

UPDATED OCTOBER 2019

# YOUR PRENATAL CARE



# Table of Contents

Introduction . . . . .	3
Common Questions . . . . .	4
Prenatal Care Schedule . . . . .	5
Embryo Development . . . . .	6
The Changes in Your Body . . . . .	7
The Common Discomforts of Pregnancy . . . . .	8
Making Healthy Choices While Pregnant . . . . .	10
Eating Well . . . . .	11
Healthy Physical Activity . . . . .	15
All About Weight . . . . .	17
Prenatal Genetic Screening . . . . .	18
Prenatal Genetic Testing . . . . .	19
About Conditions That Can Be Detected Prenatally . . . . .	21
Mental Health During Pregnancy . . . . .	22
Resources for Expecting and New Families . . . . .	24

# Introduction

Congratulations on your pregnancy! Being pregnant is an exciting time in your life – and it also comes with many questions. This booklet answers the most common questions asked during pregnancy. Your doctor and nurse are happy to talk to you if you need any more information – please just ask.

# Your Prenatal Care

**Preparing for your appointment**  
It is a good idea to write down a list of questions that you have before your appointment. Ask your most important question first, and make sure to find out from your doctor the best way to get questions answered in between appointments.

## LIGHTS LEGEND

-  = go ahead.
-  = use caution.
-  = STOP.



# Common Questions

### 1. What if I start bleeding?

Some bleeding may be harmless. However, if you have bleeding and cramping in your lower abdomen, it may be a sign of a miscarriage. It is important that you see a doctor right away.

If you start bleeding, call your doctor's office immediately. If you cannot get in touch with your doctor or nurse, you should go directly to your hospital emergency department.

### 2. Can I change my cat's litter box?

While you are pregnant, have someone else clean out the cat's litter box. Cat feces can cause an infection called toxoplasmosis, which is dangerous to your baby. Talk to your healthcare team about safety precautions if there is no other person in your house to change the cat litter.

### 3. What medications are safe to take while I'm pregnant?

It is always best to check with your doctor, nurse or pharmacist before taking any medications.

### 4. What about breast feeding?

Breast feeding is a learned skill. You are not expected to naturally be good at breast feeding right when your baby is born. It takes support and encouragement, but you and your baby can be successful at breast feeding.

We recommend that you exclusively breast feed your baby for the first six months, because breast milk:

- provides the best nutrition to your growing baby and helps you bond and learn your baby's cues
- helps prevent your baby from getting sick and supports digestive & brain development
- is easier for your baby to digest and research shows that mothers who breast feed sleep on average the same amount as mothers who do not.

If you run into challenges after the baby is born, your healthcare team is there to help.

Some ways to help with success in breast feeding:

1. Skin to skin contact immediately after birth.
2. No artificial pacifiers or bottles.
3. Feed on demand.
4. Initiate breast feeding within half hour of birth.

# Emergency Situations

Be in contact with your healthcare team immediately if you have:

- Blurred vision, dizziness or become very tired.
- Severe nausea, shortness of breath or chest pain.
- Unexplained abdominal pain, contractions or vaginal bleeding.
- Any gush of fluid from the vagina.
- New or increased back or pelvic pain.
- Sudden swelling of the ankles, hands or face.
- Pain, redness and swelling in the calf of one leg.
- Persistent headaches.

- A heart rate or blood pressure that remains high one hour after exercise.
- A fever of 39°C or higher, or if you are not sure what is causing a fever.

Call your healthcare team right away if:  
You stop gaining weight.  
You feel there is a change in the baby's movement.

# Prenatal Care Schedule

This schedule tells you what to expect at your appointments during your pregnancy. You may have more appointments or tests, depending on your health and whether or not you choose to have prenatal genetic screening and testing.

WEEKS 8 - 12

First Prenatal Appointment

- Prenatal paperwork is filled out – a complete history is taken, including pregnancy and family history. Bring information about your medical history and the medications you are taking.
- A complete physical exam and PAP if due is done.
- Requisitions for blood work are given to monitor your pregnancy and to test for health conditions that you may have that could affect your pregnancy, like rubella, Hepatitis B, anemia.
- An early ultrasound may be scheduled.
- Your options for prenatal genetic screening and testing are discussed.

- You will go to the lab for this blood test, which takes at least an hour and involves drinking a sugar solution and then getting your blood taken. If your blood comes back positive for Glucose Screening, you may have to go for a longer, more detailed Glucose Tolerance Test or you will be referred to the gestational diabetes clinic for education and management.
- If you have had diabetes in a previous pregnancy, be sure to discuss with your healthcare provider. Early screening may be done.
- Due to sustained high rates of pertussis (whooping cough) in Alberta, it is recommended that a single dose of pertussis vaccine is administered at 26 weeks or greater in each pregnancy. Pertussis vaccine in pregnancy is safe, and protects Mom, and baby.

WEEKS 10 – 26

Regular Prenatal Visits

- An appointment will be booked for you about every four weeks. Bring a list of questions for your doctor or nurse.
- Your blood pressure is taken, you are weighed, and urine may or may not be screened.
- Your baby's heartbeat is checked and your abdomen is measured after 20 weeks gestation.

WEEKS 26 – 36

Regular Prenatal Visits

- You will now see your doctor for regular prenatal visits every two weeks.

WEEKS 18 – 20

Routine Ultrasound

- This is generally when you will go to an appointment for an anatomical ultrasound.
- Ultrasounds are safe and painless, and provide pictures of your baby inside your body using sound waves.
- Most often can determine fetal sex.

WEEK 36

Group B Strep Screen

- Group B Strep is a common bacteria that is usually harmless in adults, but can cause serious illness in newborn babies, if it is transferred from the mother.
- Your doctor will take a swab from your lower vagina and rectum and send it to the lab for testing.
- If it comes back as positive for Group B Strep, you and your doctor will make a plan to be treated with antibiotics during labour.

WEEK 36

Gestational Diabetes Screen Blood Work

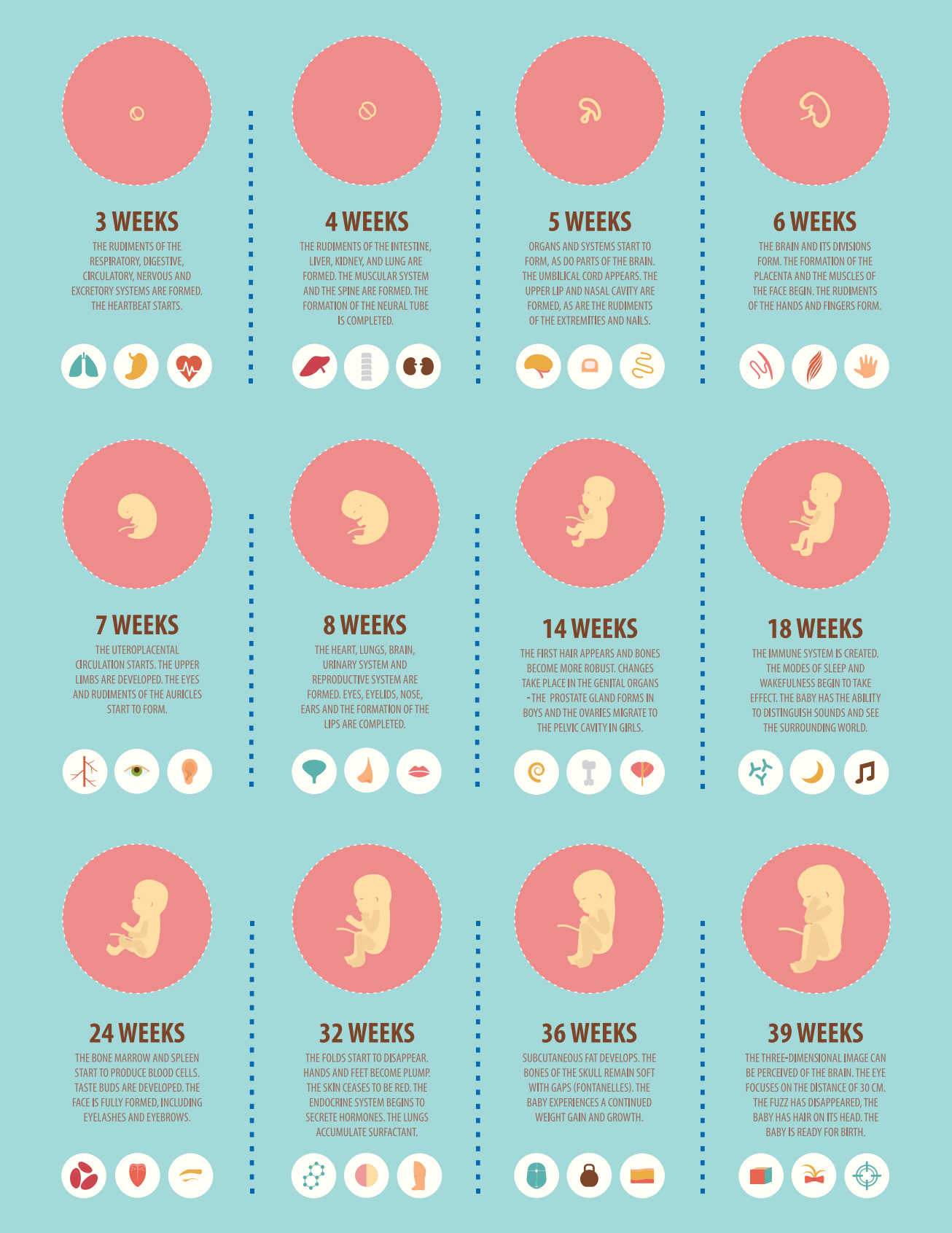
- Gestational diabetes is a specific type of diabetes that can develop in some women late in pregnancy - usually after the 24<sup>th</sup> week. Women who have this complication do not have diabetes before becoming pregnant.

WEEKS 36 - 40

Weekly Prenatal Visits

- Towards the end of your pregnancy, your prenatal visits will increase to once a week.
- Your doctor may also decide to do vaginal exams.

# Embryo Development



# The Changes in Your Body

All women and pregnancies are different. Not all women will experience these changes, but here are some common things that can happen over the three trimesters, or 40 weeks, of pregnancy.

## WEEKS 1 - 12 First Trimester

Your body is busy making the placenta and amniotic sac, which are special organs to support your baby's growth.

Weight Gain – Little to no weight gain

Physical changes:

- Dry skin or skin blemishes
- Tender gums that bleed easily
- Vaginal dryness

Physical feelings:

- Tiredness
- Tender breasts
- Heartburn
- Nausea and/or vomiting
- Decreased sexual interest
- Both excitement & anxiety about the baby
- Pain in your pelvic area
- Headaches

Baby Movement – you will not be able to feel the baby's movement yet.

## WEEKS 13 – 28 Second Trimester

You will start to 'show' now.

Weight Gain - From 12 weeks on, a healthy weight gain is usually 0.8 – 1.0 pound (0.35-0.5 kg) per week.

Physical Changes:

- Larger breasts
- Patches of colour on your face, stomach and nipples
- Hair on your face and body may grow and get darker in colour
- Hormones may cause higher blood sugar

Physical Feelings:

- Heartburn
- Backache and discomfort in your ribs
- May become more comfortable with being pregnant
- Increased sexual interest

Baby Movement: You may be able to feel the baby kick as early as 16 weeks, but more often closer to 20 weeks for a first time mom.

## WEEKS 29 – 40 Third Trimester

Your belly will grow and show the most during this trimester.

Weight Gain: A usual healthy weight gain remains at 0.8 – 1.0 pound a week (0.35 – 0.5 kg).

Physical Changes:

- Spider or varicose veins may appear
- Nipples may leak milk and become darker and wider
- Stretch marks commonly appear
- You may have swollen feet, ankles and hands

Physical Feelings:

- Sleeping can be uncomfortable and interrupted
- Urinating more often
- Dizzy and lightheadedness can happen

Baby Movement: You may begin to have Braxton-Hicks contractions, which are the muscles of your uterus contracting and relaxing. They are painless and not regular and may last up to two minutes. Check with your healthcare team about the signs that you may be in actual labour.

# The Common Discomforts of Pregnancy

While pregnancy can be a special time, it can also come with some discomforts. Here is a list of common symptoms that women can experience during pregnancy. Keep in mind that the symptoms can vary from woman to woman and from pregnancy to pregnancy.

## Nausea and/or Vomiting

### What it is:

This is also called ‘morning sickness,’ although nausea and vomiting can happen any time during the day. About half of all pregnant women can have nausea and vomiting, and the symptoms are usually in the first trimester. The reason for this discomfort is because of changes in hormone levels during pregnancy. It affects approximately 80% of pregnant women to some degree.

Nausea and vomiting can be made worse by stress, being tired, not eating regularly, travelling or certain foods – especially spicy or fatty ones. This is not a psychological problem or ‘all in your head.’

### How to help:

- Eat small meals every 1-2 hours, instead of three big meals a day.
- Eat foods that are high in protein and contain complex carbohydrates (like whole wheat bread, pasta, bananas and green leafy vegetables).
- Ginger, acupuncture and acupressure may be beneficial.
- Limit caffeine, chocolate, and spicy or fatty foods.
- Don’t drink fluids with your meals – save fluids for in between meals as it makes your stomach feel more full.
- Reduce the smell of food by asking others to cook meals and opening windows in the kitchen.
- Avoid warm places, as feeling hot can make you feel nauseous.
- Get up slowly in the morning, and begin eating with dry crackers or plain toast or cookies.
- Get lots of rest, since nausea gets worse when you are tired.
- Make sure to have a snack at bedtime, so you have some food in your stomach when you go to sleep.
- Try to drink at least 2L of fluid per day between your meals.

- Prenatal vitamins can worsen nausea due to high iron content. If this happens to you speak to your healthcare provider.
- If you are throwing up, don’t brush your teeth right after vomiting to protect your teeth. Instead, rinse your mouth with mouthwash or a mixture of water and baking soda.

When to call your healthcare team:

- If your nausea and/or vomiting is having a profound effect on your life or
- If you vomit more than twice a day or you cannot keep fluids down.

You can also talk to them about medications that help with severe nausea and vomiting.

## Heartburn

### What it is:

Heartburn happens because of pressure on your stomach, which causes the contents of your stomach to back up. Pregnancy hormones also slow the movement of food through your body and can cause heartburn. Heartburn can include a sour taste in your mouth, or a burning sensation or pressure in your chest.

### What you can do:

The ways to treat heartburn are similar to treating nausea and vomiting:

- Generally avoid caffeine, tea and high fat food.
- Eat small meals several times a day, and do not drink fluids with your meals.
- Go for a walk after you eat and avoid lying down for two hours after meals.
- Having good posture can also help lessen heartburn.
- Do not wear tight clothing.

- Avoid common triggers like spices, peppermint, chocolate, citrus fruits/juices, onions, garlic, and tomatoes.
- Ginger may also be effective as an alternative therapy. It can be taken in tea or tablet form.

## Feeling Tired

### What it is:

In the first three months, your body is working overtime as your blood volume and other fluids adjust to your pregnancy, which causes you to be tired.

### How to help:

If you are especially tired, ask your healthcare team for a simple blood test to check for anemia, which is usually due to low iron levels and may contribute to your fatigue.

### What you can do:

- Schedule regular rest breaks
- Eat small, well balanced meals at regular times
- Drink enough fluids, but reduce caffeine
- Exercise to stay active

## Food Cravings

The cause of food cravings during pregnancy is not known.

### What you can do to help:

- If you are craving less-nutritious foods, allow yourself the occasional small portions.
- Make sure you are still eating a healthy diet.

- Cravings for non-food items like dirt, detergent and starch is a rare condition known as pica. Do not eat these items, and contact your healthcare team if you are having these cravings.

## Constipation and Hemorrhoids

### What it is:

Later in your pregnancy, you may have constipation because of increased pressure on your intestines. Pregnancy hormones can also slow movement in your intestines and make it difficult to have bowel movements. Hemorrhoids, which are swollen veins in your anus area, can happen for the same reasons.

### How to help:

- Increase fluids (have up to 9-12 cups a day in beverages and eat foods that are high in fluid).
- Go for walks and keep active.
- Eat more foods with fibre, like fruits, vegetables, legumes and whole grains.
- Try not to get constipated and do not strain while having a bowel movement to avoid hemorrhoids.
- Try not to stand or sit for long periods of time.

If you continue to have troubles with constipation or hemorrhoids despite the above suggestions, contact your healthcare team.

## Skin Conditions

Varicose veins, spider veins, stretch marks and blotches on your skin can appear during pregnancy, and generally fade or disappear after the baby is born.

*Check with your healthcare team or pharmacist before trying any medications to help with pregnancy discomforts. This includes medications you buy off the shelves at the drugstore.*





# Making Healthy Choices While Pregnant

## Do Not Drink Alcohol or Use Cannabis

No amount of alcohol is safe to drink at any time when you are pregnant.

Alcohol severely harms your baby by causing physical, brain and central nervous system disabilities. It also causes cognitive, behavioural and emotional issues. These would be lifetime issues for your child, called Fetal Alcohol Spectrum Disorder.

There is no known safe amount for cannabis use during pregnancy or while breastfeeding. Regular cannabis use during pregnancy may be associated with increased risk of low birth weight, preterm labour and may affect your baby's brain development. While some women may use cannabis to alleviate symptoms such as nausea and anxiety, speak to your doctor or nurse about alternative safer options.

## Avoid Tobacco & Second Hand Smoke

It is never too late to quit smoking. Using tobacco products or being exposed to second hand smoke can increase your risk of miscarriage or Sudden Infant Death Syndrome (SIDS), delivering your baby early or having a baby with a low birth weight. Please do not vape or use e-cigarettes, either.

## Home Remedies, Over the Counter and Prescription Medications

Always check with your healthcare team or pharmacist before taking any home remedies, over the counter or prescription medications.

## Do Not Take Illegal Drugs

Using street drugs can seriously harm the health of your baby.

Try to moderate your drug use and ideally stop using entirely. If you require assistance/support regarding a drug or alcohol problem please discuss with your healthcare provider.

Alberta Quits offers free support to quit smoking or using spit tobacco. Contact 1-866-710-QUIT or [albertaquits.ca](http://albertaquits.ca).

There is help if you struggle with alcohol, drug or prescription medicine issues while you are pregnant. For confidential information and to find an Alberta Health Services addiction service office near you, call this toll-free 24 hour Helpline at: 1-866-332-2322



# Eating Well

It is important to eat well during your pregnancy. Healthy eating can lead to more energy, the right amount of weight gain and is also good for your baby's development.



Balance your plate every meal to ensure you and baby get all the nutrients needed.

### How much more food can I eat?

- First trimester – no extra calories needed
- Second trimester – about 350 healthy extra calories
- Third trimester – about 450 healthy extra calories

### Healthy Snacks

Here are some examples of snacks to consider for your second and third Trimester.

350 calorie snacks		
Fruit parfait containing 3/4 cup plain yogurt, 1/2 cup unsweetened berries, and 1/2 cup granola	Granola bar, 8 raw baby carrots, and 1 cup of skim milk or fortified soy beverage	Half a multi-grain bagel with 1.5 oz light cheddar cheese, 1/2 cup blueberries and a glass of water
450 calorie snacks		
1 bran muffin with 3/4 cup yogurt	1 pear, 2 tbsp of almonds and 3/4 cup yogurt	2 tbsp peanut butter on 1 slice rye bread, with 1/2 medium banana, and 1/2 cup of milk

### Plan your Healthy Eating

Here are two examples of daily meals to help with your menu planning.

Day 1	Day 2
<ul style="list-style-type: none"><li>Bran cereal w/raisins</li><li>Milk in the bowl</li><li>Orange quarters</li><li>Coffee</li><li>Water</li></ul>	<ul style="list-style-type: none"><li>Whole wheat english muffin</li><li>Cottage cheese with peaches</li><li>Coffee</li><li>Water</li></ul>
<ul style="list-style-type: none"><li>Apple slices</li><li>Tea</li></ul>	<ul style="list-style-type: none"><li>Dried fruit bar</li><li>Milk</li></ul>
<ul style="list-style-type: none"><li>Cheese &amp; roast chicken sandwich (whole wheat bread)</li><li>Borscht</li><li>Cucumber slices</li><li>Yogurt and strawberries</li><li>Glass of water</li></ul>	<ul style="list-style-type: none"><li>Pizza on a whole grain pita (chicken, peppers, cheddar cheese, mushrooms &amp; tomato sauce)</li><li>Tossed salad w/veggies</li><li>Orange</li></ul>
<ul style="list-style-type: none"><li>Water</li><li>Orange cranberry loaf</li></ul>	<ul style="list-style-type: none"><li>Pretzels</li><li>Milk</li></ul>
<ul style="list-style-type: none"><li>Dhal</li><li>Green beans</li><li>Raita</li><li>Naan</li><li>Milk</li><li>Mango</li></ul>	<ul style="list-style-type: none"><li>Baked salmon</li><li>Mashed potatoes</li><li>Green beans</li><li>Carrot salad</li><li>Milk</li><li>Mixed berries</li></ul>
<ul style="list-style-type: none"><li>Diet soda</li><li>Baby carrots</li></ul>	

Is money to buy food a problem? Talk to your healthcare team about special pregnancy programs that can help with getting healthy foods to help you and your baby while you are pregnant.

# Making healthy food choices while pregnant

## Seafood

Fish is a great source of protein and the omega-3 fatty acids in fish can be good for your baby's development. Limit seafood high in mercury and eat only cooked seafood to avoid ingesting harmful bacteria, viruses and parasites.

- For canned tuna do not eat more than four servings or 10 oz a week of canned albacore tuna (also called white tuna). Canned light tuna is safe.
- Refrigerated smoked seafood is not recommended. Choose smoked seafood in cans or seafood that does not need to be refrigerated until opened.

Eat only 2 food guide servings (or 5oz) of these high mercury fish per month.

- Swordfish
- Shark
- King Mackerel
- Tilefish
- Escolar
- Marlin
- Orange Roughy
- Tuna – fresh or frozen

Do not eat these raw seafoods because of food safety issues.

- Raw seafood (including sashimi and other raw fish sushi)
- Raw oysters

## Meat, Poultry, Eggs and Dairy

When you are pregnant, you are more at risk for bacterial food poisoning. To prevent this, fully cook all meat, chicken and eggs.

- Hot dogs and processed luncheon meats – unless they are cooked to be steaming hot to an internal temperature of 74°C/165°F
- Raw or undercooked meat, poultry and eggs and dairy products
- Pasteurized or unpasteurized soft, semi soft and blue veined cheeses
- Refrigerated pates and meat spreads
- Raw or undercooked eggs (like eggnog, raw batter, homemade hollandaise sauce or caesar salad dressing)
- Unpasteurized milk products or juice

## Beverages

For beverages, avoid some entirely and others can be used in moderation.

- No amount of alcohol is safe during pregnancy. Alcohol severely affects the growth and development of your baby.
- Most herbal teas act like harmful drugs.
- Up to 2-3 cups of safe herbal teas like orange peel, ginger, red raspberry leaf rose hip and peppermint leaf.

- Restrict caffeine intake to no more than 300mg/day. Sources include coffee, tea, pop and energy drinks.
- Drink coffee & tea in between meals as it can interfere with iron absorption.

The daily serving size is two 8 oz cups of:

- Coffee
- Green tea
- Black tea

CAFFEINE PER 8 OZ CUP



Coffee:

- Brewed - 80-200mg
- Instant - 76-106mg
- Decaffeinated instant - 5mg

Tea:

- Green tea - 25-45mg
- Black tea - 14-70mg
- Decaffeinated tea - 2-12mg
- Instant tea powder - 11-47mg

- Consume 9-12 cups of fluids, which includes fluid from drinking beverages and fluid that is found in food. This includes fluid from water, juice, soups, broth, milk, moderate amounts from coffee and safe teas, fruits and vegetables.

## Alternative Sweeteners

Pregnant women should not consume excessive food or drinks containing artificial sweeteners,

as these items could replace more nutritious foods or beverages.

Moderate amounts of:

- Cyclamate (Sweet 'N Low, Sucaryl, Sugar Twin)
- Aspartame (NutraSweet)
- Sucralose (Splenda)
- Acesulfame K (Sunette)
- Saccharin

## Folic Acid

Taking a multivitamin and consuming foods high in folic acid can help prevent neural tube defects in your baby. Speak to your healthcare team about how much folic acid is right for you and your pregnancy.

Servings: every day, take a multivitamin with folic acid & choose foods high in folic acids.

Examples: whole grain breads, leafy green vegetables, legumes, citrus fruits and juices. In Canada, some breads, cereals and pastas have added folic acid – check the label.

Daily recommended intakes: 600 mcg per day

## Omega-3 Fatty Acids

Food with omega-3 fatty acids helps with your baby's eye and brain development.

Servings: eat two servings of cooked fish each week.

Examples: salmon, trout, mackerel, halibut, pollock (Boston bluefish) char, sole, cod, herring and sardines. Also, vegetable oil, nuts, seeds & omega-3 enriched eggs.

Daily recommended intakes: 1.4g of alpha-linolenic acid (ALA) per day

- There is some concern that too much flax can affect hormone levels in pregnancy. Limit flax seed intake (whole, bruised, cracked, ground or milled) to 4-6 Tbsp per day. Limit flax seed oil to 2 Tbsp per day
- If you take fish oil supplements, do not exceed 3g of DHA & EPA a day

## Iron

The iron found in meat, poultry & fish are best absorbed by your body. To increase the absorption of plant-based iron, eat this food with other food that is rich in vitamin C. For example, eat berries with cereal or mandarin oranges with spinach salad.

Servings: Every day, take a multivitamin with iron, eat 2 food guide servings of meat & alternatives and choose other iron rich foods.

Examples: beef, pork, chicken, lamb, fish, sardines, shrimp, oysters, mussels, legumes (like lentils, beans, chickpeas), tofu, whole grain, and iron-enriched cereals and breads and green, leafy vegetables.

Daily recommended intakes: 27mg per day

## Calcium

Calcium keeps your bones strong and helps your baby grow strong bones and teeth. It also can help your blood clot and helps your muscles and nerves to work properly.

Servings: Have 3-4 servings of dairy every day.

Examples: milk, yogurt, calcium-fortified beverages, cheese, canned salmon or sardines with bones, tofu made with calcium.

Daily recommended intakes: <18 years of age: 1300mg per day; >19 years of age: 1000 mg per day

## Vitamin D

Vitamin D helps build strong bones in your baby and keeps your bones strong too.

Servings: Drink at least two cups of milk or fortified soy beverage a day. Eat at least two servings of fish per week.

Examples: milk, fortified soy beverage, fish (salmon, trout, herring, Atlantic mackerel, sardines), Vitamin D fortified orange juice, eggs.

Daily recommended intakes: 600 IU per day

## Vitamin C

Eating foods high in Vitamin C at the same time as food high in iron helps your body absorb the iron.

Servings: Eat 1-2 servings of high Vitamin C food.

Examples: tomatoes, tomato sauce, broccoli, cabbage, sweet peppers, potatoes, oranges and other citrus fruits, cantaloupe, kiwi, mangos, strawberries.

Daily recommended intakes: 85mg per day

## Fibre

Eating lots of fibre and drinking enough fluids can help prevent constipation, diarrhea and hemorrhoids. It can also help prevent certain types of cancer and heart disease.

Servings: Every day, choose at least seven servings of vegetables and fruit. At least 3-4 of your grain servings should be made with whole grain.



**Examples:** fruits and vegetables with the skin left on, whole grains and cereals, legumes (dried beans, lentils, peas), seeds and nuts.

**Daily recommended intakes:** 28g per day

### What about vitamins and supplements?

If you started taking a multivitamin containing folic acid before you got pregnant, keep taking it while you are pregnant.

If you haven't started taking a multivitamin, start taking one with 0.4 mg folic acid, 16 to 20 mg iron, vitamin B-12 and Vitamin D right when you find out you are pregnant.

- Use caution when taking herbal supplements – some are not recommended at all during pregnancy.

It is safest to check with your healthcare team if you want to take any sort of herbal supplements.

If you are vegetarian, vegan, have been diagnosed with low iron (anemia) or have difficulty digesting dairy foods, talk to your healthcare team about other healthy choices.

- Any multivitamin that has more than 10,000 IU of Vitamin A
- Do not take more than 4,000 IU of Vitamin D per day
- Do not take more than one daily dose of a multivitamin
- Be careful of taking cod liver oil along with a multivitamin. You could be consuming unsafe levels of vitamin A
- Soy protein powders are not recommended. There is not enough information on the use of amino acids in pregnancy and they are therefore not recommended

Always check the labels on food and beverages in the grocery store for specific vitamins and minerals.

Most people meet at least some of their Vitamin D requirements through sun exposure. However, in Canada, season, time of day, cloud cover, skin pigmentation and use of sunscreen can affect how your body uses Vitamin D. Speak to your healthcare team about how much Vitamin D is right for you.

# Healthy Physical Activity

When you are tired or you have other pregnancy discomforts, it can be hard to imagine being more active. But being physically active when you are pregnant will support you in so many ways:

- Since many women feel tired during pregnancy, exercise can actually improve your energy levels, and help you relax so you can wind down more easily at the end of the day.
- Being active can improve your mood, improve your self-esteem and manage your stress levels.
- It can also help prevent pregnancy-related high blood pressure, manage your blood sugar levels and reduces the risk of developing diabetes while you are pregnant.
- Since physical activity gets your heart pumping, improves blood flow and helps move fluid in your body, exercise can help with backaches, swelling, leg cramps, shortness of breath, varicose veins and constipation.
- Scientific evidence shows that women who are physically fit before pregnancy have fewer aches and pains and report better energy during pregnancy.
- Studies have found that being active during pregnancy can help prevent post-partum depression and anxiety.
- Being active helps you not gain too much weight, and to lose weight easier after pregnancy (along with healthy eating).

### Consider Healthy Activity!

Always check with your healthcare team to make sure there's no reason you shouldn't be active while you are pregnant. Your exercise program might need to be adjusted as your baby grows, but most women are encouraged to be physically active before, during and after pregnancy.

If you have not been active before you got pregnant, it is recommended that you start low and go slow. To begin with, try regular brisk walking or swimming, or light weights. Choose an activity that will strengthen your heart and lungs and tone your muscles.

### How much activity should I get every day?

Even five minutes a day of activity helps, especially if you haven't been active before you got pregnant. Gradually increase the amount of activity to 30 minutes per day, up to 5 days per week.

#### Ready for Exercise?

To see how ready you are for exercise, take a look at the PARmed-X for Pregnancy Physical Activity Readiness questionnaire on the Canadian Society for Exercise Physiology website: [www.csep.ca](http://www.csep.ca).

### Some Examples of Healthy Activity

Safe activities include:

- Walking
- Jogging
- Stationary cycling
- Group-led classes of low to moderate impact activities
- Dance classes
- Swimming
- Pool aerobics or aquasize
- Yoga
- Pilates
- Resistance Training



As an added bonus, being active throughout your pregnancy can also provide you with the strength and energy you need for your labour and delivery and can help your baby through labour too.

#### Exercise benefits your child

Research shows that babies of mothers who are active during pregnancy have less risk of getting diabetes when they are children. Children of women who were active during pregnancy have been also shown to score higher on mental tests at age 5.





Make sure your instructor knows you are pregnant and talk to your healthcare team about connecting with a Certified Exercise Physiologist to get more information.



These activities are called higher risk because they are high impact that could cause strain on your joints, make you lose your balance and fall, or they are sports where you may come into contact with other players.

- Yoga, pilates and resistance training may contain some positions that should be avoided when you are pregnant – make sure your instructor knows you are pregnant.
- Competitive sports such as ice hockey or soccer that involves contact with others
- Outdoor cycling
- Downhill skiing
- Snowboarding
- Horseback riding
- Gymnastics
- Climbing



- You should not scuba dive while you are pregnant, as it is not safe for your baby.
- Stop exercising if you become very tired or uncomfortable.
- Make sure you don't exercise so much that you don't have energy for the rest of the day, especially in the third trimester.
- Avoid exercise in humid or very hot climates so you don't overheat.
- Do not use saunas and hot tubs and hot swimming pools.
- Avoid heavy lifting and standing for too long, especially in your third trimester.

If your healthcare team gives the ok for exercise it is recommended that your intensity should be adjusted to your exertion. A simple way to do this is with the “talk test”. If you are able to carry on a normal conversation while exercising at a good intensity.

Active Living By Trimester

1<sup>st</sup> Trimester

- If you were active before you became pregnant, continue your activity as long as you feel comfortable.
- Exercise at a level where you are able to talk easily (without laboured breathing).
- Avoid holding your breath during strength training, and choose weights that you can lift comfortably for 12-15 repetitions. Do not lift to failure and rest between sets.

2<sup>nd</sup> Trimester

- If you were not active before you got pregnant, this is the best time to start an active living program.
- Avoid lying on your back after your 4th month of pregnancy. Lying on your back can cause you to be light-headed and interrupt the blood flow to your baby.

3<sup>rd</sup> Trimester

- Listen to your body! Change the length and intensity of your exercise if you become uncomfortable.
- Your centre of gravity changes in your third trimester as the baby grows. Be sure to watch your step while being active.
- Choose activities like stationary biking, walking, swimming and pool exercises to reduce your risk of falling.
- Be gentle when you stretch, as pregnancy hormones can contribute to pain and overstretching.

Throughout your pregnancy, talk to your healthcare team about your physical activity levels.



All About Weight

Weight gain is an important part of pregnancy to keep you and your baby healthy. The amount of weight you should gain depends on what your weight was when you first got pregnant. Talk to your healthcare team to figure out the right amount of weight for you to gain when you are pregnant.

Women who gain a healthy amount of weight have shown to have fewer complications during pregnancy and labour, such as Caesarean sections, high blood pressure and low birth weight.

If you are overweight or underweight, it is important to gain the right amount of weight for the health of you and your baby.

Gain too little weight

If you gain too little weight, your baby can:

- be born early
- weigh less than average or be small for their age at birth
- be at risk for disease in their first few weeks of life
- have physical or developmental disabilities
- have ongoing health problems throughout life

Gain too much weight

If you gain too much weight, this may affect you because:

- your labour and delivery may be difficult
- you might have more difficulty losing weight after pregnancy
- you might get high blood sugar or high blood pressure during pregnancy

Your baby can:

- be born large for their age or have a high birth weight (over 9 pounds/4.1 kg)
- might have problems with their own weight in childhood and beyond
- be born premature

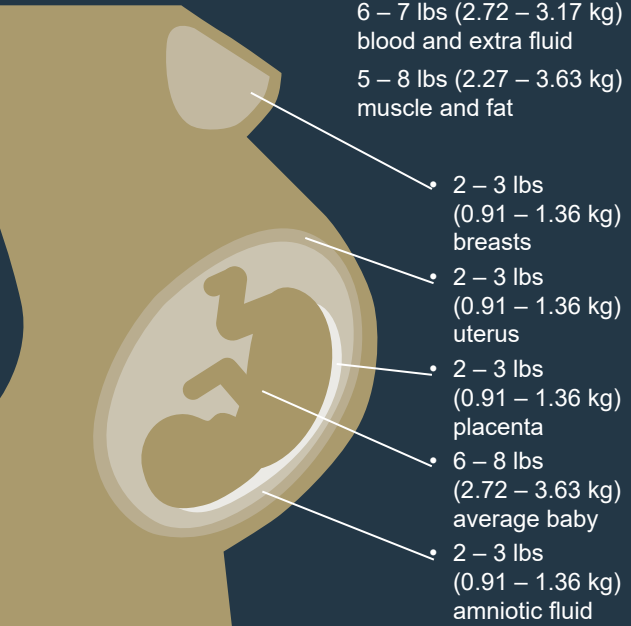
What's the right amount of weight to gain?

The right amount of weight to gain while you are pregnant depends on your BMI (body mass index) before pregnancy. The BMI formula is your weight (in kg) divided by your height (in cm). Talk to your healthcare team about how much weight is the right amount of weight to gain.

Weight category	Pre-preg-nant BMI	Total weight gain for pregnancy	Weight gain rate in 2nd and 3rd trimesters
Under-weight	<18.5	28 – 40 lbs (12.5 – 18 kg)	1.0 – 1.3 lbs/ week (0.44 – 0.58 kg/week)
Healthy Weight	18.5 – 24.9	25 – 35 lbs (11.5 – 16 kg)	0.8 – 1.0 lbs/ week (0.35 – 0.5 kg/week)
Over-weight	25.0 – 29.9	15 – 25 lbs (7 – 11.5 kg)	0.5 – 0.7 lbs/ week (0.23 – 0.33 kg/week)
Obese	>30.0	11 – 20 lbs (5 – 9 kg)	0.4 – 0.6 lbs/ week (0.17 – 0.27 kg/week)

Talk to your healthcare team about the right amount of weight gain if you are carrying twins or multiples.

Where is the Weight Going?



from Healthy Eating & Active Living from www.healthyalberta.com

# Prenatal Genetic Screening

This is a guide to explain the most common prenatal genetic screenings that may be offered by your doctor. It is important to know that it is your choice whether or not to have prenatal genetic screening. This information can help you decide if you would like to have prenatal genetic screening or not.

### What are the Prenatal Genetic Screenings?

There are three different prenatal genetic screenings:

- 1. First Trimester Screen – this is an early prenatal screening that involves an early ultrasound, called a Nuchal Translucency, and a blood test.
- 2. Second Trimester Screen – this is a blood test available to women who are between 15 to 20 weeks pregnant.
- The results of these tests will come back as either Screen Negative, which means the chance of your baby having one of the conditions is low, or Screen Positive, meaning that your baby has an increased chance of having one of the conditions. Please ask your doctor to explain the results of your prenatal screening.
- 3. Non-Invasive Prenatal Screening Test – Non-invasive prenatal screenings are based on cell-free DNA analysis taken from a maternal blood test. This can be done as early as 10 weeks or later in pregnancy and does not require an ultrasound. At this time, non-invasive prenatal screening tests are not covered by Alberta Health Care. You will have to pay for this test before it is done. Any pregnant woman can choose this option, but please talk to your doctor to see if this is the best screening test for you.

It is your personal choice about what to do with the results of these prenatal screenings. You can choose to continue your pregnancy with no further tests, or you can decide to have further diagnostic tests (see page 20).

Please remember that the prenatal genetic screening cannot identify all possible health conditions, and that most babies are born healthy.

Screening means the results will tell you if you have a chance of having a baby with Down syndrome, Trisomy 13, Trisomy 18 or other chromosomal abnormalities. You can decide to have a diagnostic test to find out for sure if your baby has one of these conditions.

- Harmony – This is a new DNA-based blood test that assess for a number of genetic conditions, including Trisomy 21 (Down syndrome), Trisomy 18 (Edwards’ syndrome), and Trisomy 13 (Patau syndrome). Harmony has been shown to identify most cases of Down Syndrome with a false positive rate of less than 0.1 per cent. This greater accuracy can minimize the need for follow up tests. The Harmony prenatal screen can also be used anytime in pregnancy from 10 weeks gestation. Please note these test are not covered by Alberta Healthcare. There is a substantial out of pocket fee. For more information visit [www.harmonytest.com](http://www.harmonytest.com).
  - Panorama – is a newer Non-Invasive Prenatal Test on the market. Again, it is similar to Harmony as it analyzes placental DNA. It currently is the only test that screens for the condition Triploidy, although it is extremely rare. This test can be done anytime after nine weeks gestation. The cost is also out of pocket and can be costly.
  - 4. Alpha-Fetoprotein (AFP) blood test – Detects neural tube defects in fetuses like spina bifida and anencephaly.
- Please talk with your healthcare provider or physician regarding any positive results. Positive results are not uncommon, but may mean that more testing is required.

### FOR WOMEN OVER 35 YEARS OF AGE

*The chance of having a baby with Down syndrome, Trisomy 13 or 18 increases with the age of the mother. If you are over 35 years of age on your due date, and you decide to have further testing, it is important you talk to your doctor to help you make your decision.*

### IS PRENATAL GENETIC SCREENING RIGHT FOR YOU?

Remember, it is your choice whether or not to have prenatal genetic screening. Here are some questions to think about to help you make a decision.

Do you want to know the chance of your baby having a chromosomal difference like Down syndrome, Trisomy 13 or 18 or neural tube defect?

YES

NO

If your results come back, and there is an increased chance that your baby may have one of these conditions, additional prenatal genetic diagnostic tests may be suggested by your doctor. (See page 20). It is also your decision to choose to have further genetic tests or not.

You have decided that you don't want to know if your baby has a chance of having one of these conditions. You will continue your pregnancy without this information, and will 'take what comes.'

# Prenatal Genetic Testing

Testing is different than screening. Screening can only tell you if there's a chance your baby has Down syndrome, Trisomy 13, Trisomy 18, or neural tube defects. Prenatal genetic testing can give you a definitive diagnosis, which means that you will know for sure if your baby has one of these conditions.

If you have positive genetic screen results, you can choose to have prenatal genetic testing done by a specialist, which will give you a 'for sure' diagnosis.

You may be offered one of two tests:

- 1. Amniocentesis – using an ultrasound to guide the test, this involves collecting fluid from around the baby inside you and examining the cells within the fluid.
- 2. CVS (chorionic villus screening) – using ultrasound guidance, a small sample of the placenta is taken for testing. Please note: this test is not offered very often because of the need for it to be done at a precise time in your pregnancy.

### SOME THOUGHTS ABOUT RECEIVING UNEXPECTED NEWS

*Receiving unexpected news during pregnancy is a stressful time for women and their families. Making a decision is not easy. Please remember that your doctor, nurse, and genetic counselor are there to support you in your decision, no matter which decision you make.*



## DO YOU WANT PRENATAL GENETIC TESTING?

YES

You want to find out for sure if your baby has Down syndrome, Trisomy 13, 18 or neural tube defects, if your prenatal screen came back positive.

You recognize there is a small chance of miscarriage if you decide to have prenatal testing. Most women do not have complications after these procedures. For an amniocentesis: there is a one in 200 chance for a pregnancy to miscarry because of this procedure. For CVS (chorionic villus sampling), there is a one in 100 chance for a pregnancy to miscarry because of this procedure.

You know that these tests can only tell you if your baby has certain conditions. There is no prenatal genetic test to test all conditions, and no guarantee that your baby will be born healthy.

NO

You have decided that you don't want to know for sure if your baby has Down syndrome, Trisomy 13, 18 or neural tube defects. You will continue your pregnancy, and take things 'as they come.'

If your results come back positive, you will have a decision to make about your pregnancy:

- 1 You can continue with your pregnancy and parent the baby. This information can help you prepare to have a child with special needs, and help your health providers prepare for your delivery. You can ask to be put in touch with local support groups to connect with other families who have been through similar situations.
- 2 You can continue with your pregnancy and place the baby for adoption.
- 3 You can decide to terminate your pregnancy.

# About Conditions That Can Be Detected Prenatally

While no prenatal genetic test can test for every single condition, screening and testing is available to look for Down syndrome, Trisomy 13, Trisomy 18 and neural tube defects (Spina Bifida and Anencephaly). Please remember that people with Down syndrome and Spina Bifida can grow up to live happy and productive lives, and there is no way to predict the future for any child.

It is important to note that each family who has a baby born with a disability deals with it differently. You can ask your health provider if you'd like to be connected with support groups of other families who have children with these conditions.

### DOWN SYNDROME

People with Down syndrome are born with an extra chromosome. The effect of having 47 chromosomes varies greatly from person to person. Most people with Down syndrome have a mild to moderate intellectual disability. Some babies with Down syndrome are born with other medical concerns - like congenital heart defects – although most of these defects can be corrected with surgery. Each person with Down syndrome is different, and people with Down syndrome generally live into their 50s. The chance of having a baby with Down syndrome increases with the mother's age, but babies with Down syndrome can be born to any woman. In Canada approximately one in every 781 live births results in Down Syndrome (16.6 cases per 10,000 births).

For more information, visit the Canadian Down Syndrome Society website's information for new and expectant parents: <http://cdss.ca/>

### TRISOMY 13 AND TRISOMY 18

Both Trisomy 13 and Trisomy 18 are chromosome conditions that have medical complications involving physical and intellectual disabilities. Unfortunately, most babies with Trisomy 13 or 18 do not survive to the age of one, but it is important to note that some babies do survive their first year of life. The chance of having a baby with Trisomy 13 or 18 increases with a mother's age, but a baby with Trisomy 13 or 18 can be born to any woman. In general, 3.1 in every 10,000 births has Trisomy 13, and 2.5 out of every 10,000 births has Trisomy 18.

For more information about Trisomy 13 and 18, visit: <http://trisomy.org/>

### NEURAL TUBE DEFECTS

These conditions occur when the brain or spinal cord does not form properly. Examples of these conditions include Anencephaly (1.4/10,000) and Spina Bifida (3.3/10,000). Most babies with Anencephaly are not born alive, or they live a few hours or days after birth.

There is a great diversity among people who have Spina Bifida, and they can range from having a mild to serious disability. Treatment can help many of the physical disabilities. The chance of having a baby born with one of these conditions does not increase with a mother's age, and in Canada, one out of every 2,000 births has a neural tube defect. 0.76 per 1,000 live births.

Research has shown that the incidence of neural tube defects decreases if women take a daily multivitamin that contains 0.4 mg of folic acid before they become pregnant and during their first trimester of pregnancy.

**For more information:**  
<http://www.sbhana.org/>

# Mental Health During Pregnancy

There are many emotional changes that occur during pregnancy. Not only do you have hormonal changes that can affect your mood, energy level, and memory, you are also transitioning into a new phase of life that can carry its own additional worries and stressors.



It is important to dedicate time every day for your own self-care activities, for example reading a book, meditation, or going for a walk and allow yourself the time and space to work through all of your new thoughts and feelings.

Some individuals, around 20% of women and 10% of men, develop a Perinatal Mood and Anxiety Disorder (PMAD) which is a mental health illness that develops during pregnancy and/or the postpartum period. PMAD is an umbrella term that includes depression and anxiety during pregnancy, as well as, postpartum depression, anxiety, obsessive-compulsive disorder, psychosis, and others. Poor mental health impacts all members of the family including the pregnant person and their fetus, their partner, children, extended family, friends, and society as a whole.

The challenge with mental health and the perinatal period is that most people cannot identify if their symptoms are unique or related to pregnancy or a normal adjustment to parenthood, making diagnosing PMADs more difficult. Pregnancy and the first year after birth are particularly vulnerable times for mental health in a family. This is a period of time when parents are likely sleep deprived, while experiencing the pressures and concerns of caring for an expectant mother and/or a new infant and changes in their family relationships.

## Depression

Signs and symptoms of perinatal depression are similar to those of depression occurring at other times in life. These may include: persistent sadness; hopelessness; fatigue; loss of interest or pleasure; loss of appetite; sleep disturbances; tearfulness; poor concentration and memory; difficulty making decisions; irritability; feelings of guilt or worthlessness; continuous worrying about the baby; feelings of inadequacy and inability to cope with the infant; and suicidal thoughts.

Depression during pregnancy may have multiple consequences, including prolonged sick leave, inadequate prenatal care, negative expectations of motherhood, difficulties transitioning to parenthood, substance abuse, and the risk of developing other forms of distress. Perinatal depression is a leading risk factor for postpartum depression, especially when left untreated. It can lead to chronic or recurring depression that can affect the person throughout their life.

Depression among men is often underdiagnosed and under-reported. It also presents differently than in women. Men can present with moodiness and lethargy; however, men are more likely to have lower impulse control, increased irritability and hyperactive behaviour, and displays of anger. Depression and anxiety among men can be difficult to diagnose, as screening tools are tailored to female expressions of depression. In addition, depression in men can be masked by interpersonal conflict, difficulties sleeping, and avoidance behaviours (e.g., drug and alcohol use, and preoccupation with work). Fathers who experience depression and anxiety are less likely to have effective support systems or to adopt positive coping strategies. They're also more likely to be socially isolated, which can be harmful to themselves and their families. Men are at greater risk for depression and anxiety if they have a history of depression, are experiencing unemployment, and/or have difficult partner or family relationships.

## Anxiety

Perinatal anxiety refers to a range of anxiety disorders: social anxiety, panic disorder, generalized anxiety disorder, separation anxiety disorder and/or specific



phobias occurring during the perinatal period. Prenatal anxiety can also present with unique concerns. The main feature is numerous thoughts about the fetus, worry that something might be wrong with the pregnancy, and concern regarding their parental capability. Following the birth of the baby, the symptoms of anxiety (like depression) may increase due to the physical, psychological and social transitions of parenthood.

It is important to dedicate time every day for your own self-care activities, for example reading a book, meditation, or going for a walk and allow yourself the time and space to work through all of your new thoughts and feelings.

Perinatal mental health concerns are unique and require specialised services from healthcare providers who can support the needs of women before, during and after childbirth. They have the knowledge and skills to understand the risks and benefits of different treatment options including medication during pregnancy and while

breastfeeding and the ability to care for the emotional needs of all family members. The good news is that PMAD can be treated and it is important to speak to your physician, nurse and/or counsellor.

## Treatment can include one or more of the following:

- **Social support:** Community services or parenting education. There are many support programs for new parents. Talk to your doctor, nurse, midwife, or contact your local public health office for a listing of services in your area.
- **Family therapy:** With your partner and/or children. This can help when children are older.
- **Individual therapy:** Talking one-on-one with a family doctor, psychologist, psychiatrist, social worker, or other professional.
- **Medication:** Drugs used most often to treat depression are SSRIs (selective serotonin reuptake inhibitors). Talk to your doctor first, before starting or stopping any medication.



# Resources for Expecting & New Families

## Websites:

**Alberta Health Services** - information for pregnancy and parenting. [www.healthyparentshealthychildren.ca](http://www.healthyparentshealthychildren.ca)

**Society of Obstetricians and Gynaecologists of Canada** - Information from preconception to postpartum [www.pregnancyinfo.ca](http://www.pregnancyinfo.ca)

**Postpartum Support International** - focus on mental health during pregnancy and postpartum. [www.postpartumnet.ca](http://www.postpartumnet.ca)

**Canadian Paediatric Society** - information for parents on infant and children health. [www.caringforkids.cps.org](http://www.caringforkids.cps.org)

## Community Resources:

**Alberta Association of Midwives** - if considering midwifery care see website for further information and to register. [www.alberta-midwives.ca](http://www.alberta-midwives.ca)

**Doula Association of Edmonton** - if considering doula support during labour and/or postpartum. [www.edmonton-doula.org](http://www.edmonton-doula.org)

**Health for Two** - free program for pregnant women who require extra support to have a healthy pregnancy up until two months postpartum. Contact your local public health centre or a program coordinator at 780-735-3008/780-289-1472

**Family Futures Resource Network** - offers strength-based programs and services in a safe and welcoming environment to help families thrive and grow. [www.familyfutures.ca](http://www.familyfutures.ca)

**B.E.S.T. Breastfeeding Cafe** at Edmonton Southside PCN- weekly program that offers group support and connection to trained lactation nurses. Guest speaker once per month. [www.edmontonsouthsidepcn.ca/workshop/b-e-s-t-breastfeeding-cafe/](http://www.edmontonsouthsidepcn.ca/workshop/b-e-s-t-breastfeeding-cafe/)

**New Mom Network** - offers 6 weekly group sessions with mothers of infants between six weeks to six months of age at your local public health centre. Cost \$30 (may be waived).

Call Alberta **Health Link at 811** for health advice  
24 hours a day, 7 days a week.

## Prenatal Education Classes:

**Edmonton Southside Primary Care Network** - cost is \$5.

Early prenatal (recommended up to 20 weeks gestation)- an evening course that focuses on nutrition, physical activity, and symptom management in early pregnancy.

Prenatal (recommended 30 weeks and beyond)- one day course that focuses on labour and birth, relaxation and comfort measures, pharmaceutical options, infant care and infant feeding.

**Public Health Centers** - offers held over one weekend, or as a series one evening a week for five weeks. Topics include signs and stages of labour, when to go to the hospital, breathing and relaxation, decision-making, medical procedures, breastfeeding, baby care, and more. <http://www.birthandbabies.com/edmonton/> 780-413-7980. Cost is \$65.00

**Online Prenatal Course**- Alberta Health Services Birth and Babies [www.birthandbabies.com](http://www.birthandbabies.com)

May also contact the hospital/birth centre you are planning to give birth at to inquire about their prenatal classes.