Department of Dietetics

Happy Valley
Hong Kong Sanatorium & Hospital
4/F, Central Block
2 Village Road, Happy Valley, Hong Kong
Tel: (852) 2835 8674 Fax: (852) 2892 7428
dietitian@hksh-hospital.com
www.hksh-hospital.com
Monday to Friday: 9:00 am – 5:00 pm
Saturday: 9:00 am – 1:00 pm
Closed on Sundays and Public Holidays

Admiralty
HKSH Healthcare Medical Centre
Level 23, One Pacific Place
88 Queensway, Hong Kong
Tel: (852) 2855 6000 Fax: (852) 2892 7428
dietitian@hksh-healthcare.com
www.hksh-healthcare.com
Consultation by Appointment

Island East
HKSH Li Shu Fong Building
5/F, 5 A Kung Ngam Village Road
Shau Kei Wan, Hong Kong
Tel: (852) 2917 1150 Fax: (852) 2892 7404
dietitian@hksh-emc.com
www.hksh-emc.com
Monday to Friday: 9:00 am – 5:00 pm
Saturday: 9:00 am – 1:00 pm
Closed on Sundays and Public Holidays

For enquiries and appointments,
please contact us

DIET.005B.H/E-09-032024

Nutrition during Pregnancy and Breastfeeding

營養部
Department of Dietetics

www.hksh.com

Nutrition During Pregnancy

Good nutrition during pregnancy is important for you and your baby's long-term health. Your baby relies on you for all the nutrients required for normal growth and development. Therefore, eating well is a vital part of a healthy pregnancy.

Healthy Pregnancy Guidelines

- Eat adequately for steady weight gain
- Balanced diet, eat a wide variety of nutritious foods from the five food groups
- Adequate intake of calcium, iron, folate, vitamin D and Omega-3
- Limit intake of foods high in saturated fats, added salt and added sugar
- Avoid smoking and limit alcohol
- Drink at least 8 glasses of fluids each day
- Include 30 minutes of physical activities on most, if not all days

How Much Food to Eat?

"Eating for Two" does not mean eating twice the amount of food. Pregnant women do not have to increase energy in the first trimester, extra **300Kcal** energy maybe needed to increase during the second (4th to 6th month) trimester and **450Kcal** during the third trimester (after 7th month).

What Do 300 Calories Look Like?

- 1 cup of yoghurt, 1 apple, 8 walnuts
- 1 orange, 10 almonds, 3 wheat crackers
- A slice of bread with peanut butter and 1 kiwi
- ⅔ bowl of rice with 1 egg and vegetables
- 1 bowl of rice vermicelli with 2 taels of lean meat

How Much Weight to Gain?

Gaining the right amount of weight during pregnancy will help you and your baby get the best health outcome. All women should gain no more than 1 to 2kg (2 to 4 lb) in the first trimester. The ideal amount of weight gain for the remaining trimesters depends on your Body Mass Index (BMI) calculated using your weight ***before pregnancy***.

$$\text{Body Mass Index (BMI)} = \frac{\text{Weight(kg)}}{\text{Height(m)}^2}$$

BMI Interpretation

The BMI is a tool to estimate body weight status for the average population. The table below shows the BMI range and corresponding weight status for the average Asian population.

BMI (kg/m²)	Weight Status
<18.5	Underweight
18.5 to 22.9	Normal
>23	Overweight

Ideal Weight Gain for Healthy Pregnancy

Based on your weight and BMI before pregnancy, the following table shows how much weight you should aim to gain for a healthy pregnancy.

BMI (kg/m²)	Singleton Pregnancy		Twins Pregnancy
	Weekly Weight Gain (4th to 10th Months)	Total Weight Gain	Total Weight Gain
Underweight <18.5	**0.5**(0.4 to 0.6)kg every week (1(1 to 1.3) lb)	**12.5 to 18**kg (28 to 40 lb)	Data deficient
Normal 18.5 to 24.9 ***(Asian, 18.5 to 22.9)***	**0.4**(0.3 to 0.5)kg every week (1(0.8 to 1) lb)	**11.5 to 16**kg (25 to 35 lb)	**17 to 25**kg (37 to 54 lb)
Overweight 25 to 29.9 ***(Asian, 23 to 24.9)***	**0.3**(0.2 to 0.3)kg every week (0.6(0.5 to 0.7) lb)	**7 to 11.5**kg (15 to 25 lb)	**14 to 23**kg (31 to 50 lb)
Obesity >30 ***(Asian, >25)***	**0.2**(0.2 to 0.3)kg every week (0.5(0.4 to 0.6) lb)	**5 to 9**kg (11 to 20 lb)	**11 to 19**kg (25 to 42 lb)

*Assumption of 0.5 to 2kg (1.1 to 4.4 lb) weight gain during the first trimester (first three month)
Source: Weight gain during pregnancy: reexamining the guidelines, Institute of Medicine, 2009

Example for Calculating Weight Gain

Amy is 1.6m tall and weighted 50kg before pregnancy. Her BMI is 19.5kg/m² (50/1.6² = 19.5). Her goal weight throughout her pregnancy will be:

	Goal Weight			
Before Pregnancy	First Trimester	Second Trimester	Third Trimester	End of Gestation
50 kg (110 lb) **BMI = 19.5kg/m²**	51 to 52kg (112 to 114 lb)	56 to 57kg (123 to 125 lb)	61 to 62kg (134 to 136 lb)	61.5 to 66kg (135 to 145 lb)

Work Out Your Own Weight Gain Plan

Insert your pre-pregnancy weight and height into the following formula to work out your BMI:

$$\frac{\text{Weight} \_\_\_\_ \text{kg}}{\text{Height} \_\_\_\_ \text{m}^2}$$ My BMI is: _____

Select the appropriate BMI category:

		Ideal Weight Gain	
	BMI (kg/m²)	Second-Third Trimester	Total Gestation Period
☐	**<18.5**	0.5kg per week (1.1 lb)	12.5 to 18kg (28 to 40 lb)
☐	**18.5 to 22.9**	0.4kg per week (0.9 lb)	11.5 to 16kg (25 to 35 lb)
☐	**>23**	<0.3kg per week (<0.7 lb)	5 to 9kg (11 to 20 lb)

Fill in your targeted weight gain progression:

First Trimester	Second Trimester	Third Trimester	End of Gestation

Steady weight gain is an important part of a healthy pregnancy. Inadequate weight gain may indicate insufficient nutrients to support normal growth and development of the baby. This increases the risk of preterm birth and birth defects. On the other hand, too much weight gain may lead to high blood pressure, gestational diabetes, complications in delivery and increase the risks of long-term health issues. Therefore, it is important to eat the right amount of the right foods.

What Foods to Eat?

The key to a healthy and balanced diet is to eat a wide variety of nutritious foods to ensure adequate nutrient intake to support a healthy pregnancy and breastfeeding.

Food Group	Women	Pregnant Women (2nd to 3rd Trimester)	Lactating Women	Serving Examples
Grains and Cereals *Wholegrain cereals are rich in vitamins and fibre, they can enhance your satiety and relieve constipation	3 to 4 bowls	3½ to 5 bowls	4 to 5 bowls	1 bowl rice =1½ bowls macaroni/pasta =1¼ bowls noodles/ 1 bowl vermicelli =2 slices bread =2 bowls congee/oatmeal
Vegetables *Eat more dark green vegetables which are rich in iron, calcium and beta-carotene	1½ bowls	2 bowls	2 bowls	1 bowl cooked vegetables/ mushroom = 2 bowls fresh salad or vegetables = 1½ glasses vegetable juice
Fruits *Consume vegetables and fruits in different colours to absorb a wide variety of nutrients and phytochemicals	2 to 3 portions	2 to 3 portions	3 portions	1 medium-sized orange/ apple/pear =half large-sized fruits (banana) = 2 plum/Kiwifruit = ½ cup fruit slices = 1½ tbsp dried fruit
Meat, Poultry, Fish or Substitutions *Choose skinless, trimmed meat *Non-fried and low-salt soy products *Choose fish in low mercury level *Avoid preserved and high-salt processed food	5 to 6 taels	5 to 7 taels	7 to 8 taels	1 tael/40g uncooked meat = 1 mahjong tile in size = 30g cooked meat (about 1 table tennis ball in size) = 1 egg = ⅓ tofu block = about 4 tbsp cooked soy bean = about 6 to 8 tbsp cooked soy products
Dairy Products and Its Alternatives *Choose low-fat or skimmed milk	1 to 2 glasses	2 to 3 glasses	3 glasses	1 glass 240ml milk/high-calcium soy milk/almond milk = 150g (1 box) yoghurt = 2 slices cheese = ½ pressed tofu
Oil and Fat, Sugar, Salt *Choose vegetable oils and iodised salt	In moderation			No more than 2 tsp oil for each meal, and less than 6 tsp oil a day
Fluids Fluids except coffee, tea, alcohol, soft drinks	6 to 8 glasses	8 glasses	8 to 10 glasses	Water, milk, soup, fruit juice

Specific Nutrient Requirements

Eating the recommended serves of all kinds of food is a great guide to a healthy and balanced diet. This will not only help pregnant women get the calories required for the appropriate weight gain, but will also ensure key nutrients are consumed. Pregnant women have increased requirements for several key nutrients and particular attention should be given to the following:

Folate

Folate is a group B vitamin that can prevent anemia in pregnant women and is essential for cell growth. Deficiencies may lead to neural abnormalities and neural tube defects (NTD).

The recommended intake of folate for pregnant women is **600μg** per day. Women who are planning pregnancy should consume **400μg** per day as fetal neural development occurs in the early stages of pregnancy.

Leafy green vegetables, legumes, seeds, liver, fortified grains and fruit juices are all good sources of folate.

Folate in Food

Food	Serving Size	Folate (μg)
Dried beans	60g	130
Spinach	90g	80
Green peas	90g	50
Potato	180g	45
Orange	1 medium	50
Orange juice	1 cup	40
Fortified cereal	1 bowl	100
Whole wheat bread	2 slices	40

Iron

Iron is a major component of red blood cells that carry oxygen and supports normal brain development in the foetus. Pregnant women has increased requirement for dietary iron in order to supply iron to the growing foetus and prevent iron-deficient anaemia. Adequate iron is important for the foetus to build up iron stores for the first 6 months of infancy and account for the mother's blood loss when giving birth.

The recommended iron intake for pregnant women is **27mg** per day.

Good sources of iron can be found in meat, fish, crustacean, eggs and poultry. Non-animal high-iron sources include legumes, nuts, seeds, tofu, leafy green vegetables, iron-fortified juices and breakfast cereal. However, iron from animal products are better absorbed by human body. Consuming the below food along with vegetables, fruits and juices that are rich in vitamin C can enhance iron absorption, while coffee and tea may reduce iron absorption.

Iron in Food

Animal Products	Common Serving Size	Iron (mg)
Clams	85g Around 3 ounce (cooked)	23.7
*Pork liver		15.2
Oyster		7.8
Mussels		7 to 11
Beef		2.8
Sardines		2.2
Chicken / Pork		0.9
Salmon		1.1

** Pregnant woman should avoid liver intake as it has high vitamin A content. Excessive vitamin A maybe teratogenic and harmful to foetus growth.*

Non-Animal Products	Common Serving Size	Iron (mg)
Firm Tofu	⅓ block (100g)	2.7
Iron fortified breakfast Cereals	½ cup	2 to 3
Quinoa (raw)	42ml (¼ cup)	1.9
Baked potato (with skin)	1 medium size	2.8
Spinach (cooked)	125ml (½ cup)	3.2
Kidney bean / chickpeas (cooked)	125ml (½ cup)	2 to 2.5
Dried figs / prunes	5 pieces	0.8 to 1
Broccoli (cooked)	125ml (½ cup)	0.7

Iodine

Iodine is an essential nutrient for human metabolism and maintenance of thyroid function. Fetal growth and brain development require sufficient iodine, it is recommended to take **220µg** of iodine every day during pregnancy. Iodine deficiency will affect the neurodevelopment and growth of the fetus.

Studies have found dietary iodine is insufficient in most local pregnant women. The Department of Health advises pregnant women to consider taking iodine-containing supplements to prevent deficiency.

Iodine in Food

Food	Portion	Estimated Iodine (µg)
Iodised salt	5g	150
Mussels	100g	140
Kelp	1g	2,600
Shrimp	100g	44
Golden thread/ Horsehead (fish)	100g	35
Seaweed snack	1g	34
Yoghurt	100g	29
Skimmed milk	250ml	20
Canned sardines	100g	19
Chicken egg	1 piece	18

** Kelp contains high level of iodine and should not be taken more than once a week. Overconsumption may adversely affect the thyroid function.*

Calcium

Calcium is required for the growth of strong bones and teeth. If dietary calcium is insufficient to supply the needs of the baby, calcium will be leeched from the mother's skeletal (bone) reserves. The loss of calcium increases the risk of developing osteoporosis later in life. Therefore, adequate calcium intake is vital for long-term bone health of you and your baby.

The recommended intake of calcium is **1,000mg** per day for pregnant women between 19 to 50 years old and 1300mg per day for women under 19 years old.

Dairy foods such as milk, cheese and yoghurt are a great source of calcium. Pregnant women should consume 2 to 3 serves of dairy or dairy equivalents per day. Non-dairy sources of calcium include sardines (with bones), tofu, dark leafy green vegetables, nuts, legumes and calcium-fortified soy milk.

Calcium in Food

Dairy Products	Serving Size	Calcium (mg)
Full cream milk	1 cup	276
Skimmed milk	1 cup	300
Yoghurt	1 small cup	160
Cheese	1 slice	143
Sardine (with bones)	100g	240
Tofu	100g	320

Non-Dairy Products	Serving Size	Calcium (mg)
Chinese cabbage	1 bowl	158
Broccoli	1 bowl	72
Almond	20 pieces	80
Sesame Seeds	30g	300
Soy milk	1 cup	25
Fortified soy milk	1 cup	400

Vitamin D

Adequate vitamin D is essential for human to absorb calcium from food. Pregnant women are recommended to have **600IU/15µg** of vitamin D per day.

While some foods such as oily fish, eggs and milk contain small amounts of vitamin D, it is difficult to acquire adequate vitamin D through dietary means.

Vitamin D in Food

Food	Serving Size	Vitamin D (IU)
Salmon	85g	440
Tuna (canned)	85g	160
Egg yolk	1 piece	40
Vitamin D-fortified milk	1 cup	112 to 124
Vitamin-fortified juice	1 cup	136
Mushrooms (uncooked)	1 bowl	40

Vitamin D is produced when our skin is exposed to the ultraviolet (UV) radiation of sunlight. Exposure to sunlight is the most effective way for pregnant women to gain vitamin D. 10 to 15 minutes of sun exposure twice a week is enough for daily use and can enhance calcium absorption in the body. To avoid intense heat and skin damage by UV rays, the safest hours for sun exposure is before 10:30am and after 3:30pm. Brisk walking during these hours is a great way to get vitamin D and incorporate daily exercise routines during pregnancy.

DHA

DHA is a type of omega-3 fatty acid that is important for your baby's brain and eye development and lowering risk of preterm delivery. Pregnant women are recommended to have an average of **200mg** DHA per day as a minimum intake.

Along with other omega-3 fatty acids, DHA is found in oily fish such as salmon, sardine and tuna.

DHA in Food

Food	Serve Size (cooked)	DHA (mg)
Salmon (wild)	85g	1,215
Salmon (farmed)	85g	1,238
Sardine (with bone)	85g	433
Tuna (canned, in oil)	85g	190
Tuna (canned, in brine)	85g	86
DHA-fortified egg	1 piece	168

Pregnant women are recommended to have two serves of fish per week to meet DHA requirements. This will also ensure adequate intake of other omega-3 fatty acids which are known to be beneficial for maternal and fetal health.

Fluids

Apart from eating the right foods during pregnancy, it is equally important to ensure that you are well hydrated with the right fluids.

Blood volume increases with gestation to supply nutrients for the growing foetus and prepare the mother for blood loss at childbirth. Therefore, it is important to drink enough fluids to support increasing blood volume throughout your pregnancy.

Pregnant women are recommended to drink **at least 8 cups** of fluids per day. Water is the best source of hydration. Other fluids include milk, soy milk, fresh fruit juice, fresh vegetable juice and soups. It is a great way to meet your daily calcium and vegetable requirements by including such fluids into your diet.

Beverages with high amounts of added sugar and salt are not recommended. They include soft drinks, sweetened packaged beverages, canned soups or other highly salted soups. Beverages with high amounts of added sugar will have a strong effect on your blood glucose level and increase the risk of gestational diabetes. Beverages with high amounts of added salt will affect your blood pressure and may cause fluid retention and swelling.

Frequently Asked Questions

1. Can I drink alcohol?

There is no scientific evidence related to how much alcohol consumption is safe during pregnancy. Therefore, **abstaining from alcohol** is recommended. Alcohol consumption during pregnancy can cause a range of irreversible birth defects that affect the brain, facial structure, heart and other organs.

2. What about caffeine?

Excessive caffeine intake may increase risk of miscarriage and low birth weight baby. Caffeine takes longer time to break down during pregnancy. Caffeine intake levels of up to **200 to 300mg** per day is shown to be safe during pregnancy. Caffeine is found in coffee, tea, some soft drinks, chocolate and some medications. However, this may vary in strength with the type of beverage being consumed. It is best to reduce caffeine intake below these limits or use decaffeinated alternatives. In addition, different people have different tolerance for caffeine, and please consult your doctor and dietitian about your caffeine intake.

Caffeine in common food and drinks (mg)

Brewed Coffee (a cup) (6 ounces)	110 to 170
HK-style Coffee (a cup) (8 ounces)	220 to 380
HK-style Milk Tea (a cup) (8 ounces)	73 to 220
Instant Coffee (a cup) (6 ounces)	57
Espresso (a cup) (4 ounces)	82 to 170
Coke (a can) (12 ounces)	11 to 69
Tea (a cup) (6 ounces)	26 to 36
Dark Chocolate (1.5 ounces)	30
Cocoa Powder (1 table spoon)	12

3. Are artificial sweeteners safe?

Some artificial sweeteners and low-calorie sweeteners you consume can reach your baby through the placenta. **Moderate use** of sugar substitutes/ sweeteners is considered safe during pregnancy. However, pregnant women with Phenylketonuria (PKU) must avoid product contains aspartame.

4. What about mercury in fish? Is it safe to eat fish?

Methylmercury is present in some fish. It is harmful to the nervous system of foetus and infants if mothers consumed too much mercury.

Since fish provides an excellent source of lean protein, iodine, vitamin D and omega-3 fatty acids, FDA suggests pregnant or breastfeeding women can consume **8 to 12oz** of fish and seafood with low methylmercury level a week to enhance the growth and development of foetus and infant. Eating two to three portions a week (one portion of about 4oz (112g)) is recommended.

Fish with low methylmercury leve includes salmon, sardine, Japanese jack mackerel, chub mackerel, golden thread, Pacific saury, pomfret, grass carp, mud carp, grey mullet, horse head, big eyes, etc.

Avoid consuming fish in high methylmercury level, e.g. shark, swordfish, marlin, king mackerel, bluefin tuna, bigeye tuna, albacore tuna, yellowfin tuna, splendid alfonsino, orange roughy, yellowback seabream and dash-and-dot goatfish or large predatory fish.

*In view of food safety, eating different kinds of fish in low methylmercury level can reduce risk of poisoning

Mercury Levels in Fishes (World Health Organization)

Fish type	Mercury (µg/kg)	Mercury (µg/100g)
Chub mackerel	213	21.3
Star snapper	161	16.1
Yellowfin tuna	114	11.4
Red snapper	106	10.6
Humpback grouper	101	10.1
Green wrasse	95	9.5
Freshwater grouper	91	9.1
Javelin grunter	90	9.0
Tonguefish	75	7.5
White horsehead	73	7.3
Japanese eel	71	7.1
Largemouth black bass	69	6.9
Areolate grouper	66	6.6
Blind tasselfish	65	6.5
Mangrove red snapper	60	6.0
Green grouper	57	5.7
Pacific saury	56	5.6
Golden threadfin bream	54	5.4
Leopard coralgrouper	52	5.2
Giant grouper	51	5.1
Mud carp	39	3.9
Fourlined tonguesole	39	3.9
Japanese seaperch	38	3.8
Atlantic salmon	34	3.4
South American pilchard	31	3.1
Yellowtail amberjack	31	3.1
Bombay duck	17	1.7

Remarks: 100g of fish is about 3.5oz. Adults can consume 2 to 3 portions (4oz or 122g) of fish in low methylmercury level a week

5. What If I have no appetite?

Morning sickness may affect appetite, especially in the early stages of pregnancy. It is important to manage nausea and vomiting to adequately nourish you and your child. Some tips include:

- Eat small frequent meals or snacks. Hunger may increase nausea
- Eat dry foods such as toast or saltine crackers
- Try refreshing flavours. Foods and drinks with apple, celery, ginger and mint can be comforting
- Avoid fatty foods or foods with oily sauces
- Avoid smells and foods that make you feel uncomfortable. Foods with a strong odor may increase nausea. Hot foods usually have more aroma than cold foods. Eat in a comfortable environment. Sharing a meal with family or friends can help your mood and appetite

Heartburn may also affect appetite and is common in the later stages of pregnancy. Some ways to reduce heartburn include:

- Eat smaller meals frequently
- Sit up straight while eating
- Chew foods well
- Wear loose clothes
- Avoid laying down or bending after meals
- Avoid fatty and spicy foods
- Avoid caffeinated drinks such as tea, coffee, cola and chocolate
- Eat in a comfortable environment. Being relaxed can help reduce heartburn

6. Can I still eat deli meat?

Yes. However, certain refrigerated, ready-to-eat meat (hot dogs, luncheon or deli meat) should only be consumed after being **heated until steaming hot** to prevent infection from Listeria monocytogenes. Listeria monocytogenes is a bacteria that can grow in the refrigerator, which can cause serious illness to pregnant women, unborn babies, and newborns. In addition, unpasteurised cheese and frozen desserts containing uncooked dairy products or eggs are high-risk foods for Listeria infection as well.

7. How much exercise do I need?

Exercise is an important part of any healthy lifestyle. Pregnant women are encouraged to include **30 minutes of physical activity** on most days, if not every day.

Staying active during pregnancy can help relieve stress, improve sleep and increase your resistance to fatigue. Furthermore, regular exercise can reduce bloating, swelling and constipation. This can improve your appetite and ensure an adequate intake of nutrients. Maintaining or improving your fitness level can also help weight control for a healthy pregnancy and allow faster return to your pre-pregnancy healthy weight range.

The body will experience several changes during pregnancy that will affect the range of physical activities you can do. As your baby grows, the extra weight will put more stress on the pelvis and lower back and may affect your balance. Your joints will also become more flexible and care needs to be taken to avoid joint injury. Therefore, intense exercise with rapid start-stop movements are not recommended. As pregnancy also increases resting heart rate, you may feel exerted more quickly compared to your pre-pregnant state. It is important not to overexert yourself and rest frequently. Take a rest if you are feeling breathless, pain, overheated, dizzy or light-headed.

The following exercises are recommended during pregnancy:

- Walking
- Swimming
- Gardening
- Stepping stairs
- Stationary bikes
- Pregnancy exercise classes such as
  - Yoga
  - Pilates
  - Dancing
  - Light resistance training
- Light aerobics

Doing exercise with family or friends together will provide more support and encouragement, making it enjoyable throughout your pregnancy.

8. Can I support a healthy pregnancy with a vegetarian/ vegan diet?

Vegetarian or vegan mothers may choose to continue their dietary practices with pregnancy. A vegetarian or vegan diet can still support a healthy pregnancy with careful planning to ensure adequate nutrients for you and your child's development. Pay special attention to adequate **intake of protein, iron, calcium and vitamin B12** in diet. Like any healthy diet, the focus remains on eating a wide variety of nutritious foods from the five food groups. For grains or cereals, try to choose whole grains for more nutrients and protein. Eat fruits and vegetables as recommended for the average healthy diet. Replace the protein, vitamins and minerals found in meat with the equivalent serves of eggs, beans, legumes, seeds and nuts. Dairy products can be replaced with the equivalent serves of calcium-rich foods such as tofu, fortified soy milk, juices and breakfast cereals.

If you have any other dietary concerns or would like to find out more about nutritional health throughout pregnancy, talk to our registered dietitian for a personalised consultation.

Diet for Breastfeeding

- Maintain a balanced diet, consume more foods in high nutritional value
- Additional **350 to 500Kcal** intake every day
- Pay special attention to the absorption of below nutrients during breastfeeding period*:
  - **Vitamin D** (600IU)
  - **Calcium** (1,000mg)
  - **Omega-3 fatty acids** (DHA, 200 to 300mg)
  - **Iodine** (290mcg)
  - **Iron** (9mg)
  - **Folate** (500mcg)
- Drink 8 to 10 glasses of water and not more than two cups of high-caffeine drinks every day
- No smoking and avoid alcohols

* Food sources of above nutrients can be found at page 9 to 14

Benefits of Breastfeeding

To Baby	To Mother
• Ideal nutrition for babies, composition change as babies grow • Easy to digest and absorb, reduce risk of diarrhea and constipation • Contain antibodies and immunoglobulin - Enhance digestive health - Prevent food allergy and enhance immunity • Help to prevent childhood obesity • Feel secure • Fresh, clean and safe	• Enhance bonding between mother and baby • Help burn fat and reduce weight naturally • Help the uterus contract • Reduce risk of breast cancer and ovarian cancer • Better control of blood glucose level and prevent diabetes • Improve postpartum bone mineral density and reduce postmenopausal fracture risk • Serve as a natural contraceptive • Save time and money, convenient and environmentally friendly

Breastfed infants should absorb additional Vitamin D

The American Academy of Pediatrics (AAP) recommends breastfed infants or babies who consume less than 1,000ml infant formula per day should be supplemented with **400IU vitamin D** every day beginning in the first few days of life to 12 months old.

Proper Storage of Breast Milk

- Breast milk can be kept refrigerated in sealed storage bags and bottles
- Label the date and time on the container before storage
- Store the breast milk in one serving size of your baby as it should not be refrigerated again and should be discarded
- The storage time varies with temperature at which breast milk is kept. Breast milk should be stored according to the guideline below:

	Fresh Breast Milk	Thawing Breast Milk
Room temperature (25°C or below)	4 hours	1 to 2 hours
Ice bag with ice pack	24 hours	-
Fridge (4°C)	4 days	Within 1 day after completely defrosted
Freezer (-18°C or below)	6 months	Cannot be frozen again

*Breast milk should be placed on the upper shelves of the refrigerator, while undercooked food should be placed separately on the lower shelves. Also, breast milk should not be placed on door shelves as the temperatures are not stable.

Family Health Services, Department of Health. WHO/UNICEF 2009