

The First Trimester

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1. Routine Tests

During your prenatal visits, routine tests and procedures will be offered to you to check your health and your baby's health.

Office tests

- Your blood pressure will be monitored throughout the pregnancy to ensure it is at a safe level for you and your baby.
- Your weight is monitored to ensure optimal growth and health for you and your baby.

Laboratory tests

- In the first trimester (0 – 14 weeks) a blood test is done to check your blood type, Rh type, antibody screen to test for syphilis, HIV, hepatitis and rubella

Ultrasounds

- These are done to check the development and position of the baby.
- A dating ultrasound is done in the first trimester to confirm the due date.
- Another ultrasound is done around weeks 18 – 20 which is a more detailed imaging of your baby's growth and development.
- Some women may also need additional ultrasounds throughout the pregnancy to check things like placement of the placenta, fluid levels around the baby, position of the baby.

2. Genetic Screening in Pregnancy

What is it?

A blood test that will provide you with the chances that your baby will have the genetic conditions of down syndrome, trisomy 18 or open neural tube defects. This provides you with the risk and cannot tell you for sure whether your baby has these conditions. These conditions affect the baby's health and development.

Down Syndrome: this happens when the baby has an extra 21st chromosome. These babies will have intellectual disabilities and development delays. They are also at a higher risk of health problems such as heart defects, gastrointestinal defects and immune conditions.

Trisomy 18: these babies have an extra 18th chromosome. They will have poor growth in the womb with low birth rates. They often have serious health conditions such as heart defects and other organ problems even before birth. Many of these babies don't survive to the third trimester. Those that do survive to birth will have severe developmental delays and intellectual disabilities.

Open Neural Tube Defects: this is when the neural tube doesn't close properly and results in developmental abnormalities of the spinal cord, spine or brain. The most common types are spina bifida and anencephaly. In spina bifida, babies have an opening in the skin on their middle or lower back and the covering of the spinal cord sticks out. Spina bifida can cause weakness or inability to move legs, decreased sensation in legs, problems with controlling bladder or bowel, problems with learning and attention. Anencephaly is a severe NTD where the brain is not developed and is exposed. These babies die within hours to days after birth.

Considerations

First and foremost, it is entirely your choice as to whether you wish to get genetic screening. In making this decision, it is important to consider whether the outcome of the test would change how you move forward in the pregnancy. Some patients may choose a termination, while other may want to know ahead of time in order to be able to plan for the extra supports for when the baby comes. Similarly, for some patients would continue with the pregnancy regardless of the results and they may choose to not undergo the screening.

SIPS

- Free, entirely covered by MSP and 92% accurate
- First blood test is done at 9-14 weeks and a second between 14-16 weeks (but can be done up to 21 weeks)
- Your results will be made available to you 10 days after the second blood test

NIPT (Non-Invasive Prenatal Testing)

- A private pay blood test after 10 weeks, \$495-650
- Over 99% accurate
- The government will cover the cost of this test if your SIPS indicates you are high risk, you've had a previous trisomy 13, 18, or 21 pregnancy, or ultrasound marker shows high risk (greater than one in 300) of aneuploidy

Nuchal Translucency Ultrasound

- A special ultrasound that may be offered to you if you are over 40 years old or are having twins
- It is an ultrasound that looks at the fluid space in the back of the baby's neck.
- Completed between 11-14 weeks

3. Nutrition and Dietary Restrictions in Pregnancy

What to Eat

- You can continue to eat similar portion sizes, with small increases in the second and third trimester as baby grows. This is around 340 calories more per day in the second trimester and 450 calories in the third trimester
- You should continue to follow the Canadian food guide recommendations and eat a healthy diet with fresh fruits and vegetables, whole grains and protein
- Try to pick foods that are natural sources of folate, iron, vitamin C, calcium with vitamin D, choline, and omega 3 fats
- Folic acid can be found in green vegetables such as broccoli, spinach and asparagus, dairy or meat
- Iron can be found in meat and well as meat substitutes such as tofu and legumes
- Omega 3s can be found in salmon, tofu, eggs, seeds and nuts
- Calcium can be found in dairy, almonds, and soy
- Vitamin D can be found in dairy, fortified soy milk or orange juice, and salmon
- Choline can be found in chicken, beef, eggs, milk or soy
- Try to increase fiber with a goal of 28g per day
- Milk and hard cheeses are safe to eat as long as they have been pasteurized

What to Limit

- Caffeine should be limited to no more than 300mg a day, the equivalent of two 16oz cups of coffee
- Sugar or artificial sweeteners

What to Avoid

- Alcohol, tobacco, and any recreational drugs. There is no amount that is considered safe in pregnancy
- Unpasteurized dairy: milk and hard cheeses, juices or liquid eggs
- Avoid eating large fish that could be high in mercury (fish that eat other fish because these accumulate mercury and other toxins like tuna, swordfish, mackerel)
- Avoid processed foods
- Uncooked deli meats and soft cheeses. Soft cheese has a high chance of containing bacteria as they have not been pasteurized. These cheeses are safe to eat if they have been cooked.
- Avoid raw or undercooked meats, including fish

- Smoked seafood or shellfish
- Raw sprouts
- You should try to avoid added salt, sweet or fatty foods

Supplements

- In addition to a healthy diet, it is important that you include a prenatal vitamin
- Choose a daily prenatal vitamin that include mg of folic acid, vitamin b12, and up to 27mg of iron
- You may also include 450 mg of choline if this is not found in your prenatal vitamins
- DHA is another important supplement. It is recommended to have 200 mg per day.

For more information: <https://www.fraserhealth.ca/health-topics-a-to-z/pregnancy-and-baby/pregnancy/healthy-eating-during-pregnancy#.YHTzaUhKjIw>

4. Nausea and Vomiting

“Morning sickness” can happen at any time of the day or night. About 65% of women have nausea and vomiting during pregnancy. Usually, it starts around weeks 4 to 8 and can continue to 12 to 16 weeks. Some women experience nausea and vomiting longer than 16 weeks.

Tips to reduce nausea and vomiting

- Rest as much as you can! Being tired can make nausea worse.
- Ice chips and popsicles can reduce metallic taste in your mouth
- Rinse mouth with water or mouthwash to help control unpleasant taste in mouth
- Adding ginger to hot water can help reduce nausea – grated fresh ginger, or ginger syrup
- Reduce foods that can make your nausea worse
 - Very sweet foods
 - Spicy foods
 - Fatty or fried foods
 - Hot foods
- Avoid strong smelling foods that bother you
 - Try eating outside in fresh air
 - Ask someone else to cook the foods that have the smells that bother you
 - Wearing a mask can help block some of the food smell
 - Smelling lemons can help reduce nausea

When eating:

- Try to avoid drinking fluids with your food because this can add too much to your stomach and cause you to vomit
- Eat when you feel hungry
- Eat every 2-3 hours to keep food in stomach: an empty stomach can make nausea worse
- Eat slowly
- Avoid lying down for at least 30 minutes after a meal – this helps the food stay down
- Once you have stopped vomiting, eat plain cold or room temperature foods with little smell

- Toast
- Crackers
- Fruit
- White rice
- Plain hot cereal
- Plain white pasta
- Pretzels

Keep hydrated

- Try to have 8 cups or 2 litres of fluid each day, by sipping small amounts throughout the day
 - Water
 - Diluted juice
 - Gelatin (Jell-O)
 - Clear soda (no fizz)
 - Popsicles
 - Weak tea
 - Oral rehydration solutions
 - Ice chips
 - Broth

Signs you are not getting enough fluid

- More thirsty than usual
- Darker urine than usual
- Passing little or no urine in 8 hours
- Dizziness when standing or sitting
- Dry eyes and dry mouth

When to talk to your doctor

- Vomiting 2-3 times per day
- Vomiting and you have a fever
- Pain, bloating or swollen stomach and don't feel better after vomiting
- If you would like to consider medications to help manage your nausea and vomiting

5. Exercise in Pregnancy

- Staying active in pregnancy can help you to be strong for the birth, improve your sleep and health, and improve mood
- All uncomplicated pregnancies benefit from regular aerobic exercise and resistance training. There is no evidence that exercise increases the risk of miscarriages in healthy, uncomplicated pregnancies
- Avoid any sports or activities that could result in injury to the abdomen as this could injure the baby (ex. Contact sports)
- Remember to stay well hydrated even if you don't feel very thirsty. Aim for 8- 12 cups of water a day
- Stop exercising and make an appointment with your doctor if you begin to experience difficulty breathing, pain or cramping in the back or pelvic area, vaginal bleeding, lightheaded or unusual sensations in your chest

First Trimester

- Continue exercising at a similar level as before you became pregnant. The goal is to exercise to stay healthy, not to lose weight or to reach a new personal record.
- In early pregnancy, you can continue your regular exercise as tolerated. You may find you need to scale back for a while due to morning sickness or fatigue
- You should aim for a minimum of 150 minutes of moderate physical activity over 3 days a week. This can include jogging, biking and walking briskly. Moderate activity includes being able to hold a conversation while exercising.
- If you find that you are beginning to be fatigued more easily, it is okay to scale back the activity to something less rigorous.

Second and Third Trimester

- In your second trimester, avoid lying flat on your back, including for sit ups or yoga as the growing uterus can push on important blood vessels.
- At this time, your joints may become a little more unstable as they relax and your center of gravity will be changing, making it more difficult to balance. Be careful to avoid any exercises where you may fall.
- Choose a supportive bra and a belly belt can be worn to reduce any discomfort

6. Weight Gain During Pregnancy

Weight gain is a normal and expected part of the pregnancy. It's important to gain some weight to help baby grow. However, gaining too much or too little weight can have risks for you and your baby.

Gaining too much weight increases the risk of:

- Pregnancy problems like high blood pressure, gestational diabetes or pre-eclampsia
- Increased chance of miscarriage or stillbirth

- Long labour or birth, and higher risk of needing Caesarean section
- Injury to you or your baby during the labour and birth
- Poor blood supply of oxygen to baby during labour
- If your baby's birth weight is over 4.5 kg (9.9 lb) there is greater risk that your baby may develop type 2 diabetes later in life, and may become overweight or obese

Gaining too little weight increases the risk of:

- Baby low birth weight and size
- Illness in first month of life
- Physical and mental disabilities
- Health problems later in life

Healthy weight gain

Weight gain should happen slowly over the whole pregnancy, with most of the weight gain happening in the third trimester when baby is growing most rapidly

Recommended weight gain:

Pre-pregnancy BMI	Average weekly weight gain in 2 nd and 3 rd trimester		Recommended total weight gain	
	kg/week	lb/week	kg	lb
Less than 18.5	0.5	1	12.5 – 18	28 – 40
18.5 – 24.9	0.4	1	11.5 – 16	25 – 35
25.0 – 29.9	0.3	0.6	7 – 11.5	15 – 25
Greater than 30	0.2	0.5	5 – 9	11 – 20

7. Medications during Pregnancy

Many medications can cross the placenta and affect the baby's growth and development. These include over the counter medications, prescription medications, and natural or herbal remedies.

Over the Counter Medications that are Safe in Pregnancy

- Acetaminophen (Tylenol) – for minor aches and pains, headaches, etc.
- Diphenhydramine (Benadryl)
- Loratadine (Claritin)
- Prenatal vitamin
- Docusate (Colase) for constipation

Not Safe in Pregnancy

- NSAID medications (Non-steroidal anti inflammatory drugs)
 - Ibuprofen (Advil, Motrin)
 - Aspirin
 - Naproxen (Aleve)
- Combination medicines, multiple ingredients, often have an NSAID in them
 - DayQuil

- Herbal medications or remedies
 - These products are not regulated and most have not been clinically tested for safety. It can contain ingredients that could harm your baby. Always talk to your doctor first.

8. Working during Pregnancy

For most women with uncomplicated, low-risk pregnancies, it is safe to work as long as you would like. However if you work with certain chemicals, solvents, fumes or radiation, you may need to avoid contact with these workplace hazards. If your work is physically demanding, you might not be able to continue strenuous work. If your work includes any of the following, talk to your doctor.

- Stooping or bending over more than 10 times per hour
- Climbing a ladder more than three times in an 8 hour shift
- Standing for more than 4 hours at a time
- Climbing stairs more than three times per shift
- Working more than 40 hours per week
- Shift work
- Lifting more than 23 kg (50 lb) after the 20th week of pregnancy
- Lifting more than 11 kg (24 lbs) after the 24th week of pregnancy
- Stooping, bending, or climbing ladders after the 28th week
- Needing to lift any heavy items after the 30th week
- Needing to stand still for more than 30 minutes of every hour after the 32nd week
- Working with chemicals, solvents, fumes, or radiation

In Canada, there is federal Employment Insurance (EI) to help provide temporary assistance to Canadians who are pregnant. To learn more about eligibility and details visit servicecanada.gc.ca

9. Vaccinations in Pregnancy

Being vaccinated before pregnancy helps protect both the mother and the fetus from disease of getting an infection. It can also help provide **passive immunity** – protection to the baby after birth and before the baby is old enough to receive vaccinations.

It is sometimes necessary to receive vaccines during pregnancy, and the benefits to both mother and fetus outweigh the risks. There is no evidence of harm to pregnant women or fetuses from receiving inactivated vaccines.

If you are not up to date on your vaccinations, and you do get an infection during pregnancy there can be problems such as passing the infection on to the baby, having a miscarriage, giving birth too early, and having a baby with a birth defect. Talk to your doctor about getting caught up on your vaccinations.

COVID-19 vaccine

- Pregnant women are more likely to be seriously ill if infected with COVID-19
- Experts recommend that pregnant women receive the COVID-19 vaccine

Flu vaccine

- This vaccine is given for the benefit of both the mother and the baby, and should be received when the vaccine is available, regardless of how far along in the pregnancy.

Adacel vaccine – for tetanus, diphtheria, and pertussis

- This vaccine protects babies from whooping cough – a disease that kills 200,000 babies worldwide
- This vaccine is recommended around week 28 of pregnancy
- Receiving this vaccine when you are 28 weeks pregnant will help protect your baby from whooping cough until they are old enough to receive their regularly scheduled vaccination at 2 months of age.

Live vaccines (for the diseases chicken pox and rubella) are usually **not** given in pregnancy because they may be harmful to the developing fetus.

There is **no** link between getting any vaccine and developing autism.

There is no vaccine for cytomegalovirus (CMV). CMV is very common in healthy children between ages one to five. If you work with children/are around young children, be sure to avoid sharing food, utensils, drinks, straws, avoid contact with **saliva** when kissing a child, reduce contact with **urine** from babies and young children, and frequently wash your hands. Also reduce contact with other bodily fluids of children, including blood, and tears. When a pregnant woman is exposed to CMV, the virus passes through the placenta to the fetus and can have severe effects on the baby, including hearing loss, developmental disabilities, and smaller than expected head compared to the rest of the body.

10. Other Resources

- Pregnancyinfo.ca
- Fraserhealth.ca
- Perinataleservicesbc.ca
- Healthlinkbc.ca