

Is your Child eating a Balanced Diet?

We hear these phrases often from friends, professionals or on the internet — ‘in moderation’, ‘empty calories’, ‘less fibre’, ‘too much fat’. All these phrases indicate a poor diet — essentially a diet which is not ‘balanced’.



With reports of increasing obesity and key nutrient deficiencies in seemingly healthy looking children, poor diets are becoming a huge concern. This is further fuelled by easy access to refined processed foods, the onslaught of advertisements for these foods, a shift from traditional food habits and the lack of physical activity. Evidence shows that adults with poor eating habits find it difficult to change to a healthier diet due to tastes acquired in childhood for sugary, salty or fatty foods. Inculcating healthy eating habits early on will help children get used to certain tastes, which otherwise become difficult to adopt later on in life. Read on to see how, by paying attention to simple details during childhood, we can help steer our children towards lifelong healthy eating habits.

Dr. Yamuna. S, a leading paediatrician and adolescent physician states that the fallout of 'child-centric parenting' is a diet that caters to the child's likes and dislikes rather than the nutrition content of the meal! A shocking statistic — approximately 30% of her patients are overweight and 10% obese!

So what is a Balanced Diet?

The term 'balanced' simply means choosing a wide variety of foods and drinks from all the food groups for your child. A balanced diet should provide around 50-60% of total calories from carbohydrates, about 10-15% from proteins and 20-30% from fat. It also means limiting certain 'bad' nutrients, namely saturated fat, trans fat, salt and refined sugar (see Box 'Know the Baddies'). While all this seems simple to understand, how do we execute this daily, especially for children? For this we need to get familiar with the following:

- The food groups and the healthy choices in each food group
- Calories your child should consume every day
- Portion sizes — as too much of a healthy food is not necessarily a good thing

Know the Baddies

Monitor the fat: Limit foods high in bad fat (saturated fat and trans fat). Saturated fat is present in dairy products like full fat milk, butter, cheese, ghee, paneer and in red meats. Trans fat is found in products from local bakeries such as biscuits and puffs, and in street foods, fried snacks and fast foods.

Say yes to less salt: The World Health Organization recommends only 1 teaspoon (5g) of salt per person per day. In our country we are nowhere close to this recommendation!

Watch the sugar: Added sugar only provides extra calories to your child's diet, with little additional nutritional value. Sugary food and drinks also increase the risk of tooth decay.

Food groups: The picture below shows the adapted version of the Indian food pyramid. It is familiar to many of us, no doubt, but the questions we need to ask are — "Do we actively think about the food groups while planning a meal?" and "Are we choosing the right foods from each group?"





Cereals and Pulses – “simple is not good”

Let's start at the base of the pyramid. Cereals and pulses contribute mainly to carbohydrate intake; pulses to a certain extent, along with milk and meat products, contribute to proteins as well. This group contributes the most to our energy requirement. The amount of carbohydrate our children get is not a concern. (They probably get more than they need!) It is the type of carbohydrates that needs our attention. Cereals have become more refined over the years and this has led to low fibre content in the diet and the latter is required to give the feeling of 'fullness'. Refined cereals are also easily digested, giving children the energy required in instant spurts as opposed to a more sustained energy release over a period of time. Children eat many products made with refined flour (*maida*) – bread, pastries, pizzas, bakery products, *naans*, and unfortunately seem to love their taste. It may be impractical to restrict these totally, but making simple switches — from white bread to whole wheat bread, using

whole pulses with skin, whole wheat flour for *chapattis*, brown rice for certain flavoured rice dishes — can go a long way in improving the quality of carbohydrate. Millets (*jowar, ragi, bajra*) are finally getting the much-needed attention they deserve. We are the world's largest producer of millets but their consumption has dropped over the past few decades owing to the growing popularity of rice and wheat. Adding millet flour to *chapatti* dough, making cereal porridge of whole grains and millets for younger kids, replacing part of the polished rice or refined flour with millet flours in *parathas* and *dosas* are some ways to incorporate millets in the diet.

Fruits and vegetables – ‘the more colours the better’

Fruits and vegetables are packed with vitamins and minerals and also contribute to fibre intake. But studies show that fruit and vegetable consumption among children is woefully low. Most guidelines recommend 4-5 servings of fruits and vegetables per

For a snack or packed lunch, whole wheat bread with cheese, and a vegetable patty, served with mint chutney, is a better choice than a burger bun/white bread or *pav* with butter, potato patty and sauce.

day, and stress on variety. Again, starting early will make the experience more enjoyable and less challenging. Also, there are many ways we can make even older children eat more fruits and vegetables. Some practical tips...

- Ensure your child is hungry if you are trying a new or 'not-a-favourite' vegetable — she will be more inclined to try something new.
- If you have a fussy eater, ensure she has something else to look forward to at the table so getting the vegetable down is not a battle.
- Make a rule that she has to taste before saying 'no'.
- Make fruits and vegetables easily available and present them in interesting ways – cut fruits in the refrigerator, juices, shakes, shapes in salads.
- Combine a new fruit with a familiar or favourite fruit so your child is more willing to try.
- Incorporate cut fruits into breakfast cereals or along with the evening milk so it does not seem like a separate chore.
- With younger kids be persistent, introduce the same vegetable in many ways, and do not give up after a couple of attempts. Some young children may have to try the vegetable a dozen times before they accept it!
- Ask older kids to make a salad for a meal to infuse some interest in eating vegetables.
- Do not reward eating fruits and vegetables with another favourite food item.

Milk and Meat Products – ‘lean is not mean’

- Lean cuts of meat, fish rich in omega 3 (mackerel, sardines, etc) and low fat milk are healthier choices in this food group. This group is important to meet the protein and calcium (a key nutrient for growing up children and often times neglected) requirements of your child.

Fats and oils – quantity and quality matters

All of us need fat. Fat gives us double the calories per gram (9 kcal/gm) compared to proteins or carbohydrates, making it the highest source of energy. But it is important to understand the types of fats and their sources. Fats are classified into good or bad depending on how they affect our cholesterol levels, both good cholesterol (HDL) and bad cholesterol (LDL). Good fats have a favourable impact on cholesterol level and there are two types: mono (MUFA) and poly (PUFA) unsaturated fats. Home-grown oils like ground nut, sesame and rice bran are equally good sources of MUFA and sunflower, soyabean mustard, canola and soyabean oils, almonds walnuts, flax seeds, dark green vegetables, and oily fish like mackerel, salmon, sardines and fresh tuna are good sources of PUFA (omega 6 and 3).

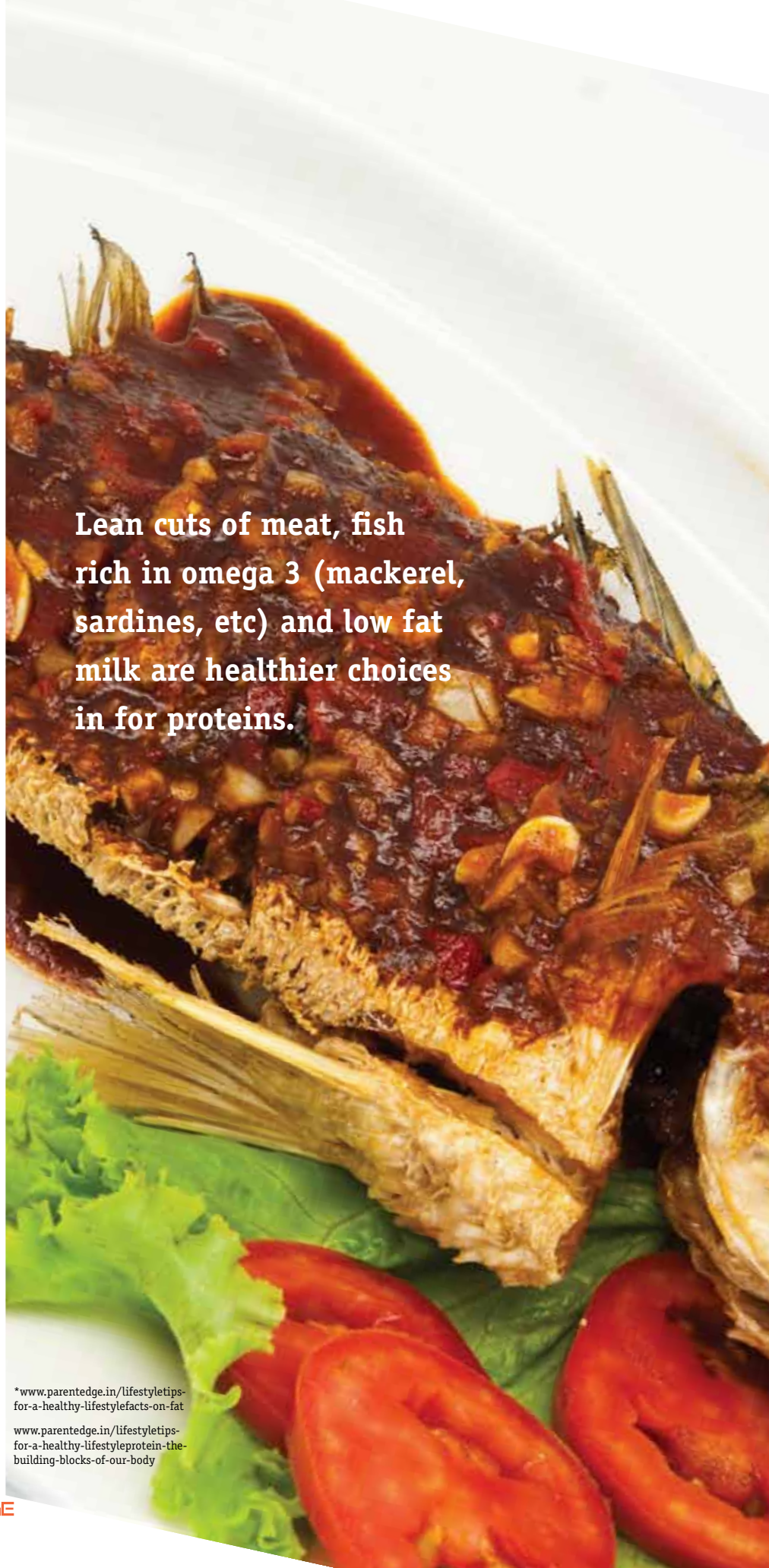
(To know more about fats and proteins, do read the March-April 2013 and May-June 2013 issues of ParentEdge.*)

Sugar – ‘even no sugar is good’

Children are allowed 20-30 grams of simple sugars every day. 1 tsp of sugar is 5 grams, so restricting sugar intake to 4-6 teaspoons can be challenging, especially since a 200ml glass of fruit drink can contain up to 30g of sugar! If you are adding sugar to milk as well, you will easily exceed the limit. So it is better to train children to adapt to lower sugar levels from a young age as it adds no nutritional value.

Daily Calorie Intake

Next let’s take a look at how many calories your child needs every day (Assuming average weight and moderate physical activity).



Lean cuts of meat, fish rich in omega 3 (mackerel, sardines, etc) and low fat milk are healthier choices in for proteins.

*www.parentedge.in/lifestyletips-for-a-healthy-lifestylefacts-on-fat

www.parentedge.in/lifestyletips-for-a-healthy-lifestyleprotein-the-building-blocks-of-our-body

‘What is BMR?’

Basal Metabolic Rate (BMR) is the number of calories the body burns at rest to maintain normal body functions like breathing, and does not include calories burnt during exercise. BMR is influenced by age, weight, height, gender, diet and exercise habits.

Age (years)	Body Weight (in Kgs)	Calories/day
4-6	18.1	1350
7-9	25.1	1690
10-12 Boys	34.3	2190
10-12 Girls	35.0	2010
13-15 Boys	47.6	2750
13-15 Girls	46.6	2330
16-17 Boys	55.4	3020
16-17 Girls	52.1	2440

Nutrient Requirements and Recommended Dietary Allowances for Indians, Indian Council of Medical Research, 2010

Clearly, if your child’s calorie intake meets growth requirements and the rest is burnt in physical activity, she will maintain an ideal weight. As you may have noticed, the calorie requirement is lower for girls as their basal metabolic rate (BMR) is lower. From birth, boys burn calories faster than girls and the difference in calorie requirements between the genders widens further at puberty, due to differences in hormone production

and body composition. The female body unfortunately is better at storing calories as fat, which contributes less to BMR than muscle tissue. But BMR can be increased temporarily by exercise, and over a long period by improving the muscle component of the body. Hence regular physical activity is a must for children as it helps to build and maintain strong, healthy muscles and bones.

Fast Fact: Urbanisation and mechanisation has led to reduction in energy output from anywhere between 400-800 calories.

So weight gain in some sense is inevitable in our children unless we consciously work against it! Here are some tips to encourage physical activity:

- Running errands to the local store and helping at home for older children,
- Compulsory outdoor play time for smaller children,
- Walking to the bus stop, taking the stairs, family walks
- Pursuing a sport, biking, swimming
- Holidays which include physical activity – camping, treks

What constitutes moderate activity?

Children should get minimum 60 minutes of moderate exercise every day.

While performing moderate activity, your child breathes harder, sweats and her heart beats faster than normal. Some examples are:

- Walking fast
- Playing chase, hide and seek
- Swimming
- Playing organised sports (such as soccer, basketball, badminton)

Younger children can be active for shorter duration, 10 - 15 minutes at a time. The goal is to target a total of 60 minutes of activity every day.

Teach your teen the concept of energy balance!

Pizza Dinner	Calories	Traditional Dinner	Calories
2 slices of pizza	400	2 parathas	300
1/2 a portion of garlic bread + dip	185	3/4 cup dal	150
1 glass of coke	80	1/2 cup vegetable	75
1 dessert	350	3/4 cup curds	75
(will take 170 mins of swimming to burn off 1015 calories)		(will take 100 mins of swimming to burn off 600 calories)	

Not only is the pizza dinner calorie dense, it also lacks nutrients like fibre and is high on baddies — sugar, saturated fat! The key takeaway is that your teen will need to double the amount of physical activity to burn off the calories.





How do we break the energy requirements for the child into daily meals and portion sizes?

The table below gives the age-wise portion numbers to be consumed in a day for different food groups. If these portion numbers are followed, not only will your child's energy requirement be met, but she will also eat a balanced diet.

Food Groups	Grams per portion	Age group							
		4-6	7-9	10-12 Girls	10-12 Boys	13-15 Girls	13-15 Boys	16-18 Girls	16-18 Boys
Cereals and Millets	30	4	6	8	10	11	14	11	15
Pulses*	30	1	2	2	2	2	2.5	2.5	3

*For non-vegetarians - one pulse portion can be replaced with one portion of egg/meat/chicken/fish

To translate, one portion of cereal (30g) is approximately -

- ½ cup of cooked rice,
- 1 ¼ *phulka*
- almost 1 *paratha*
- 2 slices of bread
- 2 *puris*
- ½ cup of *upma*

1 portion of pulses is equal to

- ¾th cup of *dal*
- ¾ cup of non-veg curry dish (~50 g of meat)

1 mixed portion of cereals and pulses is

- 1 *idli* / 1 *dosa*

So for example if a 10 -12 year old girl eats 3 *idlis*, 1 cup of rice, 2 slices of bread, 3 *phulkas*, one cup of *dal* in a day, her cereals and pulse requirement can be easily met!

Food Groups	Grams per portion	Age group							
		4-6	7-9	10-12 Girls	10-12 Boys	13-15 Girls	13-15 Boys	16-18 Girls	16-18 Boys
Milk and Milk Products*	100 ml	5	5	5	5	5	5	5	5

Meeting the requirements under this food group is probably more difficult, especially if your child is not a milk lover. Coffee mugs/glasses hold between 150 -200 ml of milk. If your child can drink 2 glasses of milk a day

and manage ½ cup of curds (100 ml) you will be close to meeting her daily requirements. Most milk additives added to make milk palatable also have some milk powder in them. *Raita*, cheese, *paneer* contribute to this

food group. If your child does not like milk, see if you can get her to consume at least one glass in a form she likes, flavoured milk/fruit shake and supplement this with curds, *raita*, flavoured yogurt, cheese/*paneer*.

Food Groups	Grams per portion	Age group							
		4-6	7-9	10-12 Girls	10-12 Boys	13-15 Girls	13-15 Boys	16-18 Girls	16-18 Boys
Vegetables (roots, green leafy, others) and Fruits	100 g	3.5	4	5	5	5	5.5	6	6

Dietary guidelines for Indians, A Manual, National Institute of Nutrition, 2010

Though the number of portions looks formidable, there are simple ways to meet the requirements of 4-5 servings of fruits/vegetables a day. Also, while the normal practice is 3-4 servings of vegetables and one portion of fruit, if your child loves fruit

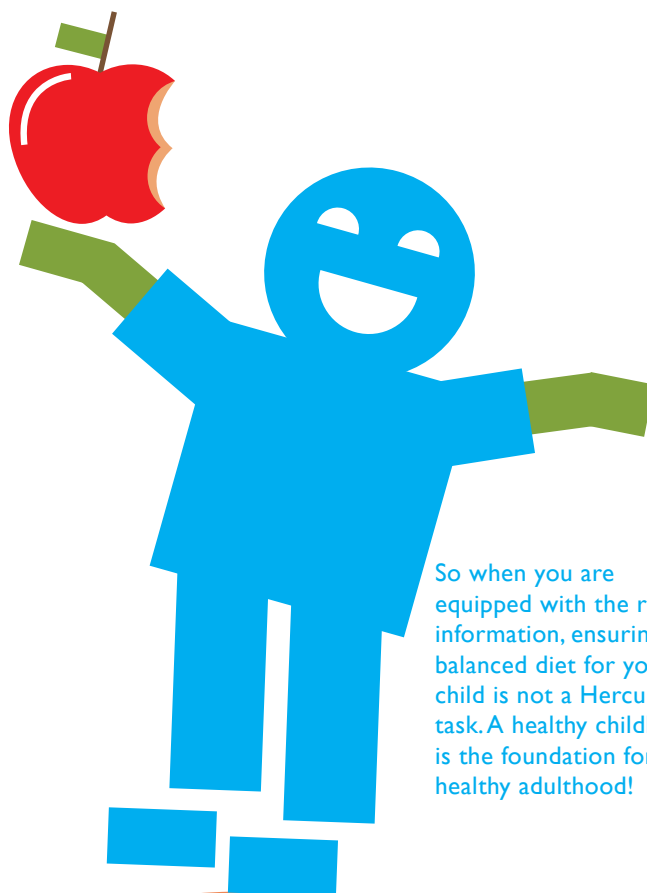
you can swap this around and give her 2-3 servings of fruit instead!

1/2 cup of cooked vegetables at lunch and dinner, 7-8 slices of fresh salad vegetables and 2 medium-sized fruits can easily meet a

day's requirement. Soups, vegetable cutlets, vegetable *raita*, vegetables added to pulses and rice are other ways to increase vegetable intake. A glass of 100% juice (with no added sugar) can also contribute to the fruit intake, if your child is a picky eater.

Other key messages:

- Evaluate how your child's plate looks — mentally tick off the foods groups so it becomes a habit.
- Remove salt from the dining table and reduce the amount of salt you add in your cooking by small amounts over a period of time — if done gradually, your family will not notice it! Savoury snacks are usually loaded in salt, so limit the intake of these.
- Water is the best drink for children, as it has zero calories. Make sure that your child drinks 5-6 glasses a day.



So when you are equipped with the right information, ensuring a balanced diet for your child is not a Herculean task. A healthy childhood is the foundation for healthy adulthood!

