

Weaning, Milk and Childhood Foods

Most people by now are aware of the benefits of breastfeeding a new born child and a lot of money has been put into making sure that the message breast is best is unambiguous, but what should you feed your baby when the breast can no longer supply enough to keep up with the growing needs?

It is generally recommended to start the weaning process between the ages of 4 to 6 months but the rate at which your baby wants to eat foods will vary enormously. In general the best weaning foods are the whole foods that you are eating. Share with baby, who doesn't need specially processed foods, mashed up food the same as you are eating will be perfect as long as your diet is full of wholesome foods. If you are eating a poor diet of fast foods and processed produce then do not share this with baby but make the effort to provide something more nutritious. Processed foods will provide too much salt and not enough of the essential nutrients, tastes and textures needed by the growing baby. In addition to the introduction of foods at this time you may find that your baby's appetite for milk is also outstripping your supply but the shortfall is not being met by the still developing interest in foods, it is at this point where a "follow on" or supplemental milk can be helpful.

MILK

Formula Milk

As already stated breast milk is the best feed for a new baby, however there are times when this is unavailable for various reasons or where the new mother simply can't supply enough. At these times formula milk is the next best option. Most formula milks are derived from dairy (cow's) milk. Some of these are then broken down into their component parts in theory to make digestion easier, but at each processing stage we move further and further away from a natural whole food. Our digestive systems have evolved to deal with whole foods and so it is these that are most acceptable to most digestive tracts no matter what age they are.

It is undeniable that the nutritional needs of a new baby are significantly different to those of a scaled down adult but we should be aware of meeting these needs in as natural a way as possible so that our children are not just added to the treadmill of a highly processed food diet.

Milk - The controversy

There is a great debate raging over the benefits or otherwise of drinking milk beyond the age of weaning – indeed whether we should drink milk from any other animal, as in the natural world animals only drink their mother's milk. There is the argument, which states that we need dairy products to supply enough calcium to survive and indeed we should drink more milk to stave off the likelihood of osteoporosis. Then there is the argument stating that we do not need to drink the milk of animals as it is not only unnecessary as a calcium source but also positively harmful.

To understand this debate it is necessary to look at both the benefits and side effects

of milk. As we are constantly bombarded with information telling us about the benefits of milk and how healthy it is, the following is more weighted in the direction of the negative aspects in order to balance the two sides of the argument. It is now common knowledge that breast milk is best for the newborn and cow's milk should be avoided until the gut is developed enough to deal with it, so let's look at the differences between these two substances in a little more detail.

Human Milk

Breast milk is the perfect food for the newborn, ideally suited to meet all its needs until such time as it can start to partake in adult foods. It has for some time now been accepted that 'breast is best' and that milk is a richly nourishing food. Problems may occur however when this belief in the value of milk is expanded to cover the milk of other animals, particularly cows.

For several reasons however, breast is not always best in the short or long term for both baby and mother. Babies may be born premature, or unable to suck at the breast for other reasons. Some babies seem to grow disproportionately to the supply their mother can provide and therefore need a supplement of formula milk. Whatever the reason, careful choice and observation of your baby to determine sensitivity will enable you to choose a formula milk without any guilt. Although breast is best in the first instance, if there are reasons why you or the baby are suffering in the name of exclusive breast feeding then it's time to look elsewhere for sake of the health of both of you.

Animal Milk

By its very nature the milk that is suitable to support the different needs of different animals has a different chemical composition to human milk. It is true that animal milk is full of nutritious elements and nourishing properties but in different levels to human milk and therefore it is not a perfect food for humans. It has a higher protein and lower essential fatty acid content compared to human milk as it is designed for the faster growing skeleton and body and slower mental development of the animal (a calf will quadruple in weight during the first six months, whereas an infant's weight will only double). Mother's milk with four to five times the linoleic acid encourages faster nervous system and brain development. When this milk is further changed by pasteurisation or homogenisation or the addition of synthetic vitamins such as A and D it becomes a totally different substance from human milk which goes straight from the mother's nipple into the baby without even being exposed to the air. As such it cannot have the same effect or provide the same benefits.

Taking on board the differences between human and animal milk mentioned above it is worth looking a little more deeply at cow's milk to see how the macronutrients and main minerals are present at such different levels.

Comparison of Nutrients in Human and Cow's milk[1]

Macronutrients in g/100g

	Protein	Fat	Carbohydrate
Human Milk	1.1	4	9
Cow's Milk	4	3.5	4.9

Micronutrients in mg/100 g

	Calcium	Phosphorus	Sodium
Human Milk	33	18	16
Cow's Milk	118	97	50

These values show the diverse differences between the two forms of milk at the purely scientific level, without even looking at other micronutrients, the colostrum and the warmth of human life that flows with breast milk into the baby.

Looking at these figures though does provide plenty of ammunition against the claim for cow's milk to be the perfect food as is shown below:

- 1) Cow's milk has 3 times more protein and almost four times more calcium than human milk, because it meets the needs of the growing calf not the growing human.
- 2) The ratio of calcium to phosphorus in human milk is 2.35:1 compared to 1.27:1 in cow's milk. It is a well known fact that an ideal ratio of calcium to phosphorus is around the 2:1 plus level, because phosphorus binds to calcium in the gut making it unavailable for absorption. Therefore the more phosphorus and less calcium present in a food the less calcium will be free for absorption. As the modern western diet is full of phosphorus already, unbalancing the ratio further will not help in calcium uptake. Human milk on the other hand although it has a lower calcium level will provide more of this building mineral to the baby as it is not swamped by phosphorus.

With regard to the fat content of whole milk there is marginally less fat than in human milk, which is why authoritative bodies advise against human babies being given skimmed or semi-skimmed milk as this would lower the fat levels even further. It is however apparently perfectly all right for human adults to drink fat reduced milk even though this pushes cow's milk even further away from the ideal and increases the relative proportion of protein and carbohydrate, calcium, phosphorus, and sodium amongst others.

A large difference is seen between the carbohydrate values in human and cow's milk, so much so that cow's milk can be seen as deficient in this nutrient which may explain why cow's milk is often sweetened or taken with simple carbohydrates such as 'milk and cookies' to make up for the natural shortage. Another problem with the carbohydrate fraction is the presence of lactose (milk sugar) which most of the world's population cannot digest.

Lastly for this section comes sodium. Along with a call for a reduction in salt consumption people are also being told to drink more milk, here lies a direct contradiction made worse by the fact that salt is often added to cheese to give them flavour. Therefore milk and salted cheese could be among the most common sources of excessive sodium in the average diet.

Potential Problems from over indulgence

All nutrients work best in the body when they are present at suitable levels for what the body needs at that time. An excess of one mineral over another can have negative effects (as seen with the calcium and phosphorus above) but this is also the case with the macronutrients, particularly protein, which when given in excess and out of proportion needs to be excreted. If there is no problem with the kidneys and liver then elimination of these excesses can continue and it won't matter how much excess we have. Unfortunately, after years of neglect and over exposure to heavy foods such as meat, cheese, fried potatoes and milk our organs become less able to deal with excreting the excess through normal channels. Eventually the liver, kidneys, intestines and lungs look for other ways to excrete the waste and unwanted intake via the skin and the mucous membranes of all our body orifices. The excess that cannot even be excreted via these routes remains inside the body which turns into mucous or pus - the perfect culture medium for bacteria.

Many of today's common problems have been put down to this ineffectiveness of the body's waste systems to keep up with demand such as asthma, allergies, tonsillitis, ear infections, pimples, acne and weight problems. Not surprisingly many healthy eating programmes are appearing now as people try to find a way to clear out the system and unblock the excretion processes so that they can cope better in today's fast moving world. Take vegetarianism, the most popular diet regime sweeping the country, the main things banned are meat and dairy products and although some people do this for ethical reasons the results are the same - less of a load is placed upon the system and our organs of elimination become less stressed and more able to cope with the demands placed upon them.

Fortification

Vitamin D for example is added to milk with the best of intentions to prevent rickets in children as it increases the absorption of calcium and magnesium in the body. Unfortunately being artificially encouraged the extra calcium may deposit itself in the wrong places in the body. Indeed added vitamin D has been identified as a causative factor in extensive injury of the cardiovascular system and calcification of the kidneys, resulting in the production of kidney stones[2]. In addition links have been drawn between calcification and deposits left in various areas of the female reproductive organs and in the worst cases it is possible for these deposits to harden into cysts.

The consumption of dairy products appears to be strongly linked to various disorders of the female reproductive system, such as fibroids, cysts, menstrual cramps and heavy flows, and interestingly fertility itself. This is not that surprising when one thinks of the amount of mucous which can theoretically build up in the fallopian tubes thereby blocking them.

Lost nutrients

Pasteurisation of milk has eliminated many infectious diseases but it does also negatively affect the value of milk as has been shown in tests with animals who did not thrive after their own mother's milk was pasteurised before they received it. Other than this nutrients which have clearly been shown to be reduced after heat treatment (pasteurisation involves heating to 72 degrees C for 15 minutes, sterilisation

involves rapid heating and cooling from 100 degrees) are the water soluble vitamins B1 and C which is reduced by 50% during pasteurisation. Sterilisation actually improves the digestibility of milk as it helps break down some of the proteins. This is as opposed to pasteurisation which can actually strengthen the weak bonds between proteins so that they coagulate and form clumps.

Homogenisation which breaks milk up into smaller pieces to stop the fat rising to the top of the milk when it is left to stand allows some substances to pass through the intestinal wall unchanged by the digestive process which can lead to intolerances developing to these substances and therefore to milk as a whole.

As well as fat being removed in the skimming of milk, the fat soluble vitamins A, D and E are also lost.

Low fat milk

Which is worse?

- 1) A whole food in excess or,
- 2) A partial food which now contains unbalanced nutrients in partial excess?

Both are going to cause problems, but one must presume that there is some logic to the natural balance contained within whole foods and when that balance is destroyed materials which would normally have been kept in check now have an opportunity to cause problems they otherwise would not have. In addition to this butterfat contains a protein-splitting enzyme (Xanthine Oxidase) XO which upon removal makes the digestion of milk protein more difficult. As this protein can now be present at relative levels upto 20% higher the problem is comparably even worse.

In homogenised milk XO is able to pass through the intestines and into the blood stream where it damages the membranes creating scar tissue. Cholesterol then accumulates on this scar tissue as the body attempts to protect the blood vessel membranes, but the more cholesterol that collects here the more the vessels can become blocked.

Lactose

All mammals except certain populations of man stop producing the enzymes needed to digest milk once they have been weaned. A few groups have had to rely on the milk of their herds for food in difficult or inhospitable conditions such as the northern Europeans during the winter nights that last for months, but almost everyone else lost the ability to produce lactase. Not all those who are lactose intolerant are unable to drink any milk, indeed some can have upto a couple of glasses without any obvious problems, but as the majority of the world's population are by design not supposed to drink milk, why is it that those who can are made to believe that it is the only source of calcium available to them?

Those who are lactose intolerant can often eat foods such as yoghurt as these have been pre-digested by lactose bacteria and so save the body the trouble of dealing with lactose.

Calcium

So if we do not need to drink milk to get our calcium where else does it come from?

- Beans, nuts
- Greens, especially broccoli, collards, kale, mustard and turnip tops, parsley, watercress and dandelion
- Sea vegetables
- Sesame seeds and tahini,
- canned salmon and sardines with bones
- Soup made with one or more bones (fish, fowl or beef) and one tablespoon of wine vinegar (which draws out the calcium and makes it available in the broth).

In fact many foods have considerably more calcium in them than milk, a lot of these foods have less available calcium in them due to their phytic acid or oxalic acid content, but because of the wide variety of calcium containing foods available over all they provide a much more varied and larger source packed with many more nutrients than milk alone. Some foods like sardines do have more available calcium in them than milk anyway. Cheese has the greatest amount of available calcium in it per 100 g though, with yoghurt a close second.

Osteoporosis

Osteoporosis is often treated these days by increasing the amount of calcium put into the body, and if that doesn't work it is excused away as being too little too late. The fact that bones are made up of a mix of many different minerals is also often ignored as more and more calcium of any sort is pumped into the body.

Instead of looking at ways of getting more calcium into the system, a new way of looking at the problem might be to see how the calcium that is already in the bones might be kept there.

Foods that affect Calcium balance in some way

Dairy products

The calcium in dairy products comes in an unbalanced relationship with phosphorus, so a fair amount will be incompletely absorbed or incorrectly assimilated.

Concentrated Sugars

These create an acid reaction in the body, acidity demineralises the system. Sugar lowers the level of phosphorus in the blood as the body tries to deal with this unnatural purified material, and so to maintain the correct calcium: phosphorus ratio in the blood the body may draw upon its reserves in the bones.

High Protein Foods

Again like sugar high protein foods acidify the system which results in demineralisation and calcium loss from the bones.

Nightshades (including tomatoes, potatoes, aubergines, peppers and tobacco)

The alkaloids in these plants appear to deplete body levels of calcium unless they accompany dairy when eaten in which case the alkaloids go for the dairy calcium rather than body sources.

Wine, Vinegar and Citrus

The body has to buffer these foods because of their natural acidity, and this requires the presence of calcium which will result in decalcification of the body unless again calcium is present in the same meal. For example the traditional pairing of wine and cheese will buffer the acid nature of the wine preventing it from drawing calcium out of the body. Similarly orange juice with breakfast needs some intake of milk for example to keep it under control. People with low calcium stores may show a sign of calcium shortage such as brittle nails if they continue to drink citrus juices.

Coffee, Alcohol and Salt

Caffeine, alcohol and salt all bring about calcium losses, but alcohol and salt are the major criminals robbing the body of calcium.

Conclusion

In summary the foods that cause more calcium to leave the body are acid forming foods eaten without the balance of alkali forming foods. These include: sugar, high protein foods, flour, bread, legumes, and grains particularly refined ones.

Vegetables can on the whole buffer these foods and so remove the challenge otherwise found in the meal. If these alkaline foods are not eaten then the body must find its own buffers such as the calcium within teeth and bones.

Quality

Non organic animal milk generally has a high proportion of pesticides and other chemicals in it from the animal concentrating all the traces of residues on the food it eats and potentially also from any growth hormones or antibiotics given to the animal which leech into the milk.

A high consumption therefore of animal milk and other products can also increase the toxins in human milk and so it is advisable for a human mother to cut down the amount of these materials in her diet before she starts breastfeeding.

Is milk good for you or not?

Having looked at the peculiarity of the human being to drink the milk of another animal after weaning and all the accompanying negatives associated with cow's milk and to a lesser extent goat's milk when compared to human milk, it is a fair assumption that cow's milk is not good for you.

This theory does however fly in the face of all orthodox dietary advice and a considerable amount of ancient wisdom too. A possible explanation for this contradiction may lie in the quality of the milk and the health of the person. Those who have weak digestions or mucous problems will find milk hard to digest. We have of course already seen that milk can cause mucous problems, which is probably more likely in those with weak digestions. Milk which has been pasteurised,

homogenised and filled with chemicals is much more difficult to digest properly, even by those with a strong digestion.

In today's climate milk often has a bad reputation amongst complementary therapists because many people already have an overabundance of mucus and are overweight as a result of their excessive consumption of meat, sugar, fat, and dairy. Having lived on this sort of diet most of their lives many have developed a weak digestion and may be intolerant to dairy products to some degree.

When mucus problems exist, dairy users may wish to consider using better quality, for example organic as well as simply fewer dairy products. Lack of exercise can also be a major factor, since the heat of physical activity normally burns up watery mucoid accumulations.

To sum up - although no other animal drinks milk beyond the age of weaning it does not necessarily mean that we should not either. Humans do many things that are unique to our race. Problems occur with dairy products if they are over consumed, they are of poor quality or if the individual digesting them cannot deal with them effectively. Dairy products can provide useful aspects to the diet if used sensibly.

References

1. Colbin, A. *Food and Healing*. Ballantine Books, New York, 1986.
2. Taussig, Helen B., Possible injury to the Cardiovascular system from vitamin D. *Annals of Internal Medicine* 65. **no.6 (December 1966)** 1195-1200

GOAT'S MILK

Many babies experience some sensitivity reactions if weaned onto cow's milk too early and it has also been seen to interfere with absorption from the gut, causing increased lead uptake, and inhibited absorption of magnesium and manganese. Therefore goat's milk has been identified as a useful alternative for sensitive children and adults alike.

The Problem With Drinking Milk

Humans are the only animals who consume the milk of another animal. therefore it is not surprising that some people are unable to digest cow's milk effectively. Human milk is really the only suitable food for babies, but circumstances often dictate that mothers cannot breast-feed all of the time. Cow's milk however forms large, indigestible curds in the stomach, and promotes detrimental mucus production in the intestines (see below). In addition many youngsters develop eczema when weaned onto cow's milk, and intolerances to cow's milk proteins and lactose are not uncommon at that age. These problems then persist into adulthood and can be a causative factor in many other food intolerances and allergic reactions, due to the build up of foreign particles and mucus in the body.

The Benefits Of Goat's Milk

Quite simply goat's milk is closer to human milk in composition than cow's milk, therefore it is more easily digested. The curds formed in the stomach during digestion of goat's milk are made up of softer, finer particles than those formed by cow's milk, therefore they pass through the digestive system far more easily.

In addition to this goat's milk is less likely to cause excessive mucus production which blocks the intestines as a result of dairy consumption. Not only does this mucus interfere with the passage of food through the intestine it coats the walls of the gut so prevents efficient absorption of nutrients and contributes to deficiencies and allergies.

Goat's Milk and Children

Pure goat's milk cannot be given to babies as its protein content is too high (as is that of cow's milk). The benefits of goat's milk have however been captured in formula feeds which are adjusted to be more suitable nutritionally. Substituting cow's milk with goat's milk has been seen to alleviate severe eczema in young children. Some youngsters are so sensitive to cow's milk that they react to its presence in breast milk when their mothers consume dairy foods.

Introducing cow's milk at a young age can cause several problems at a later age, therefore goat's milk is a good food if breast-feeding is impracticable. Soya based formula milks are often used in such cases, but they can bring their own problems such as added sugars and can lead to tooth decay, and even may increase the risks of peanut allergy as shown in new research from the ALSPAC study, therefore goat's milk formulas are often preferable.

Goat's Milk in Adulthood

Many adults choose to convert to goat's milk simply because they find it easier to digest, and it alleviates uncomfortable bloating. Some migraine sufferers too find their symptoms subside if they remove dairy products from their diet.

Of course the benefits seen in children can also be experienced by adults. Less mucus in the intestines promotes effective nutrient uptake, and therefore enhances well-being. Persistent catarrh can also be a reaction to cow's milk which clears when dairy products are eliminated from the diet. In such cases it may be wise to avoid milk altogether, but if you decide to wean yourself back onto it, goat's milk is a softer option which may be better tolerated by the body.

Weaning foods

We have explored in some depth the milk controversy and options available, but this chapter started with the question, what foods should I feed my baby? The answer to this question covers almost all foods you would eat yourselves except heavily processed or "manufactured" foods as these often contain too much salt and not enough essential nutrients.

Before we look at what, we should explore when to start weaning. It has already been mentioned that between the ages of 4-6 months is typical but as we are all individuals the actual age itself is not incredibly important. The feature that is important is that your child wants other foods. If your baby is happy on breast milk alone that is fine but when it suddenly occurs to your baby to taste what you are eating then that is the surest indication you can expect that baby is ready to wean. Now that your baby has demonstrated its readiness to wean it is time to start introducing foods, but don't view it as time to start with holding the breast as that is not what weaning is about. Weaning is a positive giving time where foods are shared with the family and the pleasures of different tastes and textures are explored and if a sip of breast milk is still required then let it be available if possible.

When the time for weaning has arrived simply mash something from your own plate and offer your baby a very small amount on a spoon. Quantity is not required at this point just the experience of variety. The greater the variety of foods that you can supply the better as it widens the experience of the taste buds to help reduce any potential food dislikes appearing later in life.

Babies just like adults need fresh, "living" foods in their diets. Fresh foods provide an energy that you will see in your baby, a zest for life that processed baby foods can never provide. Before processed foods were invented babies ate the same whole foods as their parents, it is possible and indeed natural and may even result in an improvement to the quality of your own diet!

Parental advice for Children

Introduction

Feeding children can be a battle in today's advertising led food product world between what is "healthy" and what is most desired. As with any battle though a clear strategy is the key to success, the hints and advice in this Health Credit booklet will help you find a way to balance your food choices for your child against their own.

We all have different demands on our time and often it is meal times that suffer in the rush to get on with the day's tasks. Above all else simply taking time to enjoy food together as a family will make the world of difference in your children's approach to eating habits. This constructive process begins right back at the weaning stage, and so that is where we begin.

Weaning

Keeping things calm and dedicating time are the key things here. Invest time now in exploring the different tastes, textures and colours of food with your child and this will pay dividends in the future.

Children naturally have a sweet tooth (in order to be attracted to mother's milk in the beginning), but this doesn't mean you have to pander to it with sweets, chocolate and cake for ever more. The sweetness of root vegetables (carrot, swede and sweet potato) is sufficient – and the sensitivity to this sweetness is maintained if you don't drown the taste buds with stronger sweets too early on.

Childhood

So long as the stage is set with weaning, young children won't crave sweets and fatty foods in excess if this is something they've never had. Concentrate on feeding them plenty of tasty fresh vegetables, and a wide variety from the other food groups (grains, proteins – meat, cheese, soya etc. according to your own preferences, dairy products) and there will be no room or desire for crisps, biscuits and snack bars.

Breakfasts

The most important meal of the day so don't skip it. This is all that will be keeping your child going through the morning at school so make sure it's packed with quality nutrients, and not with sugar which will send them rushing to the tuck shop at morning break for a top up.

Too many packet breakfast cereals are more laden with sugar than they are with the many other nutrients. As a general rule of thumb, if it comes in a bright packet with your child's favourite cartoon character urging them to dig in and enjoy then more thought has probably gone into this marketing than has gone into the nutritive value of the cereal inside.

Plainer cereals may appear less exciting at first, but the taste of the real cereal - be it oat, wheat or another grain - is able to shine through. You can then liven it up in your own individual way with favourite fruits (fresh and or dried), of course the cold fresh milk, and a spoon of creamy live yoghurt on the top.

Toast too is a good sustaining breakfast for children, and if spread with nut butter or a sugar free fruit spread is nutritious without the sugar overload that will send them into a sugar low by mid morning - when they are at school and trying to concentrate.

Lunch

Ideally children should enjoy a positive social environment sharing a good and healthy hot lunch at school, alternatively packed lunch may be required but these can be a minefield even for the most well meaning of parents. As with breakfast cereals there are now a wealth of products marketed at children - who often want them more for the chance of extra kudos with their friends than they do for taste.

Sandwiches are a very valid choice for a packed lunch, but try to encourage your child in the delights of wholemeal or granary breads - rather than the tasteless and poorly textured white sliced loaf. Pitta breads are also handy as you can pack a load of tasty filling in without it ending up all over the sandwich box before they've even left the bus stop in the morning.

Cheese, tinned fish (e.g. tuna, mackerel, sardines), cold meats and nut butters are all good protein sources that fit well into sandwiches. Remember protein is vital for growth and development so ensure a good daily helping at lunch. Essential fatty acids (EFAs) are also vital (particularly for brain development and concentration) so fish and nuts are good choices for growing children. This can then be bulked out further with salad or even fruit. Grated cheese and apple makes a tasty and juicy filling, and sliced cucumber is a great accompaniment to fish.

If you want to include things like pasties or sausage rolls in a pack up try to make them yourself. Bought varieties are often laden with fat - but fats of the bad, counterproductive kind rather than the EFAs mentioned above. Regular baking isn't something the average (or even above average!) parent can manage these days, but have a spree one weekend and put plenty in the freezer to add to pack ups over coming weeks.

Fruit of course should also be present in every pack up. Bananas are usual favourites with children, but apples, pears and grapes are equally popular. Dried fruits can also be convenient - sultanas, raisins, apricots, figs are common ones, but banana and apple can also be included.

Dinner

At the end of the day when you've all had a hard day no-one wants to spend hours preparing dinner. It can be far too tempting therefore to pop some fish fingers or burgers under the grill and some chips into the oven and know that the children will be filled up. Think of the adage 'you are what you eat' though - and then think what

you want your children to be. Filling them up with low grade proteins bulked out with water and flavoured with extra salt therefore isn't going to help.

For a start get the children involved in the preparation – this serves the purpose both of keeping them busy so they aren't nagging for their tea every few minutes, it ensures the meal is prepared quicker, and most importantly gets them into the habit of making time to prepare food. A habit that will stand them in good stead all their lives.

This meal is likely to be the most substantial of the day, so plan it well. Foods are best digested by the human body in the order vegetables (except potato), protein, starch. It is also good practice to start with some raw food to prepare the digestive system for its work ahead. If you're all famished when you get home therefore, why not enjoy some crudite (raw vegetable sticks) with a tomato dip, a salad or some fruit whilst waiting for dinner to cook.

For the main event you then have a formula – you need a protein source (e.g. meat if you eat it, soya, nuts, seeds and/or cheese). With this you need the vegetables – a nice green leafy one is great for the energy that children use up – and a starchy accompaniment such as potato, rice or pasta.

Children may argue, but the wholegrain options are undoubtedly more tasty and even they will agree after a while – once their taste buds are weaned off the bland, refined grains and get used to the real taste rather than the salt or sugar enhanced one. Brown rice in particular is great for sustaining blood sugar levels, and prevents sugar cravings.

Water

This is vital throughout the day – and needs to be taken as plain water to keep the body hydrated and working to its full potential. Every process performed on a minute by minute basis uses and needs water. And of course, the more water your child is drinking the less sugary and carbonate drinks he/she is taking. Therefore you achieve the double benefit of cutting down on more sugar and maintaining better hydration.

A word here on those carbonated drinks. Calcium is recognised by every parent as vital to growth and development of teeth and bones. How well known is it however that calcium can only be absorbed and used properly if it's in good balance with other minerals. One of these in particular is phosphorus. Too much phosphorus and calcium is taken out of the bones to balance out the extra phosphorus in the blood. Carbonated drinks are often high in phosphorus – so encouraging your child to drink milk and then letting them have cola too may well be counterproductive.

Supplements

All children go through phases when food just isn't a priority for them and they lose interest in eating. You may therefore become concerned by their nutrient intake.

The intake of macro-nutrients (proteins, carbohydrates and fats) is only really effective through whole foods, but micronutrients (vitamins, minerals) and also essential fatty acids can be topped up in supplemental form.

Supplements you may want to consider are:

- A good daily multi to provide a safeguard in all the essential vitamins and minerals
- Bone nutrients such as calcium and magnesium
- Iron (for many growing children, but especially adolescent girls)
- Essential fatty acids (e.g. fish oil) for support of brain development
- Chromium (to help with blood sugar balance if your child is prone to sugar 'highs' and 'lows').

Summary

1. Good eating habits start early so encourage an interest in fresh foods and water from the earliest opportunity.
2. Don't let your children skip breakfast – that's a sure way to encourage sugary snacking during the morning.
3. If a hot good quality school lunch is not available then make sure packed lunches are packed with interesting fresh foods, and therefore also with taste and nutrition.
4. Enjoy a wholesome family meal in the evening.
5. Drink plenty of plain water and avoid sugary & carbonated drinks.
6. Consider nutrient supplements if you are concerned as a safeguard of daily vitamin, mineral and EFA intake.