





BIRTH TO EIGHTEEN YEARS







DIETARY TIPS FOR YOUR CHILD'S WELLBEING











DIETARY GUIDELINESFOR CHILDREN & TEENAGERS





Nutritious food and an active lifestyle can help your child achieve good health and wellbeing throughout life. As a parent or caregiver, you have the opportunity to influence your child's food choices and encourage a healthy attitude towards food. There is evidence that dietary habits and attitudes developed during childhood and teenage years influence eating patterns later in life.

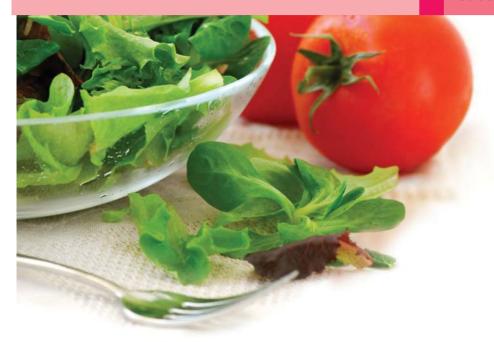
Many of today's chronic diseases, such as heart disease, stroke, diabetes and certain cancers have a strong link to diet and lifestyle. A child's diet can have a direct impact on the development of risk factors such as obesity, high blood cholesterol and high blood pressure, which can lead to diseases in adulthood.

Birth To Eighteen Years: Dietary Tips For Your Child's Wellbeing is a simple, practical guide to nutrition, food and health. We hope this booklet will provide you with useful tips on how to help your child or teenager achieve a healthy and balanced approach to food.





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AIM FOR VARIETY AND BALANCE

Every child is unique and so are his* nutritional needs, which can vary with age. By following some simple tips, you can serve up nourishing meals for your child.

Variety is your goal

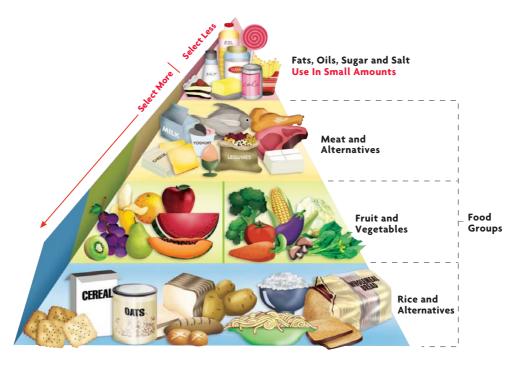
Ensure that your child gets all the nutrients he needs by providing a wide variety of food from the Rice and Alternatives, Fruit and Vegetables, and Meat and Alternatives food groups. Bear in mind that food high in fat and sugar should be eaten sparingly.

Getting the balance right

The Healthy Diet Pyramid will help you plan what your child needs to eat every day and will ensure that your child's diet has all the nutrients he needs to grow well and stay healthy.

^{*} For the sake of simplicity, the terms, he/his/him are used to represent both sexes.

Include food from all food groups but remember to choose more from the bottom of the pyramid and less from the top. It is important to remember that younger children have smaller tummies so if you find that your child is unable to finish his meal at one go, provide him with healthy snacks to help reach his suggested number of servings every day.



To get all the nutrients your child needs, select the right number of servings from each food group using Table 1 (see next page).

Table 1: Recommended number of servings for children and teenagers

	Recommended number of servings per day				
Food groups	6 months (181 days) -12 months	1-2 years	3-6 years	7-12 years	13-18 years
Rice and Alternatives (Do include the recommended whole-grain serving as part of the Rice and Alternatives serving needs.)	1-2	2-3	3-4	5-6	6-7
Whole-grains	1/2	$\frac{1}{2}$ -1	1-2	2-3	2-3
Fruit (Fruit should not be used to replace vegetables in the diet or vice versa because they contain different kinds of nutrients.)	1/2	1 /2 - 1	1	2	2
Vegetables	1/2	1/2	1	2	2
Meat and Alternatives	1/2	1/2	1	2	2
Milk (Do include the recommended milk serving in addition to the Meat and Alternatives serving needs.)	750ml	750ml	500ml	250-500ml	250-500ml

Know the serving sizes

The table below will help you get familiar with serving sizes for each of the food groups.

Table 2: Examples of 1 serving

Rice and Alternatives	Vegetables
 2 slices bread (60g) ½ bowl* rice (100g) ½ bowl noodles, spaghetti or beehoon (100g) 4 plain biscuits (40g) 1 thosai (60g) 2 small chapatis (60g) 1 large potato (180g) 1½ cups plain cornflakes (40g) 	 3/4 mug** cooked leafy vegetables (100g) 3/4 mug cooked non-leafy vegetables (100g) 150g raw leafy vegetables 100g raw non-leafy vegetables 1/4 round plate⁺
Fruit	Meat and Alternatives
 Fruit 1 small apple, orange, pear or mango (130g) 1 wedge pineapple, papaya or watermelon (130g) 10 grapes or longans (50g) 1 medium banana 1/4 cup*** dried fruit (40g) 1 glass pure fruit juice (250ml) 	 Meat and Alternatives 1 palm-sized piece fish, lean meat or skinless poultry (90g) 2 small blocks soft beancurd (170g) ³/₄ cup cooked pulses (e.g. lentils, peas, beans) (120g)

Fluid Needs

How much your child needs to drink can vary depending on how active he is. Most children should aim to drink 6-8 glasses of water a day while teenagers should aim for 8-10 glasses a day. If your child is very active then it is important to increase his fluid intake.

DEVELOP HEALTHY HABITS



Now is a great time for your child or teenager to develop healthier eating habits that will last a lifetime. By encouraging healthier food choices and getting your child or teenager to be more active, you are helping to protect his future health.

Get him into the habit

To help your child adopt healthy eating habits, start at a young age and he will more likely continue to have a preference for them as an adult. It may take several tries before he accepts a new food, so do not give up if he does not like it right away. If you have a growing teen at home, getting him to eat healthily can be a challenge; so make use of every opportunity to reinforce the importance of healthy eating. Remember, children and teenagers learn from their parents, caregivers and teachers. Hence it is important for you, as a role model, to make healthier food choices too

Food as a reward

It may often be tempting to offer your child or teenager a particular food as a reward for good behaviour. However, using food that are high in fat and sugar (e.g. candy, cookies and soft drinks) to reward your child teaches him the habit of rewarding or comforting himself with unhealthy food. Instead provide non-food rewards such as words of encouragement or a small gift of his choice.

Watch them grow

Nutrient and energy needs vary at different ages. Children have periods of rapid growth and development particularly during the first 2 years of life and the early teenage years. If you are worried that your child or teenager may be underweight for his height or age, talk to your doctor or a dietitian who can help you understand his weight/height goals.



Be active every day

Encourage your child or teenager to be on the move, it is one of the key factors in achieving good health. Being active will also help promote growth and development, build strong bones and keep his weight in check.

But don't worry, this does not mean that you need to get him to a gym from an early age. It just means that he should engage in regular physical activities like swimming, playing soccer, cycling, brisk walking, dancing or even walking to school.

GET MOVING!

Encourage your child or teenager to engage in at least 60 minutes of moderate-intensity physical activity on 5 or more days a week. Moderate-intensity refers to a slight increase in breathing and heart rate.

School activities such as PE time count towards the 60 minutes.



CUT DOWN ON SATURATED FAT

Fat is an essential nutrient in your child's diet. It provides energy and also helps absorb, transport and store important vitamins in the body. But too much fat, particularly saturated fat and trans fat, can lead to excessive weight gain and many health problems like heart disease and stroke. When choosing fat, the healthier options are the monounsaturated fat and polyunsaturated fat. These fat can lower the risk of heart disease by reducing cholesterol levels in the blood.

The Fat Exception

Children under the age of 2 years grow rapidly so food higher in fat will help meet their energy needs. Low fat food or diets are **not** suitable for them at this age.

For older children aged 2 years and above, reducing food with unhealthy saturated fat in the diet and replacing some of this fat with food containing monounsaturated fat and polyunsaturated fat, will result in a better fat balance. Also, try to minimize his intake of food high in trans fat.

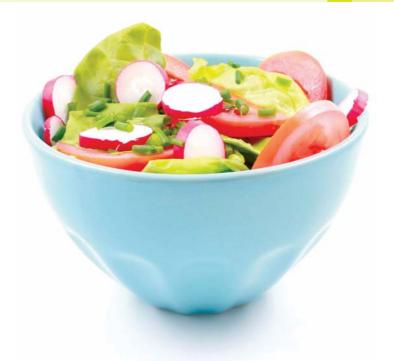
Getting familiar with the types of fat and their food sources will help you make the right choices for your child.

Table 3: Know the fat

Table 5. Know the lat			
Fat type	Food sources		
SATURATED FAT	 Animal Fat (e.g. fatty meat, chicken skin, lard) Full-fat dairy products (e.g. full cream milk, butter, ghee) Dishes containing coconut milk or coconut cream Deep-fried food Food prepared with palm-based vegetable oil 		
TRANS FAT	 Pastries and cakes Cookies and biscuits Deep-fried food Products containing vegetable shortening, hydrogenated or partially hydrogenated oils (as stated on the ingredient list) 		
POLYUNSATURATED FAT - Omega 3	 Salmon, sardines, longtail shad (terubok) and spanish mackerel (tenggiri papan) Walnuts Canola oil and soybean oil Products enriched or fortified with omega-3 (e.g. bread and eggs) 		
- Omega 6	 Vegetable oils (e.g. corn, soybean and sunflower oil) Seeds (e.g. sunflower seeds and sesame seeds) 		
MONOUNSATURATED FAT	 Vegetable oils (e.g. canola, olive and peanut oil) Most nuts (e.g. almonds, cashew nuts and hazelnuts) Avocados 	方位	

HEALTH HINT!

All types of fat provide equal calories per gram so it is important that your child still consumes all fat in moderation. This also applies to both the monounsaturated fat and polyunsaturated fat.



EAT ENOUGH FRUIT AND VEGETABLES

We all know we should be eating fruit and vegetables but most of us are not eating enough; the same is true for our children. A recent survey indicated that only a quarter of teenagers in Singapore were eating enough fruit and vegetables. Get your child into the routine of eating fruit and vegetables – it is one of the more positive healthy eating steps you can teach your child.

HEALTH HINT!

Fruit and vegetables are low-fat, low calorie food so choosing them over food that are high in fat and added sugar can help your child maintain a healthy weight.

Reap the benefits

Fruit and vegetables are rich in important vitamins and minerals; and are excellent sources of fibre and antioxidants. An increased intake of fruit and vegetables is linked to reduced risks of many diseases such as heart disease, stroke and certain cancers. Hence adequate intake of these food is important for your child's health now and also in the future.

How much is recommended?

Fruit and vegetables provide bulk in the diet which can make your child feel full. If your child eats too much fruit and vegetables, it can limit his intake of other important food in the diet and he may fail to meet his energy needs. Table 4 will help you understand your child's varying fruit and vegetable needs.

Table 4: Recommended number of servings* for fruit and vegetables

Age	No. of servings per day
6 months (181 days) - 12 months	$\frac{1}{2}$ serving fruit $\frac{1}{2}$ serving vegetables
1-2 years	$\frac{1}{2}$ -1 serving fruit $\frac{1}{2}$ serving vegetables
3-6 years	1 serving fruit 1 serving vegetables
7-18 years	2 servings fruit 2 servings vegetables

^{*}For information on what makes one serving, refer to Table 2 on page 5.

Colour your way to better health

To get the best nutrition and health benefits, brightly coloured red, yellow and orange fruit and vegetables and dark green leafy vegetables should contribute **half** of all fruit and vegetables consumed in your child's daily diet.

Red

- Tomatoes
- Red peppers
- Watermelons



Yellow & Orange

- Papayas
- Carrots
- Oranges
- Rockmelons

Green

- Green leafy vegetables
- Honeydew melons
- Kiwis
- Broccoli



White

- Cabbage
- Cauliflowers
- White turnips
- Bananas



Purple

- Plums
- Purple grapes
- Eggplants





Food from the bottom of the Healthy Diet Pyramid, the Rice and Alternatives food group, should form the bulk of your child's diet as they are a good source of energy and provide vitamins, minerals and fibre to the diet.

What are whole-grains?

Whole-grains consist of 3 parts:

- A fibre-rich outer layer (the bran)
- A nutrient-packed inner area (the germ) and
- A central starchy part (the endosperm)



A whole-grain has all the 3 parts intact. However, a refined grain has had the bran and the germ removed during processing. This is why whole-grains are packed with more vitamins, minerals and fibre than refined grains, making them an essential component in your child's diet.



How much is recommended?

The recommendations for whole-grain servings are part of your child's Rice and Alternatives serving needs. For example, out of the 2-3 Rice and Alternatives servings recommended for children aged 1 through 2 years, $\frac{1}{2}$ -1 serving should come from whole-grains while the remaining servings should come from the other food in this food group. Whole-grain food includes wholemeal bread, brown rice, brown rice beehoon, rolled oats, oat porridge, wholemeal pasta and whole wheat or whole-grain cereal.

Table 5: Recommended number of servings* for Rice and Alternatives and whole-grains

Age	No. of Rice and Alternatives servings per day (of which a portion should be whole-grains)	No. of whole-grains servings per day
6 months (181 days) - 12 months	1-2	1/2
1-2 years	2-3	$\frac{1}{2}$ - 1
3-6 years	3-4	1-2
7-12 years	5-7 (Younger children should aim for the lower	2-3
13-18 years	end of the range. Older children and teenagers should aim for the higher end of the range)	2-3

^{*}For information on what makes one serving, refer to Table 2 on page 5.

FOOD LABELS

Try to include the recommended daily servings of whole-grains in your child's diet. Buy packaged grain products with 'whole' stated on the ingredients list, such as 'whole-grains', 'whole wheat' or 'wholemeal'.



BONE UP ON CALCIUM

Milk and other calcium-rich food are a must-have in your child's diet. Calcium is the key building block for strong, healthy bones and teeth. During childhood and the teenage years bones grow longer and stronger, which makes these years the best time for your child to invest in his bone health. The more savings he has in his 'bone bank' now, the lower the risk of his 'bone bank' being depleted of calcium as he grows older.

Milk matters

Breastmilk and infant formulas are the main sources of calcium for children under 1 year of age. As your child gets older, milk should remain an important part of his diet. It is a source of many important nutrients, including calcium, protein, vitamin A and some B vitamins.

Use Table 6 to identify suggested milk servings. For children aged 1 year and above, recommended milk servings can be replaced by other dairy products or calcium-fortified products.

HEALTH HINT!

Did you know that 1 glass of milk (250ml), 2 slices of cheese (40g) and $1-1\frac{1}{2}$ tubs of yoghurt (200g) contain similar amounts of calcium?

Table 6: Recommended servings of milk

Age	No. of servings per day
0-6 months	Breastmilk
6 months (181 days) - 12 months	Breastmilk or 750ml infant formula
1-2 years	3 glasses (750ml)
3-6 years	2 glasses (500ml)
7-12 years	1-2 glasses (250ml-500ml)
13-18 years	1-2 glasses (250ml-500ml)

Get to know your calcium sources

The best sources of calcium are dairy products, such as milk, cheese and yoghurt (low-fat versions contain similar amounts of calcium). Other good sources of calcium include dark green leafy vegetables, fish with edible bones (e.g. sardines), nuts, calcium-fortified products (e.g. cereals and soybean drink with the Healthier Choice Symbol) and tofu.





Get some sunshine

Calcium does not act alone in promoting bone health. It works with vitamin D to increase calcium absorption from our food. The action of sunlight on the skin is the best way of producing vitamin D in the body and just 15 minutes of daily sunlight outdoors will ensure sufficient vitamin D for your child. Food sources of vitamin D include fatty fish (e.g. salmon) and eggs.

Lactose intolerance concerns

Although most children may naturally lose the enzyme required to break down lactose (a sugar found in milk) after 2 to 3 years of age, they can still consume dairy products. Losing the enzyme does not mean that they have become lactose intolerant.

If your child has been diagnosed as lactose intolerant by a doctor, it is recommended that he continues to consume milk and other dairy products. Milk and other dairy products are still good sources of calcium, as children with lactose intolerance are able to absorb calcium from these food. In addition, regular consumption of milk and other dairy products may help reduce the extent of symptoms related to lactose intolerance.

Here are some tips on how to maintain a calcium-rich diet if your child is lactose intolerant.

- Choose cheese and yoghurt (they are lower in lactose and the active cultures in yoghurts can help with digestion).
- Consume milk and dairy products in small portions (e.g. ½ cup of milk) together with a meal to aid in digestion.
- Lactose-reduced or lactose-free milk and dairy products may be an option.



HEALTH HINT!

Reduced-fat milk and other dairy products are not suitable for children below the age of 2 years.

Children aged 2 years or more should be encouraged to consume reduced-fat milk, cheese and yoghurt.



LIMIT YOUR SALT INTAKE

Most people in Singapore consume too much salt which can raise blood pressure, a risk factor for heart disease and stroke. Children naturally have a preference for salty food, therefore be aware of the presence of salt in their food and influence your child's liking for lightly or non-salted food early in life.

Be more aware of salt

Salt contains 40% sodium, which affects blood pressure if taken in excess. Sodium can also be found in sauces, monosodium glutamate (MSG), food preservatives and processed food. By encouraging lightly salted food and reducing overall salt intake, it is possible for your child to consume a low sodium diet. For a list of recommended salt limits and salt content of common food items, refer to Table 7 and 8 respectively.

HEALTH HINT!

A reduced salt intake in children and teenagers leads to a reduction in blood pressure and may prevent the development of high blood pressure in adulthood.

Reducing salt from the diet is easy. Here's how:

- Avoid adding salt to your child's food during preparation.
- Try not to add salt or sauces at the table.
- Cut down on salty processed food (e.g canned food).
- Check food labels for sodium content and go for lower salt choices.
 Look out for the Healthier Choice Symbol on food labels.





FOOD LABELS

Food labels often just list sodium content so it can be confusing!

To convert sodium to salt - multiply by 2.5 For example: 0.8g sodium = 2g salt

Table 7: Recommended salt limits

Age	Recommended limit (grams)
6 months (181 days) -12 months	√ 1g
1-6 years	2 .5g
7-18 years	√ 5g

Table 8: Salt content of common food items

Cooked dishes	Serving size	Salt*
Fishball noodles (dry)	1 bowl	(4.1g)
Chicken rice	1 plate	(3.2g)
Processed/Preserved food	Serving size	Salt*
Luncheon meat	2 slices	(0.2g)
Ham	2 slices	(0.2g)
French fries	1 regular serving	(0.5g)
Potato chips	1 packet	(0.5g)
Instant noodles	1 packet	(4.5g)
Sauces/Seasonings/Gravy	Serving size	Salt*
Stock cube	1 teaspoon	(2.3g)
MSG	1 teaspoon	(1.5g)
Oyster sauce	1 teaspoon	(0.5g)
Light soy sauce	1 teaspoon	(0.9g)
Dark soy sauce	1 teaspoon	(0.5g)
Tomato sauce	1 teaspoon	(0.1g)

^{*1} teaspoon =5g salt



WATCH THE SUGAR

No matter what form they are in, sugar always taste sweet! Most children have a sweet tooth and should be encouraged to consume less food and drinks containing added sugar.

The simplest way to group sugar is:

- **Naturally occurring** sugar, such as those naturally present in plain milk, fruit and some vegetables.
- Added sugar, such as those added to cakes, biscuits, sugary drinks or at the table.

Sugar woes

Added sugar is often referred to as 'empty calories' because they provide little nutritional value in your child's diet. So if you are concerned that your child or teenager may gain weight if he consumes more calories than he can burn through physical activity, now is a good time to take steps to reduce his intake of sugary food and drinks to ensure a healthy weight.

The dental issue

Bacteria in the mouth use sugar to produce tooth-damaging acid so eating sugar frequently puts teeth at risk of decay. This is especially true for processed sugar, for example, cordials or in food and drinks containing added sugar rather than those that occur naturally in food (e.g. fruit). To help look after your child's teeth, it is best to avoid sugary food and drinks.

The drinks question

The best drinks for your child are plain milk and water. Fruit juice (with added sugar) and other sweetened drinks should be limited as they are often high in calories. If you choose to give your child sweetened drinks, look out for those with the Healthier Choice Symbol.

How much added sugar is ok?

Table 9 shows the recommended intake of sugar. This recommendation includes sugar from honey, jam, fruit juice, soft drinks and processed food (such as sweets). Just 1 packet (250ml) of sweetened drink can contain about 5-7 teaspoons of sugar, therefore it is important to limit your child's intake of sweet food.

Table 9: Recommended sugar limits

Age	Recommended limit (teaspoons)
6 months (181 days) -12 months	5
1-2 years	7
3-6 years	9
7-18 years	11

5 tips to reduce your child's sugar intake:

- Choose plain water and milk instead of sweetened drinks.
- · Avoid adding sugar to food and drinks.
- · Choose food and drinks labelled
 - no added sugar,
 - less or reduced sugar,
 - low in sugar,
 - sugar free.
- Read food labels and compare the sugar content in products.
- Use spreads like jam, kaya and marmalade sparingly.



HEALTH HINT!

Even food and drinks labelled "no added sugar" or "reduced sugar" should be consumed in moderation.

BREASTFEEDING — BABY'S BEST BEGINNING



Breastmilk is the ideal and most natural food for your baby. Exclusive breastfeeding means that your baby is given only breastmilk with no other food or fluids (even water). It is perfectly suited to meet your baby's growing needs during the first 6 months of life. Experts now recommend that you continue breastfeeding till your child is 12 months old and thereafter as long as mutually desired, along with introducing a good balance of solid food from 6 months (181 days) of age.

Breastmilk-nature's superfood

Breastfeeding not only has many health benefits, it also nurtures that special bond between mum and baby.

For Baby

Breastmilk is not only packed with nutrients and important growth factors, it also helps your baby to grow well and fight diseases.

The benefits are:

- lower occurrences of common childhood illnesses such as diarrhoea and, lung and ear infections
- · lower occurrences of allergies
- · protection against asthma
- reduced risk of developing childhood obesity
- improved cognitive (brain) performance.



For Mum

The benefits are:

- · breastmilk is inexpensive and convenient
- breastfeeding assists in recovery after child birth
- improved chances of returning to prepregnancy weight.



HEALTH HINT!

Be assured that for the first 6 months of life, healthy babies who are exclusively breastfed do not need any extra fluids (e.g. water). However for infants who are ill (e.g. with fever, diarrhoea), a doctor should be consulted regarding the amount of water to provide.

Continuing to breastfeed

While most new mums in Singapore initiate breastfeeding, continuing beyond the first initial months can prove challenging for many new mums. There are many reasons why you may feel that you are unable to continue to breastfeed and it is important to remember that you are not alone.

Gaining support and encouragement from your family members, friends or joining a breastfeeding support group will help you sustain breastfeeding. Find out as much as possible before your baby arrives about the support groups available or talk to other work colleagues or friends who have had a baby. Planning ahead will help ensure that breastfeeding is a wonderful and fulfilling experience for both you and your baby.

Feeding Choices

If you are unable to breastfeed, it is important to ensure that you choose an ageappropriate infant formula for your baby. Consult your doctor for the best option.



FREQUENTLY ASKED QUESTIONS

Does my child need supplements?

A healthy balanced diet will provide all the vitamins and minerals that your child needs. From time to time, supplements are helpful, but remember that taking supplements cannot replace a healthy balanced diet. Consult your doctor before giving your child supplements.

Can I serve my child a vegetarian diet?

If you are considering a vegetarian diet for your child, very special care must be paid to ensure that all his nutritional needs are met. Vegetarian diets can be high in fibre, but low in energy, iron and certain vitamins, especially vitamin B12.

Ideally a dietitian or doctor should be consulted to help you plan your child's vegetarian diet and to advise the need for supplementation, especially for vitamin B12. An easy way to plan a balanced vegetarian diet is to use the Healthy Diet Pyramid. Whole-grains, fruit and vegetables, legumes, nuts and seeds should be a part of the vegetarian diet. Adequate amounts of pulses (beans and lentils) and beancurd should also be included in place of meat to provide sufficient protein. Dairy products, if permitted, can provide calcium and protein to your child's diet.

How can I prevent food allergies?

In Singapore, 4-5% of school children have food allergies. A food allergy can be described as an extreme response by the immune system to certain food or ingredients that your body sees as harmful. Common food allergens include seafood, eggs and cow's milk.

Your child is considered high-risk if there is a family member with a food allergy of any type. Simple steps to prevent food allergies include exclusive breastfeeding and delaying the introduction of potentially allergenic food such as dairy products until 1 year of age and eggs until 2 years of age.

If I give my child fruit juice, is he getting all the nutritional benefits of a whole fruit, and does it count towards his daily fruit servings?

Children usually like fruit juice, but when juice is extracted from the whole fruit, the fibre content is reduced. However if you find difficulty in getting your child to eat whole fruit, fruit juice may replace up to half of their recommended intake of fruit.

Should I be concerned about my child's dietary cholesterol intake?

Dietary cholesterol is present in food from animal sources especially egg yolk, organ meat and shellfish. These food are valuable sources of protein and vitamins. Moreover total fat, especially saturated fat and trans fat, has a more significant effect on blood cholesterol levels than cholesterol from food alone. The main word of caution is not to give your child more than 4 egg yolks a week and limit organ meat and shellfish to no more than twice a week.

Is it ok to give my baby soy-based infant formula?

Soy-based formulas should only be given after you have consulted your doctor.



For more information, call

Health Promotion Board's HealthLine at

1800 223 1313

to speak to our experienced nurse advisers or visit **www.hpb.gov.sg/foodforhealth**

