diet. Try to ensure that at least half of the grain products you eat daily consist of whole grains, e.g., whole wheat bread, oatmeal, barley, multigrain spaghetti, brown rice, wild rice, fibre-rich breakfast cereal, bran muffins, etc.

A few tips

- Opt primarily for bread, cereal, pasta, and rice, as these foods contain less fat and sugar than baked goods such as cookies, croissants, store-bought muffins, and cakes.
- When choosing whole grain foods, don’t rely on colour! Read the ingredient list: the first ingredient must be a whole grain.

Milk and alternatives

Dairy products and enriched soy beverages have lots to offer—and not just for kids!

They contain

- Calcium and phosphorus, which help build and maintain healthy bones and teeth
- Proteins, which help build organs and muscles

Where to start?

- Consume the equivalent of two glasses of milk or enriched soy beverage a day.
- Complement your meals or snacks with yogurt or cheese, depending on your preference.
A few tips

• Make sure the milk and dairy products you consume are pasteurized.

• If you don’t like the taste of milk or enriched soy beverages, you can
  – Add them to your cold cereal at breakfast or snacktime, or use them to replace water when making hot cereals like oatmeal or cream of wheat.
  – Flavour them with vanilla or almond extract, spices, fruit, chocolate, etc.
  – Use them in your recipes: creamy soups, blanc-mange, puddings, tapioca, smoothies, etc.

• Are you lactose intolerant? You can find lactose-free milk and enriched soy beverages in grocery stores. You can also buy capsules and drops at the drugstore that can help you digest dairy products.

Dairy products and enriched soy beverages are good for strengthening bones.
**Essential nutrients: calcium and vitamin D**

Calcium plays an essential role in developing bones and teeth and keeping them healthy. Your baby needs it to build all her bones! And vitamin D helps the body absorb and use calcium. That’s why they make such a great team!

What foods contain calcium and vitamin D?

<table>
<thead>
<tr>
<th>Calcium</th>
<th>Vitamine D</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dairy products: milk, yogurt, and cheese</td>
<td>• Milk</td>
</tr>
<tr>
<td>• Enriched soy beverages, tofu (with calcium sulphate)</td>
<td>• Enriched soy beverages</td>
</tr>
<tr>
<td>• Canned fish with bones: sardines, salmon</td>
<td>• Fatty fish, e.g., salmon</td>
</tr>
<tr>
<td>• Calcium-enriched foods (e.g., some orange juices)</td>
<td>• Margarine</td>
</tr>
</tbody>
</table>

Most legumes, dark green vegetables, nuts, seeds, and almonds also contain small amounts of calcium. Think of them as a bonus!
Meat and alternatives

Not only do meats and alternatives add variety to your plate, they also contain

- Proteins, which help build and repair organs and muscles
- Iron, which helps produce blood
- Omega-3 and omega-6 fatty acids, which help your baby grow

Meats and alternative are nutritious foods that help you keep your energy level up.

Where to start?

- Each day, choose from a variety of meats, poultry, fish, and alternatives such as legumes, eggs, nuts and seeds, peanut butter, and tofu.
- Eat fish twice a week. It is a good source of omega-3 fatty acids.

A few precautions

- Meat, poultry, eggs, fish, seafood, and any dishes that contain these foods should be well cooked (see Cooking foods, page 73).
- While liver is an excellent source of iron, it is not recommended for pregnant women because of its excessively high levels of 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.
What’s on the menu? Fish!

Eating fish and seafood during pregnancy provides important nutrients, including protein, vitamin D, magnesium, and iron. Fish is also high in omega-3 fatty acids, which contribute to the development of baby’s brain and eyes.

But some species of fish contain contaminants such as mercury. Women who are pregnant or plan to become pregnant, women who are breast-feeding, 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), Atlantic tomcod, salmon, lake white fish, haddock, anchovies, capelin, 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 to 150 grams per month (75 grams per month for children 1 to 4 years old): fresh or frozen tuna, shark, swordfish, marlin, and orange roughy;
  - Canned white tuna to 300 grams per week. Canned light tuna is a better choice. For children, see Fish, page 490.

- Avoid regular consumption of sport fish most vulnerable to contamination: bass, pike, walleye, muskellunge, and lake trout.
Essential nutrients: iron

Iron is essential for the growth of the baby and the placenta. That’s why you need more iron during pregnancy than at any other stage of life. What foods contain iron?

**Animal-based foods**
- Meat: beef, lamb, pork (including ham), veal, game
- Poultry: chicken, turkey
- Fish: sardines, salmon, trout, halibut, haddock, perch
- Seafood: shrimp, oysters, mussels
- Seal, wild duck, moose
- Blood sausage

**Plant-based foods**
- Legumes: dried beans, lentils, chickpeas
- Medium or firm tofu
- Breakfast cereals (iron-enriched)
- Certain vegetables: pumpkin, green peas, potatoes, spinach
- Nuts, peanuts, sunflower and pumpkin seeds
- Iron-enriched pasta and bread

Generally speaking, iron from animal sources is more readily absorbed than iron from plant sources. To help your body absorb the iron contained in plant-based foods, eat foods rich in vitamin C with your meal: broccoli, cantaloupe, citrus fruits and juices, kiwi, mango, potato, strawberries and peppers. Avoid drinking coffee or tea during meals to ensure the iron is absorbed properly.
Each food group is important!

No single food can provide all the nutrients your body needs to stay healthy. That’s why it is important to eat a variety of foods every day from each of the food groups in Canada’s Food Guide. Here’s an idea to help you: Concoct your meals using foods from at least three different groups, and aim for two food groups at snacktime.

Nutritious snack ideas:

- A veggie or fruit with a piece of cheese
- A few nuts with yogurt
- One or two slices of toast spread with peanut butter
- A half-pita with humus (chickpea spread)
- A muffin with a glass of milk or enriched soy beverage
- A handful of mixed nuts and dried fruit
- A fruit milkshake
- A hardboiled egg with a few crackers
Good fats

Some fats are good for you, and are important during pregnancy. These include fats from the omega-3 and omega-6 families of fatty acids. Your body can’t produce all of these fats, which is why it is important to consume them in small quantities on a daily basis.

Many of the foods we eat contain omega-6 fatty acids, including corn oil and sunflower oil, and it’s easy to get enough of them, as they are also found in many processed foods. Omega-3 fatty acids, on the other hand, are only found in certain types of foods, including:

- Fatty fish: fresh, frozen or canned salmon, rainbow trout, mackerel, sardines, herring
- Canola oil, flaxseed oil, and nut oils, as well as vinaigrettes and soft margarine (non hydrogenated) made with these oils
- Ground flaxseed, chia seeds, walnuts
- Omega-3–enriched foods (e.g., some milk and eggs)

Sweeteners

Some people prefer artificial sweeteners to sugar, or choose yogurt, drinks, jam, chewing gum, and other products containing sugar substitutes.

The sweeteners contained in processed foods are considered safe by Health Canada.

However, if you eat too many products containing sweeteners, there is a risk of diminishing your intake of nutritious foods that constitute a good source of energy.

Some sweeteners are not found in processed foods. They come in various formats, like packets, that you add yourself to food and drinks. Cyclamates fall under this category. Use them only if your doctor recommends it.
**Drinks**

Drink often to stay properly hydrated. Drinking water and eating dietary fibre helps your intestines do their job and reduces the risk of constipation. Other drink options are milk, 100% pure vegetable or fruit juice, and broth.

**Caffeinated drinks**

Coffee, tea, and cola-type drinks contain caffeine, as does chocolate and some medications. Do not exceed 300 mg of caffeine per day, regardless of the source. For example, if you limit your consumption of other products containing caffeine, you can drink a little over two cups of coffee a day (one cup equals 8 ounces, or 237 ml).

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

**Herbal teas**

Certain plant-based products can have an adverse effect on pregnant women, by triggering contractions, for example. As for herbal teas, there is not enough scientific evidence to recommend their consumption by pregnant women.

According to Health Canada, the following herbal teas are generally safe when consumed in moderation, i.e., no more than two or three cups a day: orange or other citrus peel, ginger, lemon balm, 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.
Preventing food-borne infections

There’s no such thing as a world without germs. Water and food can carry viruses, bacteria, or parasites. Microbes are also present in animals, and can make their way into fertilizers and gardens. In reality, microbes are everywhere.

Fortunately, our digestive and immune systems protect us against most of these invaders. During pregnancy, however, the immune system is somewhat modified, leaving pregnant women more vulnerable to certain infections.

Some of these infections, like listeriosis and toxoplasmosis, can also be more severe in pregnant women, and can increase the risk of problems with the fetus or newborn.

Listeriosis and pregnancy

Listeriosis is a rare disease. It is caused by a bacteria called Listeria monocytogenes. It is often relatively harmless for healthy adults.

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 (vomiting, nausea, cramps, diarrhea, headaches, constipation).

However, the bacteria that causes listeriosis can pass through the placenta and trigger a miscarriage in the first trimester. Later on in pregnancy, it can cause stillborn birth, premature delivery, or serious infections in the baby (blood poisoning, meningitis).
The bacteria that causes listeriosis is present in the environment. It can contaminate certain raw foods, as well as some of those that have been cooked or pasteurized. It survives and can develop in cold temperatures, i.e., refrigeration temperatures.

Foods that are most likely to transmit listeriosis include the following:

- Foods produced without a step that destroys bacteria, e.g., raw meat
- Cooked foods that share the following characteristics:
  - Foods at high risk of contamination during handling after cooking or pasteurization
  - Foods with characteristics (acidity, humidity, salt content) that promote the growth of bacteria
  - Ready-to-eat foods kept for a long time in the refrigerator

Here is an example of how foods can be contaminated: Deli meats are cooked in a factory, but can be contaminated by listeria bacteria when they are sliced. The bacteria can then multiply in the sliced meat stored in the refrigerator. Then, if enough bacteria are present and the deli meats are eaten without being recooked, the people who consume them can contract the infection.

**Prevention tips for pregnant women**

Pregnant women are advised to avoid certain foods that can transmit listeriosis and other food-borne infections. You’ll find Health Canada’s recommendations on foods to avoid and safe alternatives on the following pages.
## Safe food alternatives for pregnant women

<table>
<thead>
<tr>
<th>Foods to avoid during pregnancy</th>
<th>Safer alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meat, game, poultry</strong></td>
<td></td>
</tr>
<tr>
<td>• Raw or undercooked meat, game, and poultry (e.g., tartare, carpaccio, rare ground meat)</td>
<td>• Meat, game, and poultry cooked to their safe internal temperature (see <em>Cooking foods</em>, page 73)</td>
</tr>
<tr>
<td>• Refrigerated pâtés and meat spreads (e.g., country-style pâté, cretons)</td>
<td>• Pâtés and meat spreads that do not need to be refrigerated until they are opened (e.g., that come in cans)</td>
</tr>
<tr>
<td>• Non-dried deli meats (e.g., sliced ham, mortadella, turkey breast, or sliced beef)</td>
<td>• Dried and salted deli meats like salami and pepperoni</td>
</tr>
<tr>
<td>• Hot dog sausages that are not reheated</td>
<td>• Non-dried deli meats that are heated until steaming hot (they can be allowed to cool before eating)</td>
</tr>
<tr>
<td>• Hot dog sausages that are heated until steaming hot or until they reach an internal temperature of 74°C (165°F)</td>
<td></td>
</tr>
<tr>
<td>Foods to avoid during pregnancy</td>
<td>Safer alternatives</td>
</tr>
<tr>
<td>---------------------------------</td>
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</tr>
<tr>
<td><strong>Fish and seafood</strong></td>
<td></td>
</tr>
<tr>
<td>• Raw or undercooked fish and seafood (e.g., tartare, sushi, raw oysters)</td>
<td>• Fish and seafood cooked to their safe internal temperature (see Cooking foods, page 73)</td>
</tr>
<tr>
<td></td>
<td>• Oysters, clams and mussels that are cooked until the shell has opened</td>
</tr>
<tr>
<td>• Refrigerated smoked fish and seafood (e.g., smoked salmon or trout)</td>
<td>• Smoked fish and seafood that do not need to be refrigerated until they are opened (e.g., that come in cans)</td>
</tr>
<tr>
<td></td>
<td>• Refrigerated smoked fish and seafood that has been reheated to 74°C (165°F)</td>
</tr>
<tr>
<td></td>
<td>• Refrigerated smoked fish and seafood used in cooked dishes</td>
</tr>
<tr>
<td><strong>Eggs and egg-based products</strong></td>
<td></td>
</tr>
<tr>
<td>• Raw or runny eggs (e.g., sunny side up)</td>
<td>• Eggs that are well-cooked, with firm yolks and whites (e.g., omelet, boiled, scrambled)</td>
</tr>
<tr>
<td>• Foods made with raw or undercooked eggs (e.g., homemade products like mayonnaise, Caesar salad dressing, eggnog, mousse, sauces, and cookie and cake dough)</td>
<td>• Store-bought dressing, mayonnaise, and sauces</td>
</tr>
<tr>
<td></td>
<td>• Store-bought pasteurized eggs for raw egg–based recipes made at home</td>
</tr>
<tr>
<td></td>
<td>• Dishes made with eggs cooked to an internal temperature of 74 °C (165 °F) (e.g., quiche)</td>
</tr>
<tr>
<td></td>
<td>• Homemade eggnog heated to 71°C (160°F)</td>
</tr>
</tbody>
</table>
### Foods to avoid during pregnancy

<table>
<thead>
<tr>
<th>Milk and dairy products</th>
<th>Safer alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All pasteurized and unpasteurized soft cheeses (e.g., Brie, Camembert, Feta)</td>
<td>• Cheese made from pasteurized milk:</td>
</tr>
<tr>
<td>• All pasteurized and unpasteurized semi-soft cheeses (e.g., Saint-Paulin, Havarti)</td>
<td>– Firm cheese (e.g., cheddar, Gouda, Swiss)</td>
</tr>
<tr>
<td>• All pasteurized and unpasteurized blue-veined cheese</td>
<td>– Cheese curds</td>
</tr>
<tr>
<td></td>
<td>– Cottage cheese or ricotta</td>
</tr>
<tr>
<td></td>
<td>– Cream cheese</td>
</tr>
<tr>
<td></td>
<td>– Cheese spreads</td>
</tr>
<tr>
<td></td>
<td>• Pasteurized and unpasteurized hard cheeses (e.g., Parmesan and Romano)</td>
</tr>
<tr>
<td></td>
<td>• Cheese used in cooked dishes, casseroles, or au gratin</td>
</tr>
<tr>
<td></td>
<td>• Pasteurized milk and dairy products made from unpasteurized milk</td>
</tr>
<tr>
<td>• Raw milk and dairy products made from unpasteurized milk</td>
<td>• Pasteurized milk and dairy products made from pasteurized milk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fruit and vegetables</th>
<th>Safer alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Unpasteurized fruit juice</td>
<td>• Pasteurized fruit juice</td>
</tr>
<tr>
<td></td>
<td>• Unpasteurized fruit juice that is brought to a boil, then cooled</td>
</tr>
<tr>
<td>• Unwashed fresh fruit and vegetables</td>
<td>• Fresh fruit and vegetables that have been thoroughly washed (see Preventive measures for the whole family, page 73)</td>
</tr>
<tr>
<td>• Raw sprouts (e.g., alfalfa, clover, radish, bean sprouts)</td>
<td>• Cooked sprouts</td>
</tr>
</tbody>
</table>
Cooking foods

To be sure food is well cooked, you can use a digital food thermometer to check the internal temperature. Here are the minimum safe temperatures for killing microbes:

- **Beef, veal, and lamb**—whole cuts (e.g., roasts), pieces (e.g., steaks, chops): 63°C (145°F).
- **Pork pieces and whole cuts** (e.g., ham, loins, ribs): 71°C (160°F).
- **Ground meat or meat mixtures** (e.g., hamburgers, sausages, meatballs, meatloaf, casseroles): 71°C (160°F).
- **Poultry** (chicken, turkey, duck, and game birds):
  - Pieces, ground poultry meat or mix of poultry meats: 74°C (165°F).
  - Whole bird: 82°C (180°F).
- **Fish**: 70°C (158°F).
- **Other foods**—hot dogs, seafood, egg-based dishes, leftovers, stuffing, game meats: 74°C (165°F).

Preventive measures for the whole family

Certain basic practices can help reduce the risk of contracting food-borne infections, including listeriosis and toxoplasmosis. These practices are applicable at all times, not only during pregnancy.

**Cleanliness**

- Wash your hands thoroughly with soap before and after handling food (see Hand Washing, page 582).
- Wash all fruit and vegetables 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 fruit and vegetables with a firm peel, such as carrots, potatoes, melons, and squash.
- Use hot soapy water to wash all plates, utensils, cutting boards, surfaces, and sinks used to prepare raw foods, especially raw meat and poultry. If they require disinfecting, mix 5 ml (1 tsp.) of bleach with 750 ml (3 cups) of water and rinse well. Putting them through a cycle in the dishwasher will also disinfect them.
**Handling**

- Defrost foods in the fridge or microwave, not at room temperature. Those that are too big to be defrosted in the refrigerator can be immersed in cold water in their original wrapping. Change the water regularly, e.g., every 30 minutes, to ensure it stays cold.
- Cook food right away after thawing in the microwave.
- Do not refreeze foods.
- Do not allow raw foods like meat, poultry and fish to come into contact with cooked or ready-to-eat foods. For example, do not put ready-to-eat foods on a dish or plate that was previously used for raw meat before washing it thoroughly.

**Storage**

- Make sure your refrigerator 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.
- Store raw meat, poultry, and fish away from other foods.
- Don’t keep leftovers any longer than four days in the fridge, or freeze them right away.
- Use foods by the best-before date, which no longer applies once the package or container is opened.
Preventing allergies

There’s no need to exclude specific foods from your diet during pregnancy in the hopes of reducing the risk of food allergies in your newborn. By eliminating certain foods from your diet, 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.

Vitamin and mineral supplements

Food is by far the best possible source of nutrients, including during pregnancy. Vitamin and mineral supplements can never replace a nutritious and varied diet. The supplements your health professional may propose are designed to complement your diet, and are simply a way of ensuring you get all the nutrients you need during your pregnancy.


For more information on safe food preparation and preventing food-borne infections, and to consult Le Thermoguide (for safe storage times of perishable foods in the fridge and freezer), go to www.mapaq.gouv.qc.ca/fr/Consommation (in French only).
Folic acid and iron

Taking a folic acid supplement helps reduce your baby’s risk of developing a neural tube malformation such as spina bifida or other birth defects.

Women are advised to start taking a multivitamin that contains folic acid two to three months before getting pregnant and to continue taking it throughout pregnancy and after giving birth. Make sure that the multivitamin contains at least 0.4 mg of folic acid.

Pregnant women are also advised to ensure that their multivitamin contains between 16 mg and 20 mg of iron. Iron deficiency can lead to anemia in expectant mothers and cause health problems for their baby.

Tips

- Some women may need more folic acid or iron than others. Consult your health professional to find out the right quantity for you.

- Talk to your health professional before taking any vitamin or mineral supplements he or she has not specifically recommended. The same applies to all other natural health products.

- Iron supplements can cause constipation or digestive problems in some people. If this is the case for you, you will find tips on page 105 to help alleviate these discomforts. You can also make a point of taking the supplement with food.

Be sure to always follow the recommended daily dosage for the product you are taking. When taken in overly large doses, certain vitamins and minerals, such as vitamin A, can adversely affect your baby’s development.

- Neural tube: Part of the embryo that develops into the brain and spinal cord (inside the spinal column).
- Spina bifida: Birth defect of the spinal column.
- Birth defect: Abnormality existing at birth but that developed during pregnancy.
For more about nutrition

Eating Well with Canada’s Food Guide

- This guide gives the recommended number of servings and serving sizes.
- You can pick up a copy from your CLSC, order it from Health Canada, or consult it online at www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php.
- There is also a special version of the guide for First Nations, Inuit, and Métis: www.hc-sc.gc.ca/fn-an/food-guide-aliment/fnim-pnim/index-eng.php.
- It is possible to print out a personalized version of Canada’s Food Guide.
- It is also available as a mobile app: My Food Guide.

Being active

Being physically active during pregnancy will boost both your physical and psychological well-being. Physical activity helps make you feel more energetic and prevents you from feeling short of breath.

If you are already physically active, you’ve got every reason to keep it up. If you are sedentary, that is, if you’re not the active type, start slowly and build up gradually. Opt for activities that correspond to your fitness level and stage of pregnancy.

Don’t worry—physical activity does not increase the risk of miscarriage or health problems for your baby! In fact, women who are active during pregnancy tend to adapt better to the physical changes of pregnancy and recover faster after giving birth.
If yours is a normal pregnancy, you will be able to stay fit by partaking regularly in moderately intense activities like walking, swimming, aquafitness, biking, stationary cycling, cross country skiing, or snowshoeing. You can also add stretching, and posture and muscle strengthening exercises to your routine. Relaxation exercises will help you control your breathing and improve oxygen intake to your baby.

Pregnant women are advised to avoid taking part in extreme sports and scuba diving. Sports and activities that can expose you to falls or impacts are also not recommended. Women athletes who wish to continue training intensively during pregnancy should do so under the supervision of a physician.

Your health professional can give you advice if you have a pregnancy-related health problem or don’t feel capable of being physically active.

Women who are active during pregnancy tend to adapt better to the physical changes of pregnancy and recover faster after giving birth.
For more information on physical activity during pregnancy and examples of exercises you can do, pick up a copy of the Kino-Québec pamphlet *Active pour la vie* available at your CLSC and in medical clinics. You can also consult it online at www.kino-quebec.qc.ca (in French only).

**Work**

If you are pregnant or breast-feeding 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 a physician. He or she will ask an occupational health doctor to assess whether your work presents risks with regard to pregnancy or breast-feeding. If so, you will be eligible for For a Safe Maternity Experience program. For more about this program and your rights, see page 715.

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**Tobacco, alcohol, and drugs**

During your pregnancy, your health professional will ask you whether you smoke, drink alcohol, or use drugs. You may feel guilty or uncomfortable, or worry about being judged if you reply in the affirmative. Rest assured, the only purpose of these questions is to give you an opportunity to

- Get the information you need
- Talk about concerns you may have about the impacts of these habits on your health and that of your unborn baby
- Seek help if you want to quit
- Be referred to specialists if you need additional help

It’s not always easy to quit smoking, drinking, or using drugs.

Ask for advice or help from a health professional.
Tobacco

Pregnant women are advised not to smoke cigarettes or expose themselves to second-hand smoke (from other smokers), as there is a real danger for the health of the fetus, the baby, and the mom.

Smoking interferes with the development of the fetus and can impact the pregnancy 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.

Pregnancy is an ideal time to quit smoking. Friends and family who smoke can help you by not smoking around you. This is also a good time for them to quit smoking too!

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

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

► Sudden infant death syndrome: The unexplainable sudden death of an apparently healthy newborn under the age of one.
Alcohol

Pregnant women are advised to avoid drinking alcohol.

The more alcohol you drink, the greater the potential harm to your baby. Binge drinking and regular consumption of alcohol are especially harmful to your baby. The exact effects of occasional consumption of small amounts of alcohol are not known.

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 on pregnancy: it can cause miscarriage, or stillborn or premature birth. Alcohol also increases the risk of slow growth and birth defects in babies.

- The placenta does not filter alcohol: alcohol passes directly from the mother’s blood to the baby’s blood through the placenta.
The brain is the organ most sensitive to alcohol, and it develops throughout pregnancy. Alcohol can cause brain damage, which can result in the child developing learning, memory, attention, problem-solving, and behavioural problems.

Like many women, you may have consumed alcohol in the early days of your pregnancy before you knew you were pregnant. If you have concerns, you can talk to your health professional or call the Motherisk helpline for advice (in English and French) at 1-877-327-4636.

**Tip**

Take advantage of your pregnancy to discover non-alcoholic drinks or cocktails that can be just as tasty!

- Sparkling fruit-based drinks (apple, peach, or other)
• Exotic fruit juice diluted with sparkling mineral water, ginger ale, or lime soda
• Fresh or frozen fruit juice
• A slice of lemon, orange, or melon to garnish
• Frozen strawberries, raspberries, or blueberries as ice cubes

Cannabis and other drugs

Pregnant women are advised to avoid taking drugs and exposing themselves to second-hand drug smoke.

The effects of drugs on the unborn baby depend on three factors: the type of drug used, the amount consumed, and the moment the drugs are consumed.

Babies whose mothers took drugs during pregnancy can suffer withdrawal symptoms at birth. And since drugs bought on the street are illegal, there is no way to know or check exactly what is in them. This increases the risks associated with the use of these drugs.

The exact effects of cannabis consumption (marijuana and other cannabis by-products) during pregnancy are still not well understood, but are a matter of concern. Cannabis may interfere with the development of the fetus and, later on, the child. What’s more, since cannabis is a drug that is usually smoked, it may have the same effects as tobacco on the fetus. It is therefore recommended that pregnant women not consume cannabis during pregnancy.

Cocaine can cause bleeding or placental detachment in pregnant women, which can, in turn, lead to the death of the fetus or premature birth.
Got questions or concerns? Need help?

If you have questions or concerns about your consumption of alcohol or drugs or you need help to quit, you can:

• Talk about it with a health professional

• Call the Drugs, Help and Referral 24/7 hotline at 514-527-2626 or 1-800-265-2626, or go to www.drogue-aidereference.qc.ca

• Call free of charge Motherisk, an organization that answers queries from the public and health professionals on the effects of alcohol and drugs during pregnancy and breast-feeding: 1-877-327-4636, www.motherisk.org

For information on the problems caused by foetal alcohol spectrum disorders, you can contact:

SAFERA
An organization dedicated to the prevention of fetal alcohol syndrome.
418-830-1888 / 418-800-1235
info.safera@gmail.com
www.safera.net (in French only)

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 that can linger in the air in your home several hours after use. As a precautionary measure, pregnant women 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 for women exposed to them on an occasional basis during pregnancy.

Avoid using oil-based paints as they contain solvents that are harmful to the unborn baby. It is however highly unlikely 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 old paint that contains lead or to the toxic chemical products contained in paint remover.

**Pets**

**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.

To reduce the risk of having your cat pass on the parasite to you, have someone else clean the cat’s litter box. If no-one else is available to clean it, wear disposable plastic gloves and wash your hands thoroughly afterwards.
You can also reduce the risk of transmission if the litter box is cleaned daily, since parasites present in cat feces take 1 to 5 days before becoming infectious. If you don’t have a cat and would like to get one, consider waiting until after you give birth.

**Like to garden?** Keep in mind that cats and other animals may have buried their feces in your garden. As a precautionary measure, 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.

The toxoplasma parasite can also be found in raw meat. The usual methods for reducing the risk of food-borne infections can also lower the risk of toxoplasmosis. These methods are explained in the section on Preventing food-borne infections, page 68.

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**X-rays**

You may require x-rays during pregnancy. If you are pregnant, or think you might be, inform your doctor or dentist. He or she will be able to determine whether the benefits of the x-ray outweigh the risks for you and the baby you are carrying. It may be possible to put off the x-ray until later or replace it with other tests. In some cases, it may be riskier not to have an important x-ray than to be exposed to the rays.

At your first prenatal visit, let your health professional know if you had any x-rays before learning you were pregnant. If you must have an x-ray while you’re pregnant, tell the medical technician that you are pregnant so that he or she takes all the possible safety precautions, like having you wear a lead apron, for example.
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 trauma (injury) in the event of an accident. It protects the mom-to-be and is the best protection for the unborn child.

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

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

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**Zika**

Before traveling abroad, get information on the risk of infection by the Zika virus. It is recommended for pregnant women to put off 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 have no symptoms.

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

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 the equivalent of the cost of the care you would have received in Québec. Since such care can be more costly overseas, you (if you and your baby are not insured) or your insurer could end up with a big bill to pay.

**Air travel**

There are no international regulations preventing pregnant women from travelling by 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.

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

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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.

Access to health professionals, hospitals and birthing centres, birthing coaches, 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 provide prenatal care and attend deliveries include some family doctors, midwives, and obstetrician/gynecologists. Since 2007, primary health care nurse practitioners have also been authorized to provide pre- and post-natal care. In addition, you will meet nurses at your prenatal classes, your CLSC, in medical clinics or hospital high-risk pregnancy clinics (GAREs), and during your labour and delivery.

If you’re thinking about giving birth at home or at a birthing centre, 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 have the right to 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 sex therapists.

**Doulas**

Doulas help women during their 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 a doula present at the delivery. Keep in mind that doulas often charge for their services. Fees vary by organization and may also depend on your financial resources.
**CLSCs**

Centres locaux de services communautaires (CLSCs) are the 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, but all CLSCs provide care for families.

CLSCs can also inform you of the services available in your region and help answer any questions you have about your health and well-being. A few days after the birth, a CLSC nurse may visit you at home to make sure everything is going well for you and your baby.

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

If you are experiencing financial hardship, you may be eligible for the OLO program. It provides low-income pregnant women with one egg, a litre of milk, a glass of orange juice, and a vitamin and mineral supplement each day, free of charge. This program also offers the personalized services of a nurse or nutritionist.

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

After your baby has arrived, your CLSC will be there for you too! It can help you adjust to motherhood or fatherhood by offering services such as home visits, respite care, nursing support, parental support, and parent–child stimulation groups. If needed, you can also meet with social workers at your CLSC.
**Info-Santé**

Info-Santé is a free, 24-hour health hotline available in most regions throughout Québec. You can call Info-Santé at any time to talk with a nurse about any health issues you may have. This service is provided through CLSCs.

For more information about this service, go to sante.gouv.qc.ca/en/systeme-sante-en-bref/info-sante-8-1-1.

To call Info-Santé from anywhere in Québec (except northern Québec: Terres-Cries-de-la-Baie-James and Nunavik), dial 8-1-1.

**Prenatal classes and activities**

Prenatal classes are designed to answer your questions about things like pregnancy, labour, delivery, breast-feeding, and newborn care. This information is generally provided during meetings, and fathers are encouraged to attend. Classes are also an opportunity to talk with people who are going through the same things you are.
Yoga, aerobics, aqua fitness, 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. Course philosophy, start dates, length, number of students, and costs vary from one organization to the next. Some activities are for 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 748.

Health care

Medication and natural health products

- Care should be exercised when considering taking any prescription or over-the-counter (OTC) medication or natural health product during pregnancy. Some may be ineffective, dangerous during pregnancy, or harmful for your baby.

If you are pregnant or would like to get pregnant and you take prescription or over-the-counter medication or natural health products, talk to your health professional to see whether you should continue, stop, or change what you are taking.
If you are experiencing discomfort or health problems, it is important to recognize the situation and to choose the treatment best suited to your condition and the stage of your pregnancy. Many people think it is dangerous to take medication during pregnancy. But thanks to research and experience, most illnesses can be treated during pregnancy.

Be just as careful with natural health products (plants, supplements, and vitamins) as with conventional medication. Plants used for cooking, like parsley, basil, and garlic, are generally harmless. But in capsule, tablet, tincture, or extract form, these plants can be more concentrated than when they are used in food.

The effects of natural health products at high concentrations are not always known. There may be concerns about potential risks given the lack of data on their use during pregnancy. Furthermore, their exact contents are not always clearly indicated on packaging. Some ingredients could be toxic during pregnancy.

Here are some common situations and some general advice to help you make the right decisions about taking medication during pregnancy.
## Medication and pregnancy

<table>
<thead>
<tr>
<th>Situation</th>
<th>What to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>You want to get pregnant and you are taking medication for a specific problem like</td>
<td></td>
</tr>
<tr>
<td>• Anxiety</td>
<td>Talk to your doctor when you are planning to get pregnant.</td>
</tr>
<tr>
<td>• Depression</td>
<td></td>
</tr>
<tr>
<td>• Epilepsy</td>
<td></td>
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<tr>
<td>• Asthma</td>
<td></td>
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<tr>
<td>• Hypertension</td>
<td></td>
</tr>
<tr>
<td>• Depression</td>
<td></td>
</tr>
<tr>
<td>• Asthma</td>
<td></td>
</tr>
<tr>
<td>• Hypertension</td>
<td></td>
</tr>
<tr>
<td>You are pregnant and you are taking medication.</td>
<td>Talk to your doctor right away to find out whether you should continue, stop, or change your treatment.</td>
</tr>
<tr>
<td>You were taking medication before you found out you were pregnant, but are not taking it any more.</td>
<td>At your first appointment, tell your health professional what medications you were taking.</td>
</tr>
<tr>
<td>You have a health problem during pregnancy.</td>
<td>See a health professional right away for a health evaluation.</td>
</tr>
</tbody>
</table>
Things to know

- Your medication may be adjusted.

- Although some medications must be discontinued as soon as possible during pregnancy, don’t stop treatment out of fear of harming your baby or endangering your pregnancy without first consulting a professional. For some problems, stopping your treatment could cause more complications for you and your baby than the medication itself.
- A doctor or pharmacist can tell you if your medication needs to be adjusted.

- As a general rule, few medications have an effect on the baby at such an early stage.
- Ask your doctor or pharmacist for more information about your medication and its effects.

- Most infections and chronic problems can be treated with medication during pregnancy.
- Pain can also be relieved.
- Do not let your health deteriorate because you are afraid of taking medication.
Common discomforts of pregnancy

Your body changes throughout your pregnancy. These changes sometimes cause discomfort that are generally harmless, but can sometimes be hard to bear. The tables below outline some common types of discomforts as well as tips for relieving them.

Some over-the-counter medication can sometimes be taken for a short time. Talk to a health professional before taking any OTC medication. He or she may

- Suggest ways to relieve your discomforts without medication

- Check whether you are taking other products that should not be taken with OTC medication (drug interactions)

- Advise you about OTC medication that can be taken during pregnancy
  - Explain the best way to take it
  - Tell you the maximum dosage
  - Indicate how long you can take it

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

<table>
<thead>
<tr>
<th>Description</th>
<th>What to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>When:</strong></td>
<td>• Try to get more sleep at night (8–10 hours)</td>
</tr>
<tr>
<td>– Common from the beginning of pregnancy until the end of the 1&lt;sup&gt;st&lt;/sup&gt; trimester</td>
<td>• Take naps if possible</td>
</tr>
<tr>
<td>– May come back in the 3&lt;sup&gt;rd&lt;/sup&gt; trimester</td>
<td>• Eat a balanced diet</td>
</tr>
<tr>
<td><strong>Likely causes in the 1&lt;sup&gt;st&lt;/sup&gt; trimester:</strong></td>
<td>• Drink enough water</td>
</tr>
<tr>
<td>– Increased progesterone</td>
<td>• Try to get some exercise</td>
</tr>
<tr>
<td>– Waking to urinate</td>
<td>• Get help doing routine tasks if you can.</td>
</tr>
<tr>
<td>– Diminished nutrition due to nausea and vomiting</td>
<td><strong>Not feeling better?</strong></td>
</tr>
<tr>
<td>– Mood swings and anxiety</td>
<td>Talk to your health professional.</td>
</tr>
<tr>
<td>– Decreased caffeine intake</td>
<td>• Emotions and concerns about the delivery</td>
</tr>
<tr>
<td><strong>Likely causes in the 3&lt;sup&gt;rd&lt;/sup&gt; trimester:</strong></td>
<td>• Lower back pain</td>
</tr>
<tr>
<td>– Heartburn and acid reflux</td>
<td>• Heartburn and acid reflux</td>
</tr>
<tr>
<td>– Leg cramps</td>
<td>• Leg cramps</td>
</tr>
<tr>
<td>– Difficulty finding a comfortable position</td>
<td>• Difficulty finding a comfortable position</td>
</tr>
<tr>
<td>– Waking to urinate</td>
<td>• Waking to urinate</td>
</tr>
<tr>
<td>– Emotions and concerns about the delivery</td>
<td>• Emotions and concerns about the delivery</td>
</tr>
</tbody>
</table>
Nausea and vomiting

<table>
<thead>
<tr>
<th>Description</th>
<th>What to do?</th>
<th>Not feeling better?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Likely cause: hormonal changes</td>
<td>• Try to rest</td>
<td>Talk to your health professional if:</td>
</tr>
<tr>
<td>• Frequency:</td>
<td>• Eat what you want</td>
<td>• The nausea or vomiting</td>
</tr>
<tr>
<td>– Nausea: 70% to 85% of pregnant women</td>
<td>• Avoid getting hungry (going a long time without eating)</td>
<td>is interfering with your daily life. Your health professional may recommend taking</td>
</tr>
<tr>
<td>– Vomiting: 50% of pregnant women</td>
<td>• See if it helps to:</td>
<td>over-the-counter or prescription medication</td>
</tr>
<tr>
<td>• When:</td>
<td>– Eat smaller amounts more often (small meals and snacks)</td>
<td>• You are losing weight</td>
</tr>
<tr>
<td>– They generally appear between the 4th and 8th week after the start of the last period</td>
<td>– Avoid strong odours and food textures that make you queasy</td>
<td>See your health professional right away if:</td>
</tr>
<tr>
<td>– They often peak around the 9th week of pregnancy</td>
<td>– Avoid drinking when you are eating or feeling nauseated</td>
<td>• You show signs of dehydration: dry mouth and nose, dark urine</td>
</tr>
<tr>
<td>– They are rare after the 20th week</td>
<td>– Drink between meals instead</td>
<td>• You have severe, persistent vomiting</td>
</tr>
</tbody>
</table>
## Leg cramps

<table>
<thead>
<tr>
<th>Description</th>
<th>What to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cause: acid build-up (lactic and pyruvic acids) in the leg muscles. This build-up causes harmless but extremely painful cramps. They occur mostly at night.</td>
<td></td>
</tr>
<tr>
<td>• Frequency: over 50% of pregnant women</td>
<td>When you have a cramp, you can:</td>
</tr>
<tr>
<td>• When: during the second half of pregnancy</td>
<td>• Stretch your leg by pointing your toes upward</td>
</tr>
<tr>
<td></td>
<td>• Massage the affected muscles</td>
</tr>
<tr>
<td></td>
<td>• Get out of bed</td>
</tr>
<tr>
<td></td>
<td>• Walk around</td>
</tr>
<tr>
<td></td>
<td>Don’t worry if you feel slightly sore the next day; it is nothing serious.</td>
</tr>
<tr>
<td></td>
<td><strong>Not feeling better?</strong></td>
</tr>
<tr>
<td></td>
<td>See your health professional.</td>
</tr>
</tbody>
</table>
## Heartburn and acid reflux

<table>
<thead>
<tr>
<th>Description</th>
<th>What to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Possible cause: Hormonal changes associated with pregnancy which slow digestion, causing stomach fluids to move up into the esophagus.</td>
<td>You can:</td>
</tr>
</tbody>
</table>
| • When: From the start of pregnancy. They can get worse as the pregnancy progresses. | • Avoid lying down after meals  
• Sleep with your head elevated  
• Wear loose clothing  
• Change your diet:  
  – Eat smaller amounts more often (small meals and snacks)  
  – Reduce your intake of fatty foods  
  – Avoid stomach irritants like caffeine and spices  
  – Avoid eating or drinking a lot before going to bed |

### Not feeling better?

- You can temporarily take an antacid. Your health professional or pharmacist can advise you.
- Talk to your health professional if:  
  – Relief is only temporary  
  – Symptoms persist despite taking antacids  
  – You have to take antacids regularly over the course of several days  
  – Your symptoms are accompanied by fever, nausea, and severe vomiting or headaches
### Constipation and hemorrhoids

<table>
<thead>
<tr>
<th>Description</th>
<th>What to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Causes of constipation:</td>
<td>• Eat fibre-rich foods: bran and wholegrain cereal has a lot of fibre</td>
</tr>
<tr>
<td>– Pregnancy-related hormonal changes that slow digestion</td>
<td>• Eat dried fruit and fresh fruits and vegetables and drink prune juice</td>
</tr>
<tr>
<td>– Iron supplements</td>
<td>• Increase your daily water intake</td>
</tr>
<tr>
<td>– Hemorrhoids</td>
<td>• If you have hemorrhoids, you can take sitz baths. Applying zinc cream or witch-hazel compresses on hemorrhoids can sometimes relieve the pain</td>
</tr>
<tr>
<td>• Cause of hemorrhoids:</td>
<td></td>
</tr>
<tr>
<td>the growing uterus puts pressure on the veins, which makes them swell</td>
<td></td>
</tr>
<tr>
<td>• When: mostly in the 2nd and 3rd trimesters of pregnancy</td>
<td></td>
</tr>
</tbody>
</table>

**Not feeling better?**

Talk to your health professional, who may prescribe a more effective hemorrhoid ointment or suggest that you:

• Take dietary fibre or psyllium supplements. If you do, make sure to drink plenty of fluids to avoid making the constipation worse

• Take a stool softener
# Numbness and pain in the hands

<table>
<thead>
<tr>
<th>Description</th>
<th>What to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Likely causes: fluid retention in the body (oedema or swelling), which pinches the median nerve in the wrist</td>
<td>• These problems are harmless and will go away after the baby is born</td>
</tr>
<tr>
<td>• Frequency: 25% of pregnant women</td>
<td>• If symptoms are bothersome or painful, you can try an orthotic device or a wrist protector like the ones worn for rollerblading. Wear them whenever you feel pain or swelling, a few hours a day or at night</td>
</tr>
<tr>
<td>• When: especially in the 3rd trimester and mostly at night</td>
<td></td>
</tr>
<tr>
<td>• Distinctive feature: often affects both hands</td>
<td></td>
</tr>
</tbody>
</table>

**Not feeling better?**

Talk to a doctor if:
- You experience weakness in your hand
- The problem persists after the birth of the baby
### Back pain

<table>
<thead>
<tr>
<th>Description</th>
<th>What to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Likely causes:</td>
<td>The following exercises, when done regularly, can help prevent or relieve back pain during pregnancy. You can:</td>
</tr>
<tr>
<td>– Lordosis, i.e., arching of the back to compensate for abdominal weight</td>
<td>• Exercise in the pool, e.g., aqua fitness or swimming</td>
</tr>
<tr>
<td>– Ligamentous hyperlaxity: all the body's ligaments are more relaxed during pregnancy, including pelvic ligaments</td>
<td>• Exercise at home or during your daily activities: pelvic tilts while lying down or standing, round back stretch (see illustrations page 108)</td>
</tr>
<tr>
<td>• Frequency: about 75% of pregnant women</td>
<td><strong>Not feeling better?</strong></td>
</tr>
<tr>
<td></td>
<td>• Ask your health professional or pharmacist if you can take acetaminophen for a few days</td>
</tr>
<tr>
<td></td>
<td>• If the pain returns, persists, increases, or spreads to your legs, talk to your health professional</td>
</tr>
<tr>
<td></td>
<td>• 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 Recognizing the start of labour, page 169)</td>
</tr>
</tbody>
</table>
Treating common health problems

While you are pregnant, you may wonder about the best way to deal with problems that are unrelated to your pregnancy. Some problems can be more common or more bothersome during this period.

Oftentimes minor health problems do not need to be treated with medication. The table below contains advice on how to find relief. If you think you need to take medication while you are pregnant, talk to your midwife or doctor first. You can also ask your pharmacist.

- If you have to take acetaminophen, make sure not to confuse it with aspirin or ibuprofen (Motrin® or Advil®). Aspirin and ibuprofen cannot be taken at all times during pregnancy. Only take them if your health professional recommends them.
## Common health problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible solutions</th>
<th>Talk to your health professional if:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold</td>
<td>You can:</td>
<td>• Your cough or sore throat lasts for more than three days</td>
</tr>
<tr>
<td>Nasal congestion</td>
<td>• Use a nasal saline solution</td>
<td>• You have a fever (see page 129)</td>
</tr>
<tr>
<td>Sore throat</td>
<td>• If this does not help, use a nasal decongestant spray for up to three days.</td>
<td>• Your general health worsens</td>
</tr>
<tr>
<td></td>
<td>Your health professional or pharmacist can advise you. Extended use of this product</td>
<td>• You have any concerns</td>
</tr>
<tr>
<td></td>
<td>could make nasal congestion worse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gargle with salt water</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If you are in a lot of pain, ask your health professional or pharmacist if you</td>
<td></td>
</tr>
<tr>
<td></td>
<td>can take acetaminophen for a few days</td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>• Rest</td>
<td>• Your headaches last for more than three days</td>
</tr>
<tr>
<td></td>
<td>• If you are in a lot of pain, ask your health professional or pharmacist if you</td>
<td>• You have a fever (see page 129)</td>
</tr>
<tr>
<td></td>
<td>can take acetaminophen for a few days</td>
<td>• Your headaches are accompanied by other symptoms like stomach pains, vision problems, nausea or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>vomiting, or drowsiness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Your general health worsens</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• You have any concerns</td>
</tr>
<tr>
<td>Problem</td>
<td>When to talk to your health professional?</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Symptoms of urinary tract infection | Many pregnant women feel the need to urinate more frequently and in smaller amounts than they did before they were pregnant. Talk to your health professional to see if you could have a urinary tract infection if you:  
  • Have trouble starting to urinate  
  • Feel a burning sensation when you urinate  
  • Go to the bathroom to urinate just a few drops  
  • Feel the need to go again right after urinating  
  • Have pain in your lower abdomen, especially after urinating  
  • See blood in your urine  
  You may have a urinary tract infection even if you do not have any of these symptoms. It can be diagnosed through a urine test during your regular check-up. |
| Symptoms of vaginitis           | Pregnant women often have more vaginal discharge than usual. Talk to your health professional to see if it could be vaginitis and get treatment if you:  
  • Feel a burning sensation in the vulva when you urinate or have intercourse  
  • Have itching in the vulva area  
  • Notice a change in the color or odour of your discharge |
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 when women are between 26 and 32 weeks pregnant. The vaccine can be given for each pregnancy. It protects the woman and her baby during the first few months of baby’s life.

Contact with people with a contagious disease

Some pregnant women may come into contact with people, especially children, who have contagious diseases.

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, here is some advice for how to deal with certain diseases.

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

Thanks to their antibodies, over half of pregnant women in North America are protected against fifth disease, and so are their fetuses.

If an unprotected pregnant woman contracts fifth disease, there is a chance the fetus may become infected. In rare cases, the fetus could become severely anaemic and the mother could miscarry.

The risk of complications is more of a factor before the 20th week 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 the rubella vaccination, German measles is very rare in Québec and the rest of Canada. It’s unlikely that you’ll come into contact with someone who has this disease. If you think you have been, see a doctor (see also Blood tests and urine analyses, page 118).

Measles

Measles is a very 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. There have been no reported cases of congenital defect due to measles, however.

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

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**Antibodies:** Substances made by the body to fight off disease. Also called immunoglobulins.
**Chickenpox**

When chickenpox is contracted by a pregnant woman it can cause complications for the mother and baby. The childhood vaccination for chickenpox reduces the risk of exposure for pregnant women. Here is what you should do if you come into contact with a person with chickenpox:

- If you have already had chickenpox, you can rest assured that your baby is at no risk.
- If you’ve never had chickenpox or aren’t sure if you’ve had it, see a doctor within 48 hours. If you were born in North America, there is a more than 90% chance that you are protected.
- If you aren’t protected against chickenpox, you will be given antibodies to help keep you from getting the disease or reduce its intensity if you do get it.

**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.

However, if you are sick and you have any symptoms that may be caused by one of these contagious diseases, see a doctor.
Oral and dental health

Life goes on during pregnancy, and you may need oral or dental care at some point. Hormonal changes make your gums more sensitive, meaning they may become swollen or bleed more easily. This condition is called pregnancy gingivitis. In addition to brushing regularly, you should floss daily. Though your gums may bleed at the beginning, bleeding will go away quickly with proper oral hygiene. Talk to your dentist if needed.

You can continue to see your dentist; just make sure to tell him or her that you are pregnant. If you need dental care, your dentist may tell you when during your pregnancy it is best to receive the treatment you need. He or she may also decide to postpone non-urgent treatment until after the baby is born. And although the best time to get dental care is during the second trimester, you can have cavities, abscesses, and other urgent problems treated at any time during your pregnancy.

If needed, your dentist can X-ray your teeth if he or she covers your abdomen with a lead apron to protect your baby.

When treatment is needed, your dentist may also give you a local anaesthesia (“freeze” you) and prescribe antibiotics in case of infection.
Prenatal care

Prenatal care includes

• Appointments with your health professional
• Blood tests, urine analyses, and vaginal swabs
• One or more ultrasounds
• Screening tests (in some cases)

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

Remember, at any time you can

• 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

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

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

Frequency of prenatal visits

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

• As soon as you know you are pregnant until 11 weeks after your last period: first visit
• Between 12 and 30 weeks: one visit every 4 to 6 weeks
• Between 31 and 36 weeks: one visit every 2 to 3 weeks
• From 37 weeks until the baby is born: one visit per week
Description of prenatal visits

At every appointment, your health professional will check

- Your weight
- Your blood pressure
- The size of your uterus (starting around 20 weeks)
- The baby’s heartbeat; although it cannot be heard until 10 to 12 weeks, your baby’s heart began beating 5 weeks after the start of your last menstrual period

Usually the first prenatal appointment will take place between the 8th and 11th week of pregnancy. This gives parents time to arrange for tests like genetic screening if they wish, as these tests should ideally be performed between the 11th and 13th week of pregnancy.

This first visit generally lasts longer than subsequent appointments because your health professional will need time to ask questions about your health history and evaluate your baseline condition at the start of your 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 bring these questions up with your health professional so you can make informed decisions.

Questions to expect

At your first prenatal visit, your health professional will probably ask about the following:

- The date of your last menstrual period in order to determine your due date and how many weeks pregnant you are
• Your health before and since the start of your pregnancy. You may also be asked whether you have taken any medication, suffered from allergies, had any operations or problems related to anaesthesia or physical illness, or if you have ever suffered from depression or any other physical or mental health problem

• If you have ever been pregnant before, including any miscarriages or abortions

• Your family history and the family history of the baby’s father. You will be asked what diseases run in your family and the father’s family, including things like heart disease, congenital defects, and hereditary diseases

• If you have ever had gynecological problems, such as cervical surgery, or if you or your partner have herpes

• What your living conditions and lifestyle are like (tobacco, alcohol, and drug use)

• 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

**Physical and gynaecological examinations**

A full physical exam, including a gynecological exam, will be performed at your first visit.

If you have not had one in recent months, a pap smear will be done to test for cervical cancer. This examination can also be done later in pregnancy or after the baby is born.
It is also recommended that pregnant women be tested for sexually transmitted infections (STIs) like chlamydia and gonorrhoea. Many of these diseases can go undetected and affect your health and that of your baby. 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 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.

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

### Blood tests and urine analyses

During your visits, your health professional may prescribe lab tests and give you information about blood tests, urine analyses, ultrasounds, and screening for congenital defects.

Blood tests and urine analyses are used to determine

- If you are anaemic
- If you have an infectious disease that you could transmit to your baby
  - If you have an infectious disease like syphilis, HIV/AIDS, or Hepatitis B, you may be given medication during pregnancy or your baby may be vaccinated at birth to eliminate or reduce the risk of the infection being transmitted to the baby.
- If your blood glucose (blood sugar level) is normal
• Your blood type and **rhesus factor** (Rh factor)
  – For example, if you are Rh negative, some precautions must be taken. You may be given anti-Rh immunoglobulin (also called WinRho®) at 28 weeks and possibly after the delivery. This treatment will prevent you from developing anti-RH antibodies that could endanger this or a future pregnancy. You may be given WinRho® for other reasons as well, for instance if you have a miscarriage, undergo **amniocentesis**, or you have bleeding.

• If you have anti-rubella antibodies
  – If you do not have these antibodies and have never been vaccinated against rubella, you will probably be advised to get the vaccine after the baby is born.

• If you have a urinary tract infection, even if you have no symptoms

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**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 (especially if you have irregular cycles or are unsure of the date of your last period)

• 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

During the ultrasound, it is often possible (but not always) to determine whether your baby is a boy or a girl, 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.

---

**Rhesus factor (Rh factor):** One of the characteristics of blood. You are either Rh positive or Rh negative.

**Amniocentesis:** Procedure that involves taking a sample of amniotic fluid for analysis.
Prenatal screening for trisomy 21

At your first prenatal visit, your health professional will ask if you want to be screened for trisomy 21. This test is not mandatory; the decision to have any prenatal screening test run is yours alone.

In Québec there is a public program that provides free trisomy 21 screening tests for all pregnant women who want one. For more information on this program, visit www.msss.gouv.qc.ca/sujets/santepub/depistage-prenatal/index.php?accueil-en.

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

Trisomy 21, also known as Down syndrome, is one of the most common chromosomal abnormalities. Those with the disease have slower intellectual development. It is difficult to determine the severity of the disease as it varies from one person to the next, and depends to some extent on the stimulation and support they receive. People with trisomy 21 may also have health problems like heart defects.

Although there is no treatment for trisomy 21, people with the disease should not be defined only by their disability. They also have the resources and potential to develop close emotional bonds and lead a fulfilling life, for themselves and their loved ones. Of course, most people with trisomy 21 will need some degree of lifelong support.

Trisomy 21 is generally not hereditary. Any woman could potentially carry a fetus with this chromosomal abnormality, although risk varies with age, as illustrated in the table.
### Risk of having a child with trisomy 21 (full-term pregnancy)

<table>
<thead>
<tr>
<th>Age of the mother</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1 in 1,500</td>
</tr>
<tr>
<td>30</td>
<td>1 in 900</td>
</tr>
<tr>
<td>35</td>
<td>1 in 385</td>
</tr>
<tr>
<td>40</td>
<td>1 in 100</td>
</tr>
</tbody>
</table>

### Prenatal screening test

The screening test involves an analysis of the mother’s blood and, in some cases, an ultrasound. It determines if the odds (risk) of the baby having trisomy 21 are low or high. There is no danger for the fetus.

- **If the odds are low**, your doctor will not recommend further testing. However, **low odds do not guarantee that the baby will not have trisomy 21**. Because of natural variations between individuals, screening tests cannot detect all cases.

- **If the odds are high**, that does not necessarily mean your baby will have trisomy 21. Another diagnostic test called amniocentesis with chromosome analysis will be proposed to you. It is normal to feel anxious if you have to have this test done, but most women who undergo an amniocentesis have normal results and give birth to a baby that does not have trisomy 21.

### Diagnostic test: amniocentesis

Amniocentesis with chromosome analysis is the most common prenatal diagnostic technique. It is used to determine with certainty whether the fetus has trisomy 21.

This test can be done any time after 15 weeks, sometimes sooner. It involves inserting a thin needle into the abdomen to take a sample of amniotic fluid from the uterus.
Amniocentesis does carry some risk of complication, including miscarriage. That is why it is most often offered to women whose screening results show them to be at high risk.

**Amniocentesis results**

1. The vast majority of parents-to-be learn that their baby does not have trisomy 21 or any other chromosomal abnormality.

2. When the results indicate that the baby does have trisomy 21, the parents must choose between two options:
   - Move forward with the pregnancy and prepare to be parents of a child with trisomy 21
   - Terminate the pregnancy and mourn the loss of the baby

3. In rare cases, amniocentesis reveals other chromosomal abnormalities. If this happens, your doctor will refer you to a genetic specialist.

If you are faced with the difficult choice of continuing or terminating your pregnancy, you may need help. Don’t hesitate to discuss this choice with your loved ones or a health professional. You may also want to contact trisomy 21 parent groups; they can help you make the decision that is best for you. To find groups in your area, contact your CLSC.

**Other screening tests**

After you give birth, you will be given the option of having your baby pass blood and urine tests in order to detect rare diseases that require early monitoring or treatment (see Blood screening, page 202).
Trisomy 21 screening tests

Ultrasound
An ultrasound may be recommended to see how far along you are in the pregnancy.

An ultrasound may also be offered to measure nuchal translucency, i.e., the space between the skin of the fetus’s neck and its spine (between the 11th and the 13th weeks). Higher than normal nuchal translucency may indicate a high risk of trisomy 21, other chromosomal abnormalities, or heart defects. Ultrasound screening for trisomy 21 must be done in conjunction with blood testing to increase accuracy.

Blood tests
The prenatal screening test for trisomy 21 offered free of charge throughout Québec consists of two blood tests. The first is performed in the first trimester (between 10 and 13 weeks), and the second in the second trimester (between the 14th and the 16th weeks). Screening takes into account your age and the results of the two blood tests to determine whether your risk of having a baby with trisomy 21 are high or low.

Two blood samples yield more reliable results than a single sample, but if you have only the first blood test done, your risk will be calculated based on the one test result and your age. If it is too late to have the first test done, you can have one run in the second trimester. Again, your risk will be calculated based on the one test result and your age.

Other screening tests
Other tests may also be proposed. Knowledge about trisomy 21 screening is constantly evolving and can change rapidly. Your health professional will tell you what is available in your area.

Source: ministère de la Santé et des Services sociaux du Québec
Warning signs

Some problems during pregnancy require immediate attention by your health professional for evaluation. These include

- Vaginal bleeding
- Loss of amniotic fluid
- Severe headaches, severe upper abdominal pain, or vision change
- Fever
- Not feeling the baby move after 24 weeks of pregnancy
- Contractions before 37 weeks

The warning signs are explained on the following pages.

At the end of your pregnancy, you can also contact the obstetrics department of your hospital directly.

Vaginal bleeding during the early months of pregnancy

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

If you have bleeding during your first trimester, contact your health professional to have the situation assessed. After asking you some questions and doing an exam, he or she will be able to explain what is happening and what to do next.

However, go directly to the emergency room if you think you are pregnant and have any of the following symptoms:

- Dizziness or loss of consciousness
- Severe abdominal pain on one side
- Shoulder pain
- Heavy bleeding: vaginal bleeding that soaks two regular sanitary pads in an hour or one maxi-pad every hour for two to three hours straight
In the first trimester, light bleeding may be related to changes associated with the start of pregnancy, in which case there is no reason to worry. In many cases, the cause of this bleeding is unknown. It does not last, and the pregnancy progresses normally.

However, half of all women who bleed during this period will miscarry. In these cases, bleeding often starts a number of days after the pregnancy has ended. Bleeding may start brownish and turn red, or it may be light or dark red. More rarely, bleeding is due to an ectopic pregnancy (pregnancy outside the uterus).

A gynecological examination will be performed to determine the source of the bleeding and determine whether the size of your uterus matches the number of weeks of pregnancy.

If you are past 10 weeks, your health professional may also try to listen to your baby’s heart. Hearing the heartbeat is a good sign, as it indicates that the likelihood of miscarriage is low (2%). However, if bleeding persists, there is still a risk. Your health professional may check if an ultrasound is needed to evaluate the condition of the fetus. Examinations and treatment will depend on your particular situation.

About one in six pregnancies ends in miscarriage. Most miscarriages are caused by major genetic abnormalities that occur at random. They do not mean the woman is infertile or has a health problem.

▶ Genetic abnormality: Error in the genes. Genes are located on the chromosomes of human cells. They pass along the traits of parents to their children.
If your pregnancy ends prematurely

It is normal for a couple to feel sad and distressed after a miscarriage and to go through a period of mourning. Some women also feel guilty about things they did or did not do early in the pregnancy because they think they caused the miscarriage. But miscarriage is not related to stress, fatigue, physical or sexual activity, diet, or lifting heavy loads.

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 gone through the same situation or ask a health professional for help. Don’t hesitate to see a psychologist or social worker if you need to, as well.

If you want to get pregnant again after a miscarriage, it is best to wait until you have had at least one normal menstrual cycle. When you feel ready to try again, your odds of having a normal pregnancy will be very good. And don’t forget to keep taking your folic acid supplement.

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 doctor.
**Vaginal bleeding after 14 weeks**

It is not normal to have vaginal bleeding after the first trimester of pregnancy. If you do, see your health professional. Bleeding does not always mean the pregnancy is at risk, but you should be evaluated to make sure everything is all right. The bleeding may be from the placenta, which can complicate the pregnancy and requires close monitoring.

If you have light red bleeding that is heavy enough that you have to wear a sanitary pad, see a health professional right away for an assessment. In some cases, an ultrasound may be needed to determine the cause of the bleeding.

Women who are Rh negative may need immunoglobulin (WinRho®).

After any gynaecological exam, you may experience light bleeding because the cervix is more sensitive during pregnancy. This type of bleeding does not require medical attention.

**Loss of amniotic fluid**

Some pregnant women may also have vaginal discharge during their pregnancy. Discharge can be vaginal secretions, urine, or leaking amniotic fluid. Loss of amniotic fluid can pose a risk for the baby if it occurs before 37 weeks. The table on the next page can help you determine what type of discharge you are having.

If you think you are losing amniotic fluid, or if you are unsure, call the delivery room or your midwife or go to the hospital to find out for sure.
**Possible types of discharge**

<table>
<thead>
<tr>
<th>Type of discharge</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal secretions</td>
<td>• Heavier and runnier in the final months of pregnancy</td>
<td>The amount of discharge is another factor that can help you distinguish between leaking amniotic fluid, vaginal secretions, and urine. To estimate the amount</td>
</tr>
<tr>
<td></td>
<td>• May wet your underwear, but not leak through</td>
<td>• Wear a sanitary pad</td>
</tr>
<tr>
<td></td>
<td>• May soak a panty liner</td>
<td>• Check the pad in 30 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If you are really losing amniotic fluid, the pad will be soaked and heavy</td>
</tr>
<tr>
<td>Urine</td>
<td>• More common after physical exertion, movement, coughing, and sneezing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Leaking stops when the bladder is empty</td>
<td></td>
</tr>
<tr>
<td>Amniotic fluid (waters)</td>
<td>• Continuous loss of a clear, odourless fluid</td>
<td></td>
</tr>
</tbody>
</table>

**Severe headaches, severe upper abdominal pain, or vision change**

Contact your health professional right away if you are experiencing any of the following symptoms: severe headaches, severe upper abdominal pain, vision change (e.g., spotty or blurred vision), or general discomfort. Also consult your health professional if you notice that your blood pressure is high.
Fever

If you have a cold and are running a low-grade fever (about 38 to 38.4°C taken orally), you can take acetaminophen to lower your temperature and relieve pain. You can also contact an Info-Santé nurse or your health professional for advice. However, if your low-grade fever lasts more than 24 hours or you have a high fever (38.5°C or more), it could be harmful to your pregnancy or be a sign that you have an infection that needs to be treated.

See a doctor for diagnosis and proper treatment if any of the following apply:

- You have a fever of 38 to 38.4°C, taken orally, that lasts more than 24 hours
- You are running a fever of 38.5°C or higher, taken orally (you can take it twice to make sure)
- Your general health is poor, you feel unwell, or you have severe chills
- You have any concerns

Your baby doesn’t seem to be moving

Your baby is more active at certain times of day, but you may not always notice his movements because you are more active or distracted than usual. You also may not be able to feel all his movements, even if your baby is active (remember the movements you saw on the ultrasound that you couldn’t feel). At the end of your pregnancy the baby’s movements may feel different, but you will continue to feel the baby move until the delivery.

After 24 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 separate movements over two hours, contact your birthing centre or health professional right away or go to the hospital to make sure your baby is all right.
Contractions before 37 weeks

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 or are experiencing pain, you may be having real contractions. Sometimes the pain of the first contractions is similar to menstrual cramping. Real contractions last at least 20 seconds and come and go regularly.

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 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.
## How to tell the difference between contractions and other abdominal pain

<table>
<thead>
<tr>
<th>Problem</th>
<th>Symptoms</th>
</tr>
</thead>
</table>
| Heartburn             | • Pain in the upper abdomen  
                        | • Burning sensation caused by excess acid                                                                                                                                 |
| Intestinal cramps     | • Pain throughout the abdomen that may be due to diarrhea 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 comes and goes regularly  
                          | • Pain lasts at least 20 seconds                                                                                                                                 |
**High-risk pregnancies**

If you have certain health conditions, your pregnancy may be considered high-risk. You will probably be monitored by a clinic that specializes in high-risk pregnancies.

**Hypertension during pregnancy**

Some women start to have hypertension (high blood pressure) during pregnancy. They are considered more at-risk if they have already been treated for hypertension, have had hypertension during a previous pregnancy, or are expecting twins.

Treatment for hypertension during pregnancy may include resting at home, reducing activity, and sometimes taking medication to lower blood pressure.

If your blood pressure starts to rise, your urine will be tested for protein. If protein is found, that means you have preeclampsia, or hypertension with protein in the urine.

If you are diagnosed with preeclampsia, you may need to be hospitalized so that you and your baby can be monitored more closely. Depending on the status of your pregnancy and the severity of the condition, labour may also have to be induced. Giving birth is the only way to treat preeclampsia. Your medical team will determine the best time for you to give birth.

**Gestational diabetes**

Gestational diabetes (pregnancy diabetes) is due to an increase in the blood sugar level caused by the placenta, which produces hormones. Gestational diabetes is different from other types of diabetes. It carries no risk of birth defects. In fact, the most common consequence of gestational diabetes is having a bigger baby, which can make for a more difficult delivery for both mother and baby. The baby may also have hypoglycaemia and breathing problems at birth.
If you have gestational diabetes, the first step in treating it is to eat a balanced diet. You can meet with a nutritionist who will explain how to eat well. The diet of a woman with gestational diabetes is different from what is usually recommended for diabetics because pregnant women need more nutrients to help their baby grow. You will also be encouraged to exercise daily, for example, by taking a 30 minute walk.

If diet and exercise are not enough to control your blood sugar, you may be prescribed insulin. The treatment may sound complicated, but it’s not. Your medical team will help and guide you. You may also have to have one or more ultrasounds and additional tests done during your last few weeks of pregnancy to ensure your baby is doing well.

**Twins**

Did you just learn you are expecting twins, triplets, or quadruplets? They say having a baby changes your life forever, so what happens when you’re expecting more than one? You’ll need to make adjustments to plan for prenatal care, the birth, and after birth.

There are two types of twins: identical twins and fraternal 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 may not be of the same sex.
Twin pregnancies are considered high-risk. So if you are pregnant with twins, you will have more medical check-ups and exams as part of your prenatal care. Care by an obstetrician will also be strongly recommended, as obstetricians specialize in this kind of pregnancy and delivery.

Here are the most common problems that occur with twin pregnancies:

- **Premature babies**: The most common problem is pre-term labour, which can lead to the birth of premature babies. Premature babies have a higher risk of disease and mortality than full-term babies.

- **Twin-to-twin transfusion syndrome**: In the case of identical twins, there may be abnormalities caused by an unequal distribution of placental blood to the two babies.
• Second baby: When twins are born, the second baby has a higher risk of complications and accidents caused by the umbilical cord, or problems with the placenta, and the baby’s position.

Plan your delivery with your doctor and healthcare team. It is also important to decide where the birth will take place. Women who are expecting twins are advised to deliver in a hospital where specialized obstetric, paediatric, and anaesthesia services are available.

Your doctor will assess your situation and needs and discuss them with you. If the first baby is in a head-down position, which happens in two-thirds of cases, vaginal delivery is usually recommended, regardless of the second baby’s position. And in 40% of twin pregnancies, both babies are head down.

During your pregnancy, you and your family will prepare to welcome your newborns into your home. The best way to do so is probably to talk with other parents of twins who are willing to share their experience and tips with you. There are also associations of parents of twins in some areas of Québec. Contact your CLSC to learn about services and organizations in your area that can provide information and assistance.

**Association de parents de jumeaux et de triplés de la région de Montréal**
514-990-6165  
www.apjtm.com (in French only)

**Association des parents de jumeaux et plus de la région de Québec**
418-210-3698  
www.apjq.net (in French only)
Tips on preparing to bring your twins home

- Have people offered to help during your recovery? Take them up on it, but be clear about your needs. Make a list of household chores and a schedule that you can adjust later as needed.

- Feel free to ask for help in the weeks after your return home. If you don’t have any family or friends nearby, find out if there are any organizations in your area that can help.

- When you cook, make extra portions and freeze some. Your friends and family can also help by bringing meals as gifts.

- You don’t always need to buy two or three of everything. You can borrow furniture, strollers, and clothing, or buy used.

---

Domestic violence during pregnancy

Most couples settle disagreements through discussion and negotiation without resorting to physical or psychological abuse. But some people try to control their partner and use violence to resolve conflicts.

Some women experience domestic violence during pregnancy. One in ten women report being victimized at least once while pregnant. 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
- 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 who can help right away.

You can contact your CLSC to get help from a health professional. It can also 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
514-873-9010

www.sosviolenceconjugale.ca (in French only)
Preparing to breast-feed

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Why breast-feed?

Women breast-feed for a variety of reasons. Some breast-feed 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 breast-feed because of the health benefits it provides. Finances are also a factor for some families, as breast-feeding is very economical (there is nothing to buy—no milk, no bottles).

Health professionals 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 foods, it is recommended that they continue breast-feeding for two years or more.

Breast milk: a food like no other

All mammals produce milk that meets the exact needs of their young. The makeup of human milk is suited to the particular needs of human babies. What’s more, milk composition changes throughout the breast-feeding period to adapt to the growing baby’s changing needs. Babies love the taste of breast milk, which varies slightly depending on the mother’s diet. This helps babies become accustomed to a variety of tastes.

Breast milk is made up of easily absorbed non-allergenic proteins, sugars, and iron, as well as enzymes that aid baby’s digestion. It provides all the fats baby needs, including lots of omega-3 fatty acids and other essential fatty acids that support brain and eye development. It gives every baby the exact amount of vitamins and minerals she needs to develop, which is also just right for her growing kidneys.
Preparing to breast-feed
Breast milk contains living cells like white blood cells and antibacterial and antiviral factors that help baby’s immune system fight infection. No other food has these, not even commercial infant formula. At present, breast milk simply cannot be recreated in a laboratory.

Human milk contains over 200 known components. The table Composition of breast milk, page 142, shows some of these components and compares them with those found in commercial infant formula. You will see that all milk contains protein, carbohydrates, and fat, but those found in breast milk are different and provide exactly what human babies need.
### Composition of breast milk

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Function</th>
<th>Naturally present in breast milk?</th>
<th>Present in commercial infant formula?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Hydrate the baby</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Protein</td>
<td>Source of energy and building blocks; regulates body function</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Carbohydrates</td>
<td>The main source of energy for all cells</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Fat</td>
<td>Store energy for future use</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Minerals</td>
<td>Help cells and bones grow</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Vitamins</td>
<td>Help cells and bones grow</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Active enzymes</td>
<td>* Amylase  * Lipase  * Lysozyme</td>
<td>Aid food digestion</td>
<td>✔</td>
</tr>
<tr>
<td>Ingredient</td>
<td>Function</td>
<td>Naturally present in breast milk?</td>
<td>Present in commercial infant formula?</td>
</tr>
<tr>
<td>----------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Hormones</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cortisol</td>
<td>Regulate metabolism and support digestive and immune system development</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>• Insulin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Thyroxine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Prostaglandin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Human growth factors</td>
<td>Support intestinal growth and development</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>• EGF and other growth factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimicrobial factors (antibacterial, antiviral, and antiparasite factors)</td>
<td>Protect against bacterial infections (e.g., <em>E. coli</em>, <em>S. pneumoniae</em>), viruses, and parasites</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>• Antibodies (SIgA, IgA, IgM, IgD, IgG)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bifidobacteria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lactoferrin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Oligosaccharides</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Lysozymes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Casein</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Living cells present in human milk (macrophages, T and B lymphocytes)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**A gift of health for both mom and baby**

Because breast milk contains antibodies and other factors that support baby’s immune system, breast-fed babies are better able to fight off certain diseases. The more breast milk a baby gets, the more protection he has—protection that can even continue after he stops breast-feeding.

Breast-fed babies are at lower risk of anemia, gastroenteritis, diarrhea, respiratory illness (colds, bronchitis, etc.), and ear infection than babies who are not breast-fed. And when breast-fed babies do get these illnesses, they are less severe and require hospitalization less frequently. Breast-fed babies are also better protected against a number of chronic diseases.

Breast-feeding also has benefits for women. In the short term, breast-feeding reduces the risk of hemorrhage after delivery. Women who breast-feed are also less likely to be anemic because nursing delays the return of menstrual periods. In the long run, women who have breast-fed have a lower risk of developing breast and ovarian cancer.

**A practical, inexpensive way to feed your baby**

Breast-feeding is practical because milk is always instantly available when baby needs it. When he’s hungry, he doesn’t have to wait for food. Breast-feeding is also practical for parents. There is nothing to wash, prepare, store, or heat.

It is also inexpensive because no milk has to be bought. Even if a mother goes out without her baby, she doesn’t need to buy any milk. She can express ("pump") her milk so someone else can give it to her baby while she is gone.

The longer a baby is breast-fed, the more protected she will be. Even small amounts of breast milk are beneficial.

*Hemorrhage: Heavy bleeding.*
Preparing to breast-feed

Breasts naturally prepare for breast-feeding throughout pregnancy, but breast-feeding itself is a learned skill just like caring for a baby. During pregnancy, many couples spend a lot of time preparing for the birth, but few prepare for breast-feeding, even though better preparation could make breast-feeding a lot easier.

How the breasts get ready

All through your pregnancy your breasts will slowly begin to produce milk. Some women even notice milk leaking from their breasts during the third trimester.

Breast shape, size, and color vary from one woman to the next. Breast appearance and texture are largely hereditary. Like the rest of the body, breasts change throughout life.

Breasts also change during pregnancy. The areolas usually darken, and the breasts increase in size. Whether you have small or large breasts and nipples, they are designed to produce milk and feed your baby. There is nothing you need to do to prepare your breasts for breast-feeding. They prepare themselves naturally throughout pregnancy. Whether your baby arrives early or on time, you will have milk for her.

Breast-feeding does not change the appearance of your breasts, but carrying a baby and producing breast milk does.

▶ Areola: Darker area of the breast around the nipple.
How women get ready
To prepare to breast-feed for the first time, try talking with women who have had a positive breast-feeding experience. You probably know some already. Ask them what it was like and use them as resources.

If you don’t know anyone who can help, you can contact a breast-feeding support group in your community. These groups are run by women who have breast-fed and want to support other women. If you don’t know of any breast-feeding support groups, your CLSC can give you the names of the organizations in your area. Most of these groups offer

- Group information meetings or breast-feeding workshops
- Mentoring by experienced breast-feeding mothers
- Information and support over the phone

Though they are aware of the benefits of breast-feeding, some women are still hesitant to nurse their baby. Common fears include being unable to breast-feed, not having enough milk, having sore nipples, not being able to eat everything they want, excluding the father from feeding the baby, and having their breasts deformed from breast-feeding. Most of these fears are based on popular misconceptions or myths. Talk to a person trained in breast-feeding to get a better understanding of how breast-feeding works and how to prevent any problems.

How partners get ready
As a future father, you play a key role in the decision to breast-feed and continue breast-feeding. Even though you aren’t the one giving baby the breast, you need to know how breast-feeding works. Oftentimes it is easier to remember important information when two people know it.

At the beginning, especially with the first baby, the mother often needs help getting the baby latched on to the breast. You can help by lending a hand bringing the baby to the breast, shifting a pillow, or giving a word of encouragement. Little things like bringing the mother something to drink or making a snack are always appreciated.
You can help in other ways, too. You can reassure your partner when she’s unsure of herself, shield her from negative pressure from friends and family, or stress the importance of breast-feeding. This daily support means a lot, especially during the adaptation period.

You will find many different ways of caring for your baby. Babies need to be held, cuddled, dressed, bathed, and changed. Some fathers like to hold their baby against their chest (skin to skin) at the hospital or at home. Your baby needs to hear your voice and forge an emotional bond with you. Babies feel safe and warm in their father’s arms.

**How family and friends get ready**

Some families have an established breast-feeding tradition in which all mothers nurse their babies. If your family is like this, the people around you will know all about breast-feeding and probably know how to help you if needed.

But you might also be the first in your family or your partner’s family to breast-feed. In this case, you may need to let them know that you intend to breast-feed. They don’t have to have breast-fed themselves to support a woman who is nursing; they just need to be well informed.

**Breast-feeding accessories**

There is an ever-expanding array of breast-feeding accessories on the market—everything from breast pumps and nursing pillows to nursing pads and more. None of them are essential, and there is usually no need to buy these accessories during pregnancy. Community groups are good sources of information when the time comes to choose a pump or other breast-feeding accessories. If you decide to wear a nursing bra, it is best to get it toward the end of your pregnancy.
Getting breast-feeding off to a good start

The following tips will help you get breast-feeding off to a good start.

Making skin-to-skin contact immediately after the baby is born

Placing the baby right on her mother’s chest, skin to skin, has many benefits. The baby retains her heat better and is calmer. This contact also triggers her reflex to take the breast.

Feeding in the first hour after birth

In his first hours of life, the baby has sharper reflexes that help him find and take the breast. It is therefore easier to start breast-feeding in his first few hours of life. This first feeding will be etched in the baby’s memory and will help him recall what to do next time. After these first few hours have passed, the baby will enter a rest and recovery period during which his reflexes will “hibernate” for a few hours.

Breast-feeding on demand or as needed and not skipping feedings

The frequency and length of feedings varies from one baby to another. In the first few days of life, some babies want to nurse very often, so mom feeds on demand. Other babies do not always initiate feeds and therefore need to be encouraged and stimulated to nurse. This is called breast-feeding as needed. Once baby has regained her birth weight, she will generally ask to eat when she needs to. This is called breast-feeding on demand.

Rooming-in with your baby, both day and night

When you are physically close to your baby, you can detect early signs that he is hungry. This makes feeding easier because he will be calmer when he takes the breast. It is easiest to feed often and on demand. This also helps you get to know each other and to quickly provide for his needs.
Avoiding bottles

Breast-feeding is a learned skill for babies. Sucking at the breast involves a very different technique than drinking from a bottle. Milk flows faster from a bottle than from the breast, especially in the early days of breast-feeding. For some babies, these differences make it difficult to learn to breastfeed.

Giving a bottle also means skipping a feed, which can reduce milk production, a process that is still getting established during the first few days and weeks. If you cannot give your baby milk directly from the breast, ask about other ways to give her breast milk.

Avoiding pacifiers

It is normal for newborns to want to suckle and to frequently request the breast. Frequent feeds stimulate milk production and help baby take more milk. Babies who use a pacifier may sleep longer or fall back asleep without taking the breast. In some babies, these skipped feeds may reduce milk intake and slow weight gain.

Ensuring baby has a good latch

When the baby takes the breast properly, feeds are comfortable. The mother experiences virtually no pain and suffers no nipple injuries when the baby has a good latch. Babies learn to latch on in the first few days of life, so ask for help if feeds are uncomfortable.
Learning how to breast-feed

The start of breast-feeding also marks the start of your life with your new baby. Preparing for breast-feeding and the first few days with your baby can help you avoid any surprises and challenges. It’s natural to become a parent and breast-feed a baby, but it’s not always easy.

Learning to breast-feed is like learning anything new. Think back to what it was like to learn to drive, dance, ride a bike, or play a new sport. First you learn the theory, and everything seems simple enough. Then you try to do it, and that’s when you realize it isn’t as easy as you thought. That is often when you need help, advice, and encouragement.

You get better little by little, and with time you start to feel more confident. Then it starts coming automatically—everything feels easy! And that’s when it becomes enjoyable. Eventually you can show someone else how to do it. Breast-feeding is like anything else. It takes practice!

Remember that everyone’s breast-feeding experience is a little different and that every baby is unique. If your neighbour’s experience or your first breast-feeding experience was difficult, that doesn’t mean you will have trouble. It can often take four to six weeks to feel comfortable breast-feeding. It is normal to need time to get used to the experience. As you are learning, it’s a good idea to surround yourself with people who can support you and to know who to turn to if you are having trouble.
10 tips to make breast-feeding easier

• Learn about breast-feeding and breast milk before the baby is born.

• Establish skin-to-skin contact with your baby as soon as she is born. This will waken her senses and encourage her to take the breast.

• Offer the breast as soon as baby starts to look for it, ideally in the first hour after birth. This will help get breast-feeding off to a good start.

• Learn to recognize the signs indicating when your baby is hungry or satisfied.

• Feed as needed whenever baby is hungry. Frequent feeds stimulate milk production and comfort the baby during this important transition period.

• Room-in with your baby, both day and night. Keep baby nearby so you can get to know each other and you can quickly respond to his needs.

• Make sure baby has a good latch and suction. This helps baby eat well without hurting mom.

• Avoid skipping feeds, using a pacifier, and giving a bottle in the first four to six weeks. Exclusive breast-feeding (not giving any other kind of milk or food before six months) encourages good milk production and ensures that baby gets the full benefits of breast milk.

• Get support and avoid isolation. The support of your partner, a friend or loved one, or a community group can often make things better.

• Trust yourself and enjoy being a parent!

For more information about breast-feeding, see the Breast-feeding your baby chapter on page 358.
Preparing for the birth

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Birth plan ................................................. 158
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Stripping the membranes .............................. 164
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Planning ahead

The arrival of a new baby brings with it major life changes for parents. For a while you may not be able to take care of your home as you usually would. Just taking a shower could be quite an adventure, so you’d best get ready ahead of time: plan for child care, make some meals you can freeze, and get used to having some clutter in the house.

Think about who can help out, like family, friends, neighbours, or a community group. And think about things you might want to avoid, too, like unwanted visits or advice for example. Make room to welcome her and make sure others give you your space.

Have you arranged for someone to take care of your children when you leave for the hospital or birthing centre? Explain your children’s routine to this person.

Most of all, don’t hesitate to take people up on their offer to help—if it’s welcome, of course! There are also community groups that can help women who have just given birth by providing a few hours of housework or childcare per week. Contact your CLSC to find out what is available in your area.

Are your friends and family asking what kind of gift you’d like when your baby arrives? Ask for ready-made frozen meals, or request “help coupons” you can redeem for babysitting, meals, housework, etc.
Hospital visit

During your pregnancy you can learn about the different options available for giving birth (hospital, birthing centre) and their specific features (routine, rules, length of stay, and types of interventions). You can also visit them. This may help you feel more comfortable.

Visiting the hospital is also a great way to familiarize yourself with the best route to get there, find parking, and learn about the admission procedure. During your visit, hospital staff will answer your questions, tell you about the services available, and explain how the healthcare team works.

For help preparing your questions, see Things to think about when preparing your birth plan, page 160.

Ask your health professional or prenatal class instructor how to arrange a visit of the hospital where you will be giving birth.

In most cases you and your partner or the person who will be with you for the birth can visit the facility where you will be giving birth. This will give you an idea of what the birthing environment is like and what you need to do when you arrive.
What to bring to the hospital or birthing centre

Suggestions for mothers

- 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 check-ups
- 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
- 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!
<table>
<thead>
<tr>
<th>Suggestions for fathers</th>
<th>Suggestions for baby</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Comfortable clothes and shoes</td>
<td>☐ Diapers (if not provided by the hospital or birthing center)</td>
</tr>
<tr>
<td>☐ Food and drinks</td>
<td>☐ Pyjamas</td>
</tr>
<tr>
<td>☐ A camera</td>
<td>☐ Undershirts</td>
</tr>
<tr>
<td>☐ Reading material</td>
<td>☐ A blanket</td>
</tr>
<tr>
<td>☐ Your toiletry bag</td>
<td>☐ A hat</td>
</tr>
<tr>
<td>☐ A bathing suit (if you want to get in the whirlpool with your partner during labour)</td>
<td>☐ Going home outfit (appropriate for the season)</td>
</tr>
<tr>
<td>For fathers who plan on sleeping at the hospital or birthing center</td>
<td>☐ An infant car seat (required to go home)</td>
</tr>
<tr>
<td>☐ Your pillow</td>
<td></td>
</tr>
<tr>
<td>☐ Pyjamas</td>
<td></td>
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<tr>
<td>☐ A change of clothes</td>
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</table>
Birth plan

When your baby is born, you have decisions to make as parents about the treatment and care mom and baby will receive. You will feel better prepared if you’ve taken the time to think about the following list. But do keep in mind that no one knows ahead of time how the delivery will go. You can change your minds during delivery and you should stay open to any eventuality:

• Identify your wishes and fears
• 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

A birth plan is a tool that can guide your thinking. It also lets you communicate your wishes, verbally or in writing, to your health professionals and anyone else involved in the birth.

There are many sample birth plans available for your use. Ask your health professional or prenatal class instructor for one, 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.
No matter how you intend to use it, a good birth plan is

• Clear and concise

• Well prepared and has been given to your health professional before the birth and gone over with him or her

Most important, remember that even if your birth plan outlines your idea of the perfect birth, things may not go as you expected. Be confident, and don’t forget that if you are feeling overwhelmed by the decisions you need to make, you can ask your health professionals for help. Trust them! They will be there for you throughout your delivery. They have lots of experience, and their top concern is the well-being of you and your baby.

Here are a couple of tips to help you plan (as much as you can) for the birth of your baby. Take some time to think about the questions below and learn about your rights during labour and delivery and after your baby is born.

Some hospitals have a sample birth plan you can use. You can also ask your health professional or prenatal class instructor for one, or look in books or online.
## Things to think about when preparing your birth plan

<table>
<thead>
<tr>
<th>Question</th>
<th>You have the right to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who will be with you during labour and delivery?</td>
<td>• Have the baby’s father or anyone else you want at your side</td>
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<td></td>
<td>• Know whether you could be examined by professionals in training (doctors, nurses, midwives)</td>
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<tr>
<td>What methods would you like to use during labour to manage or relieve</td>
<td>• Labour and deliver at your own pace</td>
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<tr>
<td>pain or make it more bearable?</td>
<td>• Push and give birth in the position that suits you best</td>
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<tr>
<td>How do you feel about the interventions that may be performed during</td>
<td>• Be informed of the motives and reasons for all interventions (induction, stimulation,</td>
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<tr>
<td>labour and delivery?</td>
<td>forceps, episiotomy, epidural, sedatives, continuous monitoring, IV, etc.) and their</td>
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<td></td>
<td>effects on you and your baby, and to refuse any interventions you don’t want</td>
</tr>
<tr>
<td>How do you want to deal with unexpected developments during pregnancy,</td>
<td>• Know the medical reasons for an intervention and all the options available</td>
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<tr>
<td>labour, and delivery?</td>
<td>• Be informed of the different types of anaesthesia available and to choose the one that</td>
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<tr>
<td></td>
<td>suits you best</td>
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<tr>
<td></td>
<td>• Have the father or any other friend or family member with you at all times</td>
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<tr>
<td>How do you want to spend your first moments with baby?</td>
<td>• Have skin-to-skin contact with your baby as soon as she is born and to hold her as</td>
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<td>long as you’d like</td>
</tr>
<tr>
<td>Question</td>
<td>You have the right to…</td>
</tr>
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<td>------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>What if you have to stay longer at the hospital or birthing centre?</td>
<td>• Room-in with your baby at all times, no matter how many people are in your room&lt;br&gt;• Ask that arrangements be made so that the baby’s father or the person with you can stay by your side at all times&lt;br&gt;• Ask not to be disturbed by the facility’s routines so you can rest or have time with your baby, according to your needs</td>
</tr>
<tr>
<td>How do you feel about the exams and interventions that may be recommended for you and your baby after the birth?</td>
<td>• Know the reasons for all examinations, interventions, and medications recommended for you or your child, and to postpone or refuse them</td>
</tr>
<tr>
<td>How do you want to feed your baby?</td>
<td>• Breast-feed your baby on demand/as needed and ask that no supplements (water, formula) be given to him&lt;br&gt;• See a breast-feeding consultant who can help you if needed</td>
</tr>
<tr>
<td>How do you want to deal with unexpected developments after your baby is born? (e.g., if you or your baby have to stay in the hospital)?</td>
<td>• Have all reasonable measures taken so you can stay with your baby at all times</td>
</tr>
</tbody>
</table>

Some of this information was based on the leaflet *Grossesse et accouchement. Droits des femmes* published by Association pour la santé publique du Québec (ASPQ).
Vaginal birth after caesarean

Women who have had a C-section can envisage giving 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, which is when the uterine incision from the caesarean separates. If this happens, an emergency C-section will be necessary. Uterine rupture is rare, but can very dangerous for both mother and baby.

A planned caesarean also carries the risk of complication (see Caesarean section, page 194).

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 health professional 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 methods.

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.
Stripping the membranes

Toward the end of your pregnancy, your health professional may suggest stripping your membranes (also called a membrane sweep). The procedure can trigger uterine contractions within a few days so you don’t have to be artificially induced after 41 weeks (see Possible interventions during labour, page 188).

A membrane sweep can be done during a vaginal exam to check the dilation and consistency of your cervix. It can be an uncomfortable, sometimes painful, procedure and may cause some spotting for the first 24 hours.

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. Version 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 version, 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 health professional about your options.

**Breech presentation**