NOTE: Refer to module outline for goal, objectives, class outline, equipment, resources required and references.

If this is the first class:

- Welcome participants to class.
- Housekeeping: bathroom, breaks, length of session, ground rules/respect.
- Have each couple or individual pair up with another couple or individual and introduce themselves to each other. (Consider including name, due date, something they are looking forward to, something they are nervous about and/or anything they would like to share about the pregnancy). Then have the pairs or individuals introduce each other to the rest of the group.
- Provide the choice of prenatal handout (depending on your organization, this may be Healthy Beginnings or A Healthy Start for Baby and Me) for each expectant mother.
- Provide a list of community resources.
- It is best to advise participants during the first session that you have a duty to report any concerns about the safety or well-being of a child (including the witnessing of abuse of the mother) to child protective services. (This is only applicable if there are children in the home already.)

**Suggestion for Facilitator:** on a flip chart, list the topics to be discussed in this session.

- Benefits of healthy eating
- Healthy weight gain
- Canada’s Food Guide recommendations
- Specific nutrients
- Food safety
- For more information
A healthy, balanced diet will help provide the nutrients you and your baby need during the pregnancy and after the birth.

Making healthy food choices is even more important during pregnancy. You are more likely to have a healthy baby if you eat well and stay active.

Many women find it easier to make healthy choices while they are pregnant. There are many good reasons to eat in a healthy way:
- Helps your baby grow and be healthy.
- Lowers your chance of having health problems such as low iron or high blood pressure.
- Helps you gain a healthy amount of weight.
- Helps you feel good about yourself.
- Helps you and your family develop good eating habits for life.

Your growing baby depends on you to eat the foods that are the building blocks for his body and brain. When you make good food choices and gain the recommended amount of weight during pregnancy, your baby has a better chance of being born at an average birth weight (over 2500 grams / 5 pounds, 8 ounces and under 4500 grams/ 9 pounds, 15 ounces).

Keep in mind that in the second and third trimesters you only need approximately 350-450 extra calories per day (and while breastfeeding, 350-400 extra calories/day). **It is the quality of the food you eat, not the quantity that matters.** This may be the equivalent of a fruit and a yogurt, or 2 cups of milk. Canada’s Food Guide suggests adding 2-3 food guide servings a day.

How does the pregnant mother benefit from healthy eating? Not only is she providing the right nutrients to help her baby grow and be healthy, but she is also improving her own health by:
- Having a reduced chance of low iron (anaemia), high blood pressure, and gestational diabetes.
- Gaining the recommended amount of weight.
- Having more energy.
- Preparing her body for labour, birth, breastfeeding and being healthy for the next pregnancy.

So, you are trying to eat twice as healthy, NOT twice as much!
Speaker’s notes:

• Even though you are not pregnant, this stage in your life is an excellent opportunity to evaluate and make positive changes to your own eating habits. Try to develop new habits such as having vegetables or fruit as a snack while watching T.V. rather than potato chips.
• Take a lead role in buying healthy food and preparing nutritious meals that you both like. Creating healthy habits now will help you to become a good role model for your child in the future. Children learn by observation, watching the foods that you eat or don’t eat. The reactions you have to trying new foods can have a big impact on their future eating habits.

Improving your eating habits now can have life-long benefits such as decreased risks for:
• obesity
• high blood pressure
• diabetes
• heart disease
• some cancers

It’s now time to make these changes so that you can enjoy life with your future family!
• To evaluate your current eating habits, download the My Food Guide Servings Tracker appropriate for your age at http://hc-sc.gc.ca/fn-an/food-guide-aliment/track-suivi/index-eng.php
• Contact your local public health department or speak with your health care provider for more information about healthy eating.
• Visit Eat Right Ontario (ontario.ca/eatright).
1. FALSE. You need extra food while you are pregnant, but you do not need twice as much. The guide recommends a daily intake of the following foods:
   • Vegetables and Fruit (seven to eight servings).
   • Grain Products (six to seven servings).
   • Milk and Alternatives (two to four servings).
   • Meat and Alternatives (two servings).
In the second and third trimesters, you will need slightly more calories, protein, vitamins, and minerals. Add an extra two or three servings per day from any food group.

2. TRUE. You need extra iron when you are pregnant. If you do not get enough iron your baby may be born with a low supply of iron. You may also feel tired and week. Pregnant women often have difficulty getting enough iron from their food. A daily multivitamin can help you get enough iron. Talk to your health care provider if you have side effects from the multivitamin.

3. FALSE. Milk alternatives are also good sources of calcium. To get enough vitamin D, Canada’s Food Guide recommends that you drink 500 ml (2 cups) of milk or fortified soy beverage daily.

4. FALSE. Canada’s Food Guide recommends at least two servings of fish each week. Avoid fish high in mercury, such as fresh/frozen tuna, shark, swordfish, marlin, orange roughy, and escolar.

5. TRUE. Take a multivitamin daily before and during your pregnancy. A daily multivitamin provides important vitamins and minerals, including folic acid and iron. Some women need more folic acid or iron. It is important to take only what is recommended by your health care provider. Check the label on your multivitamin to make sure it contains what and how much your health care provider recommends. Not all prenatal vitamins and multivitamins are the same.
Speaker’s notes:

- It is important for women to gain the recommended amount of weight to have the healthiest pregnancy possible.
- Most women should gain between 25-35 pounds (11.5–16 kilograms) but others will need to gain more or less weight depending on their pre-pregnancy weight. Talk with your health care provider about the amount of weight gain recommended for you.
- Weight gain during pregnancy is gradual. It should start off slowly. A healthy diet plus physical activity during pregnancy will help the woman gain weight gradually within the recommended range.
- Other factors such as age, genetics, height and frame, and carrying more than one baby will also influence the pregnant woman’s weight. Your health care provider will suggest the amount of weight gain that is healthy for you.

By the end of your pregnancy, your:

- breasts increase in size to prepare for feeding your baby;
- blood volume increases to carry more oxygen and nutrients to your baby;
- uterus gets about 20 times bigger to hold your growing baby;
- baby weighs about 6-8 pounds;
- placenta and amniotic fluid account for 4-6 pounds of weight gain;
- body retains extra fluids to support your pregnancy;
- body stores energy as fat because your body needs more muscle and fat to help you stay healthy during pregnancy and prepare for breastfeeding.

Note: Share Health Canada’s Pregnancy Weight Gain Calculator with your group or individually if there are questions about individual weight gain [http://hc-sc.gc.ca/fn-an/nutrition/prenatal/bmi/index-eng.php](http://hc-sc.gc.ca/fn-an/nutrition/prenatal/bmi/index-eng.php).
Suggested Activity:
Read the following story and discuss food choices (discussion details on next slide).

One Saturday morning, Alicia and Felipe decide to grab a coffee and head to a grocery store. In the produce aisle they pick up oranges, bananas, iceberg lettuce, and some white potatoes. Felipe decides to go to the meat aisle next while Alicia goes to the bakery to satisfy her craving for something sweet. Felipe chooses two thick rib eye steaks for supper and a package of extra spicy sausage. Meanwhile, Alicia returns with two sticky cinnamon buns for them to enjoy while they finish their shopping.
Suggested activity (continued):

Ask the participants to identify and explain some prenatal nutrition issues related to the food choices that Alicia and Felipe made. Include the following in your discussion:

• Caffeine passes through the placenta into the baby’s bloodstream. Your baby cannot get rid of the caffeine well. To keep your baby safe have less than 300 mg of caffeine a day. This is the amount of caffeine in about two 250 ml (8 oz) cups of coffee. Always check the size of the coffee cup so you know how much caffeine you are getting. Remember other sources of caffeine like energy drinks, tea, chocolate and some soft drinks. See table on pg. 18 of Healthy Eating for a Healthy Baby.

• Their fruit and vegetable choices are adequate. However, they could have substituted romaine lettuce or spinach for the iceberg lettuce. Potatoes are a source of folate and vitamin C. Sweet potatoes could also have been used as a source of other vitamins, micro-nutrients and fibre. Canada’s Food Guide recommends a dark green and an orange vegetable each day. Some food choices are more nutrient dense than others. Frozen and canned vegetables and fruit are usually a more economical choice during the winter season and are just as nutritious.

• Meat, fish and meat alternatives are an important source of protein. Felipe’s choices of meat are high in fat and trimming the fat from the steaks could help reduce the fat while still being a good source of iron that pregnant women need. The sausages are generally high in fat and not the best choice from the meat and alternatives group. Perhaps fish or a meat alternative such as legumes would be a better choice. Many pregnant women have an aversion to the smell of meat cooking. The extra spices may also aggravate nausea and heartburn. It’s helpful for the partner to be aware of the pregnant woman’s food preferences and aversions throughout the pregnancy.

• Food cravings are common and it is alright to indulge occasionally. It is important to limit these foods to ensure they are not replacing healthier food choices. Fruit, milk-based foods like fruit smoothies and yogurt can be sweet too.

• Plan ahead; plan a menu for the week and buy what is on your list.
Speaker’s notes:

- Ask participants to refer to pages 6 and 7 in the *Healthy Eating for Healthy Baby* booklet.
- Review the section on How many Food Guide Servings per day should women have?
- Pregnant women should eat 2-3 extra food guide servings during their second and third trimester to get the extra calories needed to support a healthy pregnancy. Examples include an extra morning snack of fruit with yogurt and an extra serving of vegetables with dinner or an extra glass of milk with lunch and supper. Or, have an extra afternoon or evening snack of whole grain cereal with milk and sliced fruit or chopped nuts.
- Refer to the section on What is One Food Guide Serving? Food models or empty food containers may be used to demonstrate examples of serving sizes.
Choose one of the following activities:

1. Ask a pregnant woman and her partner to volunteer to create a healthy meal (a healthy meal has 3-4 food guide servings) and a healthy snack (a healthy snack has at least 2 food guide servings) using the food models.

2. Have the pregnant woman and her partner complete Your Food Diary found on page 23 in the Healthy Eating for Healthy Baby booklet.

3. Provide separate copies of My Food Guide Servings Tracker to pregnant women and their partners. Choose the food trackers that are appropriate for each participant. For pregnant teens, use the “Female Aged 14-18 years” tracker and indicate that an additional two to three food guide servings are required in the second and third trimester. Indicate that a variety of food trackers are available, including some for children.
   - Pregnant Female Aged 19-50 years and Breastfeeding Female aged 19-50
   - Male Aged 19-50 years
   - Female Aged 19-50 years
   - Female Aged 14-18 years (not specific to pregnancy)
   - Male Aged 14-18 years

Notes:

- Food trackers may be downloaded from www.hc-sc.gc.ca/fn-an/food-guide-aliment/track-suivi/index-eng.php. You can also make your own food guide online based on your own food preferences.

- Suggestions for vegetarian eating according to Canada’s Food Guide can be found in Healthy Eating for a Healthy Baby booklet on page 17. Stress that it is very difficult to be vegan and pregnant without supplements and careful guidance. All pregnant women that choose to follow a vegetarian diet should receive counseling from a Registered Dietitian.
Your growing baby depends on you to eat the foods that are the building blocks for a strong body and healthy brain. Certain nutrients are especially important in pregnancy.

- Folate and vitamin C from vegetables and fruit.
- Carbohydrates and fiber from grain products.
- Calcium and vitamin D from milk and milk alternatives.
- Iron and protein from meat and meat alternatives.
- Omega-3 from certain fish and oils.

Taking a multivitamin daily that contains folate, iron, calcium and vitamin D will help you to get these essential nutrients. Don’t forget that vitamins are a supplement to a healthy diet, not a replacement!
**Folate (folate)**

**Speaker’s notes:**
- Folic acid (folate) is a B vitamin that builds healthy blood and tissue for the woman and her baby throughout pregnancy. It is particularly important for the normal development of the baby’s spine, brain, and skull. Most pregnant women in North America have difficulty getting enough folate from food sources alone.
- Because of this, it is recommended that any woman of childbearing age take a folic acid supplement (including during pregnancy and while breastfeeding). Taking a folic acid supplement before conception and during pregnancy will help reduce the risk of having a baby born with neural tube defects (i.e. spina bifida).
- Talk to your health care provider about the amount of folic acid that is right for you as some women may need higher amounts of folic acid.

**Suggested Activity:** For each nutrient described in this slide and the next ones, ask parents to identify foods that are good sources (folic acid, iron, etc.). Encourage the inclusion of foods from different cultures.

Sources of folic acid include:
- Baked beans, chickpeas, lentils.
- Cooked spinach, asparagus, broccoli, Brussels sprouts, cauliflower, tomatoes, parsnips.
- Romaine lettuce, corn, potatoes, parsley.
- Pineapple, cantaloupe, oranges, grapefruit.
- Sunflower seeds, roasted peanuts, walnuts, cashews.
- Fortified breads and foods made with enriched flour.
- Eggs.
Speaker’s notes:
• Eating foods rich in iron and taking a daily prenatal or multivitamin containing 16-20mg of iron will help prevent anemia in the pregnant woman. Low blood iron may affect her energy level and her ability to exercise.
• Iron helps build the red blood cells that carry oxygen and iron to your baby. It is important that babies have a good supply of iron when they are born. Most healthy term babies are born with adequate iron stores and hemoglobin to meet their needs for the first six months of life. The iron in your breastmilk is easily absorbed by the baby at this age. Your baby’s iron stores from birth are depleting gradually so it is important to introduce a solid food source of iron such as meats, legumes and iron fortified infant cereal by six months. Delaying the introduction of solids beyond six months increases the risk of iron deficiency.
• It is important for pregnant women to have their blood checked regularly to monitor their iron status throughout pregnancy. Iron deficiency anemia happens most often during the 3rd trimester.
• After the birth, women should continue to eat iron rich foods, as most women in reproductive years have lower levels of iron.
Speaker’s notes: (cont’d)

- Try to eat foods high in vitamin C at the same time that you eat non-meat sources of iron. Vitamin C can improve the absorption of iron found in vegetables, grain products, beans, and lentils. Some sources of vitamin C are oranges and grapefruit, tomatoes and tomato sauce, red peppers, and broccoli.
- Meat, fish and poultry can also improve non-meat iron absorption - even small amounts of these foods can improve the absorption of non-meat iron in a meal.
- Drink tea or coffee 1-2 hours between meals vs. at meals.
- Don’t take calcium supplements with meals. Calcium can reduce the absorption of iron.

Sources of iron include:
- Meats and alternatives, such as lean red meat, fish and chicken, cooked or canned clams, beans and lentils.
- Egg yolk, legumes, tofu.
- Peas and spinach.
- Dried fruit.
- Whole grain and enriched breads and cereals.

(See pg. 7 of Health Canada’s *Prenatal Nutrition Guidelines for Health Professionals - Iron*)
Speaker's notes:

- Calcium and vitamin D work together to ensure healthy development of the baby's bones and teeth and to keep the pregnant woman’s bones strong. The pregnant woman needs to get 1000mg of calcium (1300 if age 14-18) and 600 IU of vitamin D each day. Two cups of milk provides about 600 mg of calcium and 1/3 of the daily vitamin D requirement. In order to obtain the 600 IU of vitamin D, other foods containing vitamin D will also need to be consumed daily.
- Pregnant and nursing women who do not drink milk, may need a vitamin D supplement.
- If milk alternatives (for example, soy or rice milk) are being used, then the beverage should be well shaken each time it is poured; much of the added calcium and vitamin D settle in the bottom, making them less available.

Sources of calcium include:

- Milk and fortified soy products.
- Yogurt, cheese (only some yogurts contain vitamin D - look at labels).
- Broccoli, bok choy, swiss chard.
- Sardines and salmon (with bones).
- Tofu.
- Sesame seeds and almonds.
- Calcium-fortified orange juice.

Dietary sources of vitamin D include:

- Cow’s milk. Vitamin D fortification is mandatory in Canada.
- Vitamin D fortified goat’s milk. The fortification of goat’s milk is optional in Canada. Consumers should be encouraged to read labels.
- Fortified soy, rice, and almond beverages.
- Fatty fish such as salmon, trout, and sardines.
- Eggs.
- Margarine.
Speaker’s notes:

- Women need more omega-3 fatty acids in pregnancy. Omega-3 fatty acids are transferred across the placenta and play an important role in the growth and development of the fetus. (NOTE: See Health Canada’s Prenatal Guidelines for Health Professionals - Omega-3 and fish.)
- All pregnant women should eat at least 150 grams or 5 ounces of cooked fish per week (2 food guide servings). They should also vary the types of fish that they eat. Some fish and shellfish that are both low in mercury and good sources of omega-3 fatty acids include anchovy, char, herring, Atlantic mackerel, pollock, salmon, rainbow trout, shrimp, and oysters. Contact the Ontario Ministry of the Environment or your public health department for more information about contaminant levels in fish caught in your local lakes and rivers https://www.ontario.ca/environment-energy/eating-ontario-fish Also check Environment Canada’s site at https://www.ec.gc.ca/mercure-mercury/default.asp?lang=En&n=DCBE5083-1 for fish caught outside of Ontario.
- For women who do not eat fish, it is important to include other food sources that contain fatty acids such as omega-3 eggs. Fish oil supplements can be an important source of omega-3 fatty acids however, there is not enough evidence to support the effects of this supplement on your developing baby. If a pregnant woman chooses to take a fish oil supplement it is recommended that she looks for a Natural Product Number (NPN) on the label. This indicates that the supplement is government-approved for safety, efficacy, and quality. Talk to your health care provider about the use of fish oil supplements during your pregnancy.

Sources of omega-3 fatty acids include:
- Salmon and other cold water fish (including canned fish).
- Omega-3 fortified eggs.
- Walnut and flax oils.
- Vegetable oils (olive, soybean, canola) and soft non-hydrogenated margarine.

Note: Limit intake of canned white albacore tuna to no more than 300 grams or 10 ounces per week which is approximately two 170 gram cans. Pregnant women do not need to limit the amount of canned light tuna such as skipjack, yellow fin, or tongol.
During pregnancy the pregnant woman is more susceptible to food poisoning such as listeriosis and salmonella. The many changes taking place in her body weaken her immune system making it difficult to fight infections. Also, the baby may become infected because certain bacteria, viruses, and parasites cross the placenta. Contracting food poisoning during pregnancy may result in miscarriage, preterm birth, stillbirth, or delivery of a very ill baby, with possible long-term effects.

You can reduce the risk of food poisoning by practicing safe food handling:

- Wash your hands before, during, and after handling food.
- Wash raw vegetables and fruit well, including the skin.
- Cook meat, poultry, seafood, and hot dogs well. Pay particular attention to make sure meat is cooked thoroughly on the BBQ.
- Avoid processed meats; heat the non-dried deli meats to a steaming hot temperature before eating.
- Follow the ‘best before’ dates.
- Keep raw and cooked foods separate.
- Refrigerate foods promptly.

Notes:

- Go to the Health Canada website at www.hc-sc.gc.ca and search Safe Food Handling for Pregnant Women for complete details. Provide copy of booklet to participants if available.
- You may want to view a short video on safe food handling for pregnant women at this site: http://www.phac-aspc.gc.ca/fs-sa/videos/video04-eng.php.
**Speaker’s notes:**
Some foods are unsafe during pregnancy.

- **Foods most likely to cause listeriosis.** Safer alternatives to these foods can be found in Health Canada’s *Safe Food Handling For Pregnant Women* booklet.
  - Raw shell fish such as oysters and clams.
  - Undercooked meat, poultry, seafood and hotdogs.
  - Pate, some deli meats and smoked fish products; non-dried deli meats should be heated to steaming before eating.
  - Foods made with raw or lightly-cooked eggs.
  - Unpasteurized milk products and foods made from them.
  - Soft cheeses such as brie, camembert, feta, goat cheese, and queso.
  - Unpasteurized juices such unpasteurized apple cider.
  - Raw sprouts especially alfalfa sprouts.
- **Fish containing high levels of mercury (such as tuna, shark, swordfish, marlin, orange roughy, and escolar).**
- **Energy drinks.**
- **Excess caffeine from other sources (no more than 300mg/day).**
- **Liver and liver products,** due to their high concentrations of vitamin A. Pregnant women should have no more than one serving of liver or liver products every two weeks.

**NOTE:** See page 4 of Prenatal Guidelines for Health Professionals - Iron. Also be careful to avoid supplements that are high in vitamin A.
Speaker’s notes:
Pregnant women often wonder...can I still drink diet pop? Should I get rid of my cat? Should I switch to herbal teas? Here are some important things to consider when you are pregnant.

- These artificial sweeteners are safe to use occasionally, in small amounts—Aspartame (Nutrasweet, Equal), Sucralose (Splenda), Acesulfame Potassium (Ace-K or Sunett). Be careful not to use foods containing these sweeteners to replace more nutritious foods. Eating an apple is healthier than eating a sugar-free dessert.
- The safety of all herbal teas and herbal energy drinks during pregnancy has not been tested. The following herbal teas are generally considered safe if taken in moderation (i.e., two to three cups per day): citrus peel, peppermint, Echinacea, red raspberry leaf, rosemary, ginger, orange peel and rosehip. Chamomile tea is often considered mild, however, it is not recommended during pregnancy. Talk to your health care provider about the safe use of herbal products.
- Herbal supplements are not recommended unless they are advised by your health care provider. Use only those with a Natural Health Products Number (NHP).
- To flush out any potential contaminants in drinking water it is advised to run your tap water on cold for two minutes each morning.
- To reduce pesticide exposure from eating fresh fruits and vegetables be sure to thoroughly rinse and rub produce under running water. There is no need to use special produce washes or detergents. Discard outer leaves of lettuce and cabbage. Scrub thick skinned produce such as potatoes and carrots. Consider buying organically grown fruits and vegetables to reduce your exposure to chemicals such as pesticides. Organic foods may still have chemical residues.
**Speaker’s notes:**

- Bisphenol A is a chemical used in many consumer products such as pop cans, hard plastic food and some water containers. Exposure to Bisphenol A is considered to be a potential health hazard. Many people, especially parents, prefer to reduce exposure by avoiding food and beverage containers made with hard plastics. It is not just Bisphenol A that is a concern. Plastics also contain chemicals that can leach into food, particularly if food is heated in plastic container or is higher in acid content. This environmental health concern is not only for mom but also for young children. More information can be found at [www.hc-sc.gc.ca/index-eng.php](http://www.hc-sc.gc.ca/index-eng.php).

- Consider using glass food-storage containers or plastic products labelled as BPA-free.

- Toxoplasmosis is a parasite found in cat feces, raw or partially cooked meat, and unwashed root vegetables. Have someone else change the cat litter or wear gloves. Remember that neighbourhood cats often use gardens as their litter box so always wear gloves while gardening. Wash your hands after petting the cat and before cooking or eating. Cook meat thoroughly and wash all fruits and vegetables.
For More Information

- Health care provider
- Local public health department
- Dietitians of Canada
- The Society of Obstetricians and Gynaecologists
- Health Canada

Speaker’s notes:

- Review the information on the slide and add local resources as appropriate
- Suggestions for vegetarian eating according to Canada’s Food Guide can be found in *Healthy Eating for a Healthy Baby* booklet on page 17.

Suggested Take Home Activity: Spotting the Trends: Building a healthy pregnancy through nutrition

**Time:** 5 minutes

**Teaching Method:** Lecture/discussion and home work.

**Purpose:** To help learners identify and chart their food intake over the course of a week and to identify any gaps.

**Materials:** Handouts provided by the prenatal educator (use whatever materials you have for nutrition and a chart similar to the one in the module outline).

**Instructions:**
Following the discussion on healthy eating the prenatal educator invites the participants to chart their intake of whole grains, fruits & vegetables and healthy proteins over the course of a week. This activity helps people understand the concept of balance and how nutrition overall can impact a pregnancy in a positive way. Charting for a period of time (for example over 7 days) helps people see their intake patterns in a more holistic way and can make adjustments if necessary and make note of where they might need to increase food items.

*Source: Adapted with permission from the Institute of Childbirth Educators.*