

ABSTRACT

Obesity in childhood causes a wide range of serious complications, and increases the risk of premature illness and death later in life, raising public-health concerns. Management of obesity, especially in the young growing child (below 7 years of age) should focus on weight maintenance rather than weight reduction. General practitioners are well-positioned to aid in prevention and treatment efforts targeting childhood obesity. They can assist parents in helping to change eating and physical activity patterns amongst their children and aid parents & children in making informed food choices using the principles of the Healthy Diet Pyramid and Dietary Guidelines. With the guidance and support from health care professionals, parents, children and adolescents would be able to make healthy food choices and adopt healthier lifestyle practices, which would confer greater health benefits long-term.

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INTRODUCTION

Establishing sensible eating habits from young is essential in shaping food preferences later in life. An adequate diet is essential for child and adolescent growth but exactly how much an individual needs varies with size and build, growth rate and level of physical activity. Childhood obesity tends to persist into adulthood and is associated with increased risk of numerous health issues including cardiovascular disease. Management of obesity, especially in the young growing child (below 7 years of age) should focus on weight maintenance rather than weight reduction. As the child grows taller, the effect of weight maintenance in earlier years would be the attainment of normal weight³. The basic guiding principles of eating healthier foods (based on the healthy diet pyramid and dietary guidelines) and being more physically active, is a key approach to the prevention and management of the overweight or obese child.

THE HEALTHY DIET PYRAMID

The nutritional quality of a diet is often assessed against the Recommended Dietary Allowances (RDA), a dietary standard

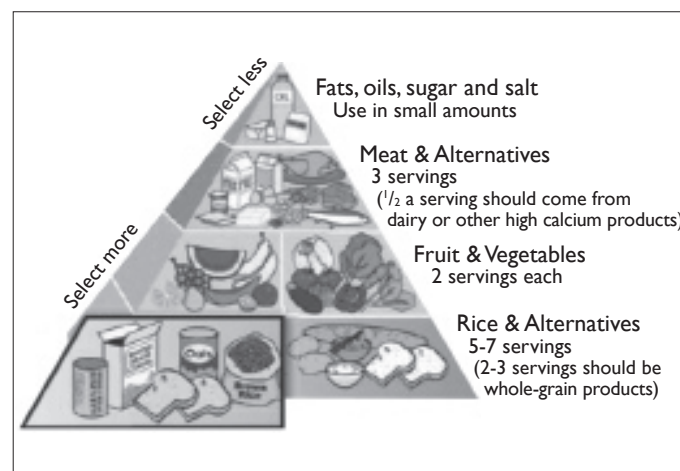
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that lists the average daily level of energy and nutrients that meet the needs of most individuals. The RDA is nutrient-based and is therefore difficult to use for choosing foods and planning meals that meet nutritional requirements.

A daily food guide is essential to provide a translation of recommendations on nutrient intake into recommended number of servings of food to be consumed daily from the various types of food. Food provides not only nutrients but also a combination of other components that are protective against chronic degenerative diseases.

Figure 1: The Healthy Diet Pyramid



The Healthy Diet Pyramid was introduced as a food guide for the average healthy Singaporean aged 2 years and above. It categorises food into four main food groups: 1) Rice and Alternatives, 2) Fruit, 3) Vegetables and 4) Meat and Alternatives. All these groups form the foundation of a healthy diet. Foods high in fat, sugar and salt are placed at the tip of the pyramid and should be eaten sparingly.

The larger number of servings is for individuals with higher nutrient and calorie needs such as adolescents and active adults. Children aged 2-11 years are recommended to consume the number of servings from the lower end of the range. Adolescents (12 years and above) are encouraged to aim for the upper end of the range.

The Healthy Diet Pyramid conveys three main messages:

- 1. Eat a variety of food.** This means eating different foods from the four food groups as well as within each food group. Each food group offers a variety of choices and each one has a unique nutritional value. There is no single food that supplies all the nutrients your body requires to stay healthy.
- 2. Eat a balanced diet.** This means eating the recommended number of servings of food from the four food groups daily.

3. Eat in moderation. This means eating the right amount of food, neither too much nor too little. Foods high in fat, sugar and salt should only be consumed in small amounts.

The number of servings is intended to meet the recommended energy and nutrient allowance for various age groups. The recommended serving sizes for the different food groups for children aged 7 months to 18 years are listed in Table 1.³ Table 2 indicates the serving sizes for each of the individual food groups.

THE HEALTHY DIET PYRAMID FOOD GROUPS

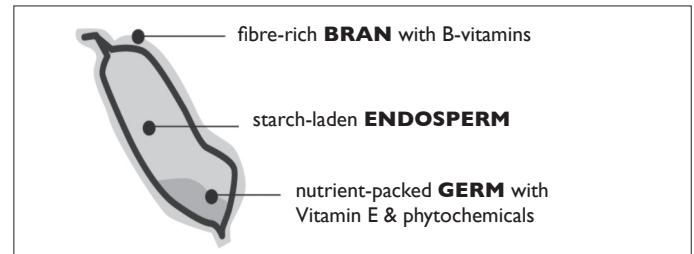
I. Food group: Rice and alternatives

Rice and alternatives should be the main component of a healthy diet. They provide the main source of energy and also contribute vitamins (B&E), minerals, fibre & some protein to the diet. Whole-grains and their products contain more vitamins, minerals (e.g. magnesium, zinc and selenium), dietary fibre and phytochemicals than refined-grain products hence should be encouraged.

A whole-grain consists of all three parts of the grain: (refer to Figure 2.)

- **Bran**, the fibre-rich outer layer
- **Endosperm**, the starch-laden middle layer
- **Germ**, the smallest portion of the grain. It is packed with nutrients.

Figure 2: What constitutes a Whole-grain



The recommended number of servings of Rice and alternatives for school children and adolescents is 5 to 7 servings daily. Of these, 2 to 3 servings should comprise whole-grain foods.

Some examples of whole-grain foods include brown rice, whole wheat noodles, wholemeal or multi-grain bread, chapati and certain breakfast cereals e.g. rolled oats, muesli or bran flakes.

Table 1: Recommended number of servings for school children and adolescents

Food group	*Recommended number of servings per day				
	7-12 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				2-3	2-3
Fruit	-	½	½-1	2	2
Vegetables	½	½	1	2	2
Meat and Alternatives	½	½	1	2	2
Milk (Do include the recommended milk serving <u>in addition</u> To the Meat and Alternatives serving needs.)	750ml	750ml	500ml	250-500ml	250-500ml

*Younger children may require fewer servings or smaller portion sizes as energy needs are related to activity level, size and growth.

Table 2: Examples of 1 serving

Rice & Alternatives	Vegetables	Fruit	Meat & Alternatives
2 slices bread (60g)	• ¾ mug** cooked leafy/non-leafy vegetables (100g)	1 small apple, orange, pear or mango (130g)	• 1 palm-sized piece fish, lean meat or skinless poultry (90g)
• ½ bowl* rice (100g)	• 150g raw leafy vegetables	• 1 wedge pineapple, papaya or watermelon (130g)	• 2 small blocks soft beancurd (170g)
• ½ bowl noodles, spaghetti or beehoon (100g)	• 100g raw non-leafy vegetables	• 10 grapes or longans (50g)	• ¾ cup cooked pulses (e.g. lentils, peas, beans) (120g)
• 4 plain biscuits (40g)	• ¼ round plate+	• 1 medium banana	
• 1 thosai (60g)		• ¼ cup*** dried fruit (40g)	
• 2 small chapatis (60g)		• 1 glass pure fruit juice (250ml)	
• 1 large potato (180g)			
• 1½ cups plain cornflakes (40g)			

*Rice bowl ** 250ml mug *** 250ml cup +10 inch plate

Large prospective studies have revealed associations between the consumption of whole-grain foods and reduced body weight and lower long term weight gain in adults. Whole-grain intake is also associated with lower BMI and waist circumference in adolescents⁴.

The antioxidants (e.g. Vitamin E and selenium) and phytoestrogens found in whole-grain foods have also been known to reduce risk of chronic diseases such as cardiovascular disease, diabetes and certain types of cancers.

2. Food group: Fruit and Vegetables

Fruit and vegetables are rich in nutrients (e.g. vitamin C, potassium, folate), and phytochemicals (e.g. carotenoids, lycopenes, isothiocyanates). They play an important role in improving the nutrient density of the diet of children and adolescents.

The recommended number of servings of fruit and vegetables is 2 servings of fruit and 2 servings of vegetables daily. Brightly coloured fruit and vegetables, and dark green leafy vegetables should make up half of all fruit and vegetables consumed.

The vegetable food group includes all fresh, frozen and well-drained canned vegetables, with the exception of legumes (e.g. soy beans) and starch tubers (e.g. potato, yam). The fruit food group includes fresh, frozen, well-drained canned (in natural juice only), pureed, or dried fruit. 100% fruit juice also accounts as part of the fruit group, but should constitute no more than ½ the fruit servings/day. This is equivalent to ½ glass (125ml) of unsweetened 100% fruit juice per day for children less than 7 years of age, and 1 glass (250ml) of unsweetened 100% fruit juice per day for children 7 years of age and above³.

In Singapore, a study of more than 700 Chinese adults showed that those who were consuming the recommended number of servings of fruit and vegetables or who were attempting to consume more fruit and vegetables were three times more likely to have cultivated a habit of eating fruit and vegetables during childhood⁴.

Fruit and vegetables have high water and fibre content, and are low in energy for a given measure of food. As these foods promote satiety and decrease energy intake, it is reasonable to suggest that they might prevent weight gain and facilitate weight loss, within the context of a reduced calorie diet.

A diet rich in fruit and vegetables is associated with reduction in the risk of coronary heart disease (CHD), stroke and certain types of cancer.

3. Food group: Meat and alternatives

Meat and alternatives are excellent sources of protein. It provides protein that builds and repairs the body. Meat, poultry and fish are rich sources of iron. Milk and other dairy products are rich sources of calcium.

The recommended number of servings of Meat and alternatives is 2 servings and 250ml to 500ml of milk in

addition to the Meat and Alternatives serving needs. Of the 2 servings of Meat and alternatives, half of the servings should come from food alternatives such as beans and bean products (e.g. tofu).

The Meat and alternatives food group includes meat, fish, chicken, milk and milk products, tofu and pulses like peas, beans and lentils. As part of a healthy diet, children and adolescents who are overweight should be advised to choose lean cuts of meat, skinless poultry and low fat dairy products. The best sources of calcium are dairy products such as milk, yoghurt and cheese (low-fat versions contain similar amount of calcium). Other good sources of calcium include dark green leafy vegetables, fish with edible bones, nuts, calcium-fortified products (e.g. cereals, soybean drink (with the Healthier Choice Symbol) and tofu).

An adequate intake of calcium is one of several factors that have been associated with increased accumulation of bone mass during periods of growth. Building a good bone mass is vital as evidence suggests that having a good peak bone mass may reduce the risk of osteoporosis and related fractures in life. Thus, it is important that adolescents consume adequate amount of calcium-rich foods and develop habits that enable them to achieve and maintain a good peak bone mass.

Besides calcium, Vitamin D is essential in absorbing calcium from our food. Exposing the skin on the face and arms (without use of sunscreen) to 15 minutes of sunshine daily helps the skin produce sufficient Vitamin D for a child. Children and adolescents who do not go out into the sun should include Vitamin D-fortified dairy products or oily fish such as salmon, mackerel and sardines to help meet requirements.

FAT, SUGAR AND SALT

1. Limit saturated fat and moderate total fat

For children aged 2 years and above, the dietary fat recommendations are the same as for adults. Dietary fat should be limited to 25-30% of total energy, with less than 10% of total calories coming from saturated fat, less than 1% from trans fat, up to 10% from polyunsaturated fat, and the rest from monounsaturated fat. Cholesterol intake should be limited to less than 300mg a day. Table 3 gives a summary of the types of fat and their food sources.³

2. Limit added sugar intake

Sugar can come in the form of naturally occurring sugar such as those naturally present in plain milk, fruit and some vegetables. Added sugar refers to those added to cakes, biscuits, sugary drinks, or at the table. Excess sugar in the diet may be associated with weight gain and increased risk of tooth decay. Children aged 1 year and above should limit their intake of added sugar to no more than 10% of total daily caloric intake.

Table 3: Know the fat



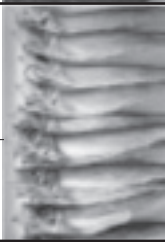
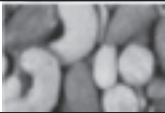
Fat type	Food sources	
SATURATED FAT	<ul style="list-style-type: none"> • Animal Fat (e.g. fatty meat, chicken skin, lard) • Full-fat dairy products (e.g. full cream milk, butter, ghee) • Dishes containing coconut milk or coconut cream • Deep-fried food • Food prepared with palm-based vegetable oil 	
TRANS FAT	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Salmon, sardines, longtai 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 3 - Omega 6	<ul style="list-style-type: none"> • Vegetable oils (e.g. corn, soybean and sunflower oil) • Seeds (e.g. sunflower seeds and sesame seeds) 	
MONONSATURATED FAT	<ul style="list-style-type: none"> • Vegetable oils (e.g. canola, olive and peanut oil) • Most nuts (e.g. almonds, cashew nuts and hazel nuts) • Avocados 	

Table 4, shows the recommended intake of sugar³. This recommendation includes sugar from honey, jam, fruit juice, soft drinks and processed foods (e.g. sweets).

Table 4: Recommended sugar limits

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

3. Limit salt intake

Salt is 40% sodium, and is a major contributor to sodium intake in Singapore. Excess intake of sodium is linked to increased blood pressure, which may lead to hypertension, a major risk factor for stroke, kidney disease and CHD. Besides salt, sodium can also be found in sauces, seasonings e.g. MSG, stock cubes, and preserved and processed foods. Children aged 1-6 years should consume no more than 1000mg of sodium/day (½ teaspoon of salt) and those 7-18 years should consume no more than 2000mg of sodium (1 teaspoon of salt) a day. Food labels often list sodium content on the packages. To convert sodium to salt, multiply by 2.5. For example: 0.8g sodium = 2g salt.

When grocery shopping, the Healthier Choice Symbol can be used as a guide to choose foods that are lower in fat, added sugar and salt.

Detailed information can be found in the booklet “Dietary Guidelines for Children and Adolescents for the Health Care Professional” and “Birth to Eighteen Years”.

Figure 3: Dietary Guidelines for Children & Adolescents

1. Encourage and Support Exclusive Breastfeeding for the First 6 months of life
2. Enjoy a variety of nutritious foods
3. Establish Sensible Eating habits and Encourage Physical Activity
4. Limit Saturated Fat and Moderate Total Fat Intake For Children Aged 2 Years and Older
5. Encourage Eating Fruit and Vegetables Every Day
6. Encourage Eating of Whole-grain Foods
7. Encourage Consumption of Calcium-Rich Foods Every Day
8. Choose Foods Low in Salt
9. Limit Consumption of Beverages And Foods With Added Sugars

FAMILY INVOLVEMENT

Family lifestyles play a pivotal role in the development of children’s food preferences. Parents in particular have a strong influence on their children’s lifestyle through modeling and education. It is vital that the strategies aimed at preventing and managing childhood obesity involve parents and the wider family unit⁷.

1. Parental Presence

The National Longitudinal Study of 7,788 adolescents conducted in the United States on breakfast consumption in adolescence and young adulthood in the presence of parents showed that having at least one parent at home in the morning substantially increased their likelihood of eating breakfast.⁹ Therefore, it is important to have family meals together at least once a day. The home environment is where children and adolescents learn about food choices and healthy living, and parental presence is important in constructing that environment⁹.

2. Role Model

Food attitudes and practices in young children are dependent on parental influence. A survey done by the American Dietetic Association (ADA) showed that parents are the top role models to children between the ages of 8 and 12 years⁷. Parents shape the child's food preference and the ability of a child to control their own food consumption. They have the opportunity in providing healthy food choices for the child by shopping and selecting healthier foods, preparing healthy meals and making healthy snack alternatives available to their children. This support allows parents to aid in monitoring the child's food intake, food portions and types of food consumed. Children should be taught to respond to body signals of hunger and fullness in order to self-regulate energy intake better and not overeat.

However, efforts to control food intake by the parents can affect the child's ability to control one's food intake later on in life⁸. It is crucial for parents to know how to support and guide their children to practice correct healthy food attitudes. Parents should offer a range of healthy foods at home; consequently allowing the child to choose from the foods offered and regulate their own intake rather than force the child to finish what's on their plate.

3. Goal setting

Family members can help their overweight children and adolescents set their own goals. Creating one's own goal gives the child a form of "ownership" of their eating behavior and provides them with the motivation to change. Goals can be simple such as "Eating 2 tablespoon of vegetables everyday". It can be either short-term or long-term, but must be realistic and achievable. It is crucial for goals to be realistic, as the achievement of the first goal will stimulate the rest of the goals to be achieved. Providing care and concern, encouragement and praise for healthy behavior will motivate the child further and keep them positive in managing obesity.

Family involvement is an important component in the child's weight management. When the parents are ready to make lifestyle modifications, they can learn to support the child or adolescent with cognitive behaviour strategies. This family approach includes nutrition education on lifestyle behaviours, making healthy food choices, self-monitoring, and motivation to change by modeling behaviours and contracting.

Family physicians have the opportunity to provide advice on healthy eating suggestions to the families during consultations. Some suggestions are stated in Figure 4.

MAKING HEALTHY FOOD CHOICES

Children and adolescents should adopt healthy eating practices and select healthier food choices. The food industry is growing and supermarkets have thousands of food items available. Eating out has become very common in Singapore

Figure 4: Healthy Eating Suggestions to Prevent Obesity in Children and Adolescents

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- Prepare a variety of foods (with servings from all four food groups : Rice & Alternatives, Fruit, Vegetables and Meat & Alternatives) of the Healthy Diet Pyramid
 - Eat home-prepared meals at least once a day
 - Eat meals together as a family as often as possible
 - Provide fruit and vegetables and whole-grain food choices
 - Reduce the use of oil during food preparation (use oil that has a higher content of mono- & poly-unsaturated fat)
 - Limit deep-fried food (eg. fried chicken, fried rice, fried noodles, french fries) to no more than twice a week
 - Drink plain water instead of sugary drinks
 - Choose food and drinks labeled : no added sugar, less or reduced sugar
 - Avoid frequent eating other than meal times and recognized snack times
 - Serve appropriate portion sizes
 - Encourage children to eat a healthy breakfast and avoid skipping meals
 - Buy food products with the Healthier Choice Symbol
 - Make healthy snacks (eg. fruits, whole-meal sandwiches) readily available
 - Discourage eating while watching TV
 - Do not use food as a reward
 - Be a role model to inculcate healthy food behaviours
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where there are many restaurants and hawker centres island-wide. Local dishes are tasty but many are high in saturated fat, cholesterol and salt. For many families, due to their busy lifestyles, eating out is a common practice. It is important for children and adolescents to learn how to make healthy food choices and read food labels.

I. General Note

Fat, sugar and water content of food are the main determinants of energy density of a diet. Of the three major nutrients (protein, fat, carbohydrate) in the diet, fat contributes twice the amount of calories per gram (9 kcal/g) than either carbohydrate or protein (both 4 kcal/g)⁶. Water does not provide energy. A lower consumption of food high in fat and sugar contributes to a reduction in total energy intake. A higher consumption of fruit and vegetables that is low in fat, rich in vitamins and high in fibre contributes to a reduction in total energy intake and an improvement in micronutrient intake.

Caution has to be exercised when making choices on processed food products. For example, "low fat products" may actually contain large quantities of added sugar and hence may not necessarily have a lower caloric content.

Protein-rich foods are particularly satiating. Adequate amount of low energy density, protein-rich foods such as skinless chicken breast, fish, egg white, beans and tofu can help to control hunger when calories are restricted, resulting in short term weight loss. However, high energy density protein foods such as high fat meat and full cream dairy products may cause weight gain.

2. Shopping for Healthy Food

a. Look out for Healthier Choice Symbol (HCS)

There are numerous products on supermarket shelves and food labels are designed to attract and inform. Today, there are about 2400 different food products available, spanning over 70 food categories such as convenience meals, sauces, beverages, snacks and breakfast cereals that have been awarded the HCS. The Healthier Choice Symbol (HCS) is awarded to food products, which meet the Health Promotion Board (HPB)'s HCS nutritional criteria⁵.

The aim of the criteria is to lower the level of negative nutrients such as saturated fat, trans fat, sugar and salt and to increase the level of positive nutrients such as fibre and calcium in the food supply.

Food products awarded the HCS are generally:

- Lower in fat, saturated fat and trans fat
- Lower in sodium
- Lower in sugar
- Higher in calcium
- Higher in dietary fibre

For example, breads displaying the HCS should contain no trans fat, less sodium ($\leq 450\text{g}/100\text{g}$) and more dietary fibre ($\geq 3\text{g}$ per 100g) compared to the regular bread. 3-in-1 coffee sachets displaying the HCS logo should contain no trans fat, less saturated fat ($\leq 60\%$ of total fat) and less sugar ($\leq 5\text{g}/100\text{ml}$) compared to regular 3-in-1 coffee powder. To date, there are guidelines covering over 70 food categories⁵.

The Healthier Snack Symbol (HSS) is awarded to snacks which are healthier compared to snacks in similar category⁵. These snacks are also lower in fat, saturated fat, sodium or sugar compared to regular products. The HSS snacks are also packaged in the recommended portion sizes that are reflected as serving sizes on the Nutrition Information Panel. The categories of snacks available are plain biscuits, cookies, crisps, ice-cream and plain cakes.

Food with the HCS products can be included as part of a healthy balanced diet. Like all food, they should be eaten in moderation.

Figure 5: Healthier Choice Symbol (HCS)



Figure 6: Healthier Snack Symbol (HSS)



b. Reading Food Labels

By law, every packaged food must have a label¹⁰. The label must include vital information to help the consumer make informed food choices that contribute to a healthy diet. The information that a packaging must include the:

- Product name
- Net weight
- Date marking
- Storage and usage instructions
- Ingredient list
- Nutrition Information Panel
- Manufacturer's details

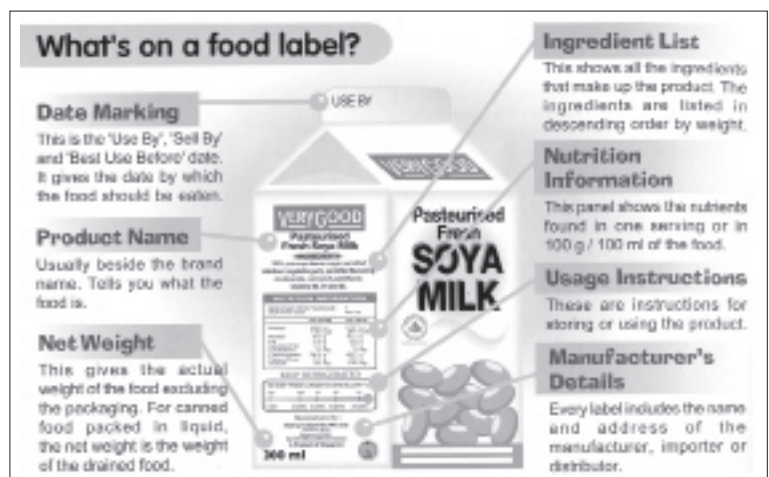
It is crucial to zoom in on a few key nutrients depending on one's health situation. If high blood pressure is of concern, then the key nutrient is the sodium values. If weight is of concern, compare the energy values between the two products, taking into account the fat and sugar content as well and the values of calcium and Vitamin D and ensure that it is of high value to build strong bones. See figure 7¹⁰.

Knowing how to read food labels will enable parents, children and adolescents to compare food products, make informed choices and help them decide whether the food fits into their daily meal plan. Use the 100g/ml column in the Nutrition Information Panel to compare the products. See figure 8 for a comparison of labels. More detailed information on Reading Food Labels can be found in the Health Promotion Board website (<http://www.hpb.gov.sg>).

3. Know what to choose when eating out

Eating out is common in Singapore and many reasons account for this. They include the lack of time for cooking at home, the variety of food dishes available and the affordability of hawker food. A variety of food places exist, from restaurants which serve ala carte and buffet meals to fast food chains and hawker centres. Hence, with such easy availability and accessibility to food this has made eating out a popular trend.

Figure 7 : Read Food labels



However, foods eaten out, generally have higher calories, fat (especially saturated fat), sugar and sodium content than food prepared at home. These features promote the development of obesity which can result in severe problems in adulthood such as hypertension, diabetes, hyperlipidemia and cardiovascular disease.

a. Healthy Eating at Restaurants/Fast food Chains

Suggestions for the patient:

1. Plan Ahead

- Eat lighter and lower fat meals in the day to allow for the additional calories that may be consumed when eating out.

2. Go light on the Appetizers and Drinks

- Many popular appetizers such as deep fried finger foods are high in calories and fat, so they are best avoided or eaten in small portions.
- Choose drinks that are “reduced sugar”, “no added sugar” or “diet” varieties.

3. Read the Menu with Care

- Avoid items that are labelled ‘crispy’, ‘deep-fried’, ‘in cream sauce’, ‘lemak’, ‘with coconut milk’ or ‘in syrup’. Select dishes that are steamed, grilled, roasted or pan-fried.

4. Order a Variety

- Select a well-balanced meal, which includes a staple, one or two vegetable dishes, and one or two protein-rich foods such as tofu, chicken or lean meat.

5. Eat Just Enough

- When eating out, order a la carte meals instead of buffet. Order enough food for a meal. Eat slowly and enjoy the meal. When eating at fast food restaurants, do not upsize your orders.

Many fast food items are exceptionally high in calories, saturated fat and salt. When fast food items are eaten between meals, the child’s caloric intake would increase. This may result in the child being overweight, especially if he/she is physically inactive. This can be illustrated by the example below.

Figure 9: Fast Food Set Meal

Food Description	Serving size portion	Energy (kcal)	Total Fat (g)
2 Chicken Thighs, Fried	2 pieces	658	21
1 Serve French Fries Regular	1 serve	258	14
1 Serve Coleslaw, Regular	1 serve	119	10
1 Can Soft Drink, Cola	1 can	138	-
Total energy consumed		1173	45

For a boy aged 10 to 12 years old, his Recommended Daily Allowance (RDA) is 2200kca/day and for a girl of the same age, the RDA would be 1850kcal/day. The total energy consumed from the above fast food set meal alone was 1173 kcal, which is 53.1% of the recommended daily energy intake for a boy and 63.4% for a girl. The energy from fat contributed is 18% of daily energy needs for the boy and 22% for the girl, on just one meal! This is likely to far exceed the recommended caloric and fat intake for children (25%-30% of total daily energy needs)⁷ especially if the rest of the meals for the day are included.

Fast food restaurants now serve many healthier choices on their menu, hence is it important to make a concerted effort to select healthier choices. Select items that are grilled, not fried; replace deep fried items with grilled or baked items; switch the classic ice-cream or apple pie for a piece of fresh fruit or a glass of unsweetened fruit juice; purchase “no added sugar” or “sugar-free” beverages instead of sweetened soft drinks.

A list of healthier restaurants can be found in the Health Promotion (HPB) website: www.hpb.gov.sg/healthierdining

b. Eating at Hawker Centres

Many of our favourite hawker food are also high in fat, saturated fat, cholesterol and salt. The challenge really is - can we live in this hawker paradise and still stay in the pink of health? The following advice can be given to patients:

- Look out for stalls selling healthier food choices. Healthier options are lower in fat, especially saturated fat and cholesterol. They are also lower in salt and sugar.
- Use the “ask for” labels when eating out. i.e. you can ask for “skin to be removed from poultry”, “less oil”, “less gravy”, “more vegetables”, “no sugar syrup” for drinks/ desserts.
- Look out for stalls with the Healthier Choice Logo displayed. These hawker stalls use healthier ingredients such as cooking oil with lower saturated fat content, low fat milk in beverages and provide whole-meal/whole-grain varieties instead of those made with refined flour.
- Additional tips for making healthier choices outside include:

Choose:	Instead of:
- Soup noodles	Fried noodles
- Plain rice/ brown rice	Rice cooked with fat and coconut milk
- Food prepared with less oil	Deep fried food/ food cooked with a lot of fat
- Fresh fruit	Sweetened desserts

Studies on the effects of a weight management program for overweight children conclude that making healthier food choices is more likely to be more effective long-term compared to calorically-restricted diets⁸. With the guidance and support from health care professionals, parents, children and adolescents would be able to make healthy food choices and adopt healthier lifestyle practices, which would confer greater health benefits long-term.

MYTHS AND FACTS

The following are some of the common myths and misconceptions concerning food:

Myth 1: All vegetable oils are the same.

Fact: No, most blended vegetable oils have proportionately higher levels of saturated fat compared to pure vegetable oils. Many blended vegetable cooking oils contain palm olein as the main ingredient and have 40-50% saturated fat. In comparison, pure vegetable oils such as corn, soybean, sunflower, safflower, canola and peanut oil have proportionately higher levels of unsaturated fat. Most of these oils have only 10-20% saturated fat and are therefore healthier alternatives.

Myth 2: All margarine contains trans fat. Is it a healthier choice than butter?

Fact: Soft margarine has less than half the amount of trans fat compared to hard margarine. A teaspoonful (5g) of soft margarine provides less than 1g of trans fat. The total amount of trans fat and saturated fat in soft margarine is less than half that in butter. Hence, soft margarine is still a healthier choice. There are several varieties of trans fat-free soft margarine on the market.

Myth 3: Reduced-sugar products are lower in calories.

Fact: "Reduced-sugar" and "unsweetened" beverages contain less sugar and are generally lower in calories than regular drinks and juices. However, some food products which carry the "reduced-sugar" claim may be high in fat. Check the Nutrition Information Panel on the food labels. Compare the values of similar products to choose one that provides less fat and more vitamins, minerals or fibre for the same energy content.

Myth 4: Fruit and vegetable juices are effective substitutes for fresh fruit and vegetables.

Fact: Valuable fibre is removed in the process of making fruit and vegetable juices. Therefore, it is best to eat fresh fruit and vegetables instead of drinking juice. If an individual has difficulty chewing food, puree the fruit and vegetables with a blender instead of using a juicer. This is to minimise the loss of fibre.

Myth 5: No added sugar means sugar-free.

Fact: No. Even unsweetened products such as juices, milk and canned fruit contain naturally occurring sugar. The Nutrition Information Panel on the food label gives the content of both naturally occurring and added sugar. To find out if sugar has been added, look at the ingredients list on the food label. Look out for words ending with "-ose", (e.g. dextrose, maltose and fructose). These are different forms of sugar.

Myth 6: Reduced-fat foods are always low in fat.

Fact: These foods are lower in fat than their regular counterparts, but that doesn't necessarily mean they are "low-fat". A "low-fat" claim has less than 3g of fat per 100g of food or <1.5g of fat per 100ml of beverage, while a "reduced-fat" claim means the food or beverage has 25% lesser fat than the regular versions.

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LEARNING POINTS

- **Management of obesity, especially in the young growing child (below 7 years of age) should focus on weight maintenance rather than weight reduction.**
- **A daily food guide is essential to provide a translation of recommendations on nutrient intake into recommended number of servings of food to be consumed daily from the various types of food.**
- **The recommended number of servings of Rice and alternatives for school children and adolescents is 5 to 7 servings daily.**
- **The recommended number of servings of fruit and vegetables is 2 servings of fruit and 2 servings of vegetables daily.**
- **The recommended number of servings of Meat and alternatives is 2 servings and 250ml to 500ml of milk in addition to the Meat and Alternatives serving needs.**
- **Fat, sugar and water content of food are the main determinants of energy density of a diet.**