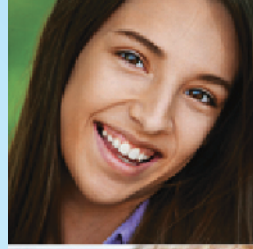


Facts and theories



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What is healthy eating?

Magazines, newspapers, and radio and TV programs are full of articles and items about the importance of a healthy diet and what a healthy diet actually is. Often this information is confusing and sometimes it is wrong. This chapter attempts to clarify the world of healthy eating and will describe:

- A brief history of healthy eating
- Healthy eating in the modern day
- Healthy eating throughout childhood
- Why a healthy diet is important

A Brief History of Healthy Eating

The nature of a good diet has changed dramatically over the years. In 1824 *The Family Oracle of Good Health* published in the UK recommended that young ladies should eat the following at breakfast: “plain biscuit (not bread), broiled beef steaks or mutton chops, under done without any fat and half a pint of bottled ale, the genuine Scots ale is the best”; or if this was too strong, it suggested “one small breakfast cup of good strong tea or of coffee – weak tea or coffee is always bad for the nerves as well as the complexion.” Dinner is later described as similar to breakfast, with “no vegetables, boiled meat, no made dishes being permitted much less fruit, sweet things or

The Good Parenting Food Guide: Managing What Children Eat without Making Food a Problem, First Edition. Jane Ogden.

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Good parenting . . .

A healthy diet is important for how a child grows and develops. It also helps children stay healthy once they are adults as many adult illnesses start in childhood long before we have any symptoms. Good parenting is therefore about helping your child to eat a healthy diet and to develop good eating habits. It is also about making food nice without it being an issue.

pastry . . . the steaks and chops must always be the chief part of your food.” In the 1840s Dr Kitchener recommended in his diet book a lunch of “a bit of roasted poultry, a basin of good beef tea, eggs poached . . . a sandwich – stale bread – and half a pint of good home brewed beer” (1). In the US at this time, diets were based around the staples of corn, rye, oats, and barley for making bread, the use of molasses as a cheap sweetener, and a quantity of salt pork, which could survive the warmer weather in the absence of refrigeration. Blood pudding was also a source of meat; it was made from hog or occasionally beef blood and chopped pork, seasoned and stuffed into a casing which was eaten with butter crackers to provide a meal for the workers. What constituted a healthy diet in the nineteenth century was very different from current recommendations.

Most improvements in the diets of many Western countries mainly came about as a result of the rationing imposed during both the world wars. These rations resulted in a reduction in the consumption of sweet foods and an increase in the role of carbohydrate in the diet. In addition, the need to provide the armed forces with safe and healthy food stimulated research into food technology and established dietary standards.

Healthy Eating in the Modern Day

Over the past 30 years there has been a proliferation of literature on healthy eating. A visit to any bookstore will reveal shelves of books full of diets designed to improve health through weight management, salt reduction, a Mediterranean approach to eating, or the consumption of fiber. Nowadays there is, however, a consensus among nutritionists as to what constitutes a healthy diet (2). Descriptions of healthy eating tend to divide food into

broad food groups and make recommendations as to the relative consumption of each of these groups. Recommendations change across the lifespan as we grow from babies into toddlers, to children, to teenagers, then adults. They even change as adults get older, as we need different diets at different stages, such as pregnancy, the menopause and as we progress into older adulthood. Current recommendations for children aged over 5 and for adults are the same, and are outlined below. These are:

- **Fruit and vegetables:** A wide variety of fruit and vegetables should be eaten, and preferably five or more servings should be eaten per day.
- **Bread, pasta, other cereals, and potatoes:** Plenty of complex carbohydrate foods should be eaten, preferably those high in fiber such as brown bread, brown pasta, and brown rice.
- **Meat, fish, and alternatives:** Moderate amounts of meat, fish, and alternatives should be eaten and it is recommended that the low-fat varieties are chosen.
- **Milk and dairy products:** These should be eaten in moderation, and the low-fat alternatives should be chosen where possible.
- **Fatty and sugary foods:** Food such as potato chips, sweets, and sugary drinks should be consumed infrequently and in small amounts.

Other recommendations for adults include a moderate intake of alcohol (a maximum of 3–4 units per day for men and 2–3 units per day for women), the consumption of fluoridated water where possible, a limited salt intake of 6 g per day, eating unsaturated fats from olive oil and oily fish rather than saturated fats from butter and margarine, and consuming complex carbohydrates (e.g. bread and pasta) rather than simple carbohydrates (e.g. sugar). It is also recommended that men aged between 19 and 59 consume about 2,550 calories per day and that similarly aged women consume about 1,920 calories per day, although this depends on body size and degree of physical activity.

Recommendations for children are less restrictive for fatty foods and dairy products, and it is suggested that parents should not restrict the fat intake of children aged under 2. By 5 years old, however, children should be consuming a diet similar to that recommended for adults, which is high in complex carbohydrates such as brown bread, brown pasta, and brown rice, high in fruit and vegetables, and relatively low in fat and sugary foods. They should also have a diet that is low in salt and should not drink any alcohol until they are at least 16.

while pregnant or while breast-feeding. The evidence for this remains weak, but to me personally, it seems to make sense. You wouldn't put alcohol in your baby's bottle so why put it in their breast milk?

While breast-feeding, the mother needs to eat a healthy balanced diet high in fruit and vegetables and brown bread, brown pasta, and brown rice and relatively low in fat and sugary foods. At this time mothers shouldn't try to eat for two or lose weight by eating a restricted diet. They should just eat a healthy diet to keep themselves and the baby well nourished.

But some women genuinely struggle to breast-feed and then feel guilty. Being a mum is a huge responsibility in so many ways, with so many possibilities for guilt and beating ourselves up. Therefore if you have weighed up the pros and cons and decide to stop breast-feeding, don't feel guilty. Just move on. And one benefit of not breast-feeding is that dads can take on a greater role in parenting, which may well keep them more involved in the longer term.

Babies 6–12 months

Current recommendations state that babies should be fully breast-fed (or bottle-fed) until 6 months when weaning onto solids can start. At first most of their food will still come from milk so the main aim of early weaning is to get them used to eating and encouraging them to try different tastes. Some mums make up ice-cube trays of mashed-up sweet potatoes or vegetables, or purée parts of their own meal to spoon-feed to their baby. Others hit the shelves of jars in the shops, while others toss their baby bits of finger food from their own plate to chew on. Nutritionally, at this stage it is probably best to create perfectly balanced frozen cubes of food which can be defrosted on time to be wolfed down by your compliant child. But life isn't always like that and the last thing you need at this stage is a parent frazzled by the food processor and cross with a baby who throws the carefully prepared food onto the floor. So psychologically (for you and your child) it is probably best to give your child a mix of a variety of foods including mashed-up vegetables, handy jars, and whatever you have on your plate, in order to keep your sanity and not make food into an issue.

Toddlers 12–24 months

As babies turn into toddlers they suddenly become much more active and their need for energy increases dramatically. At this age children move away

from mashed-up food and start eating more adult-like meals. Children need energy, but they don't need sugar for energy, as although this might give them an immediate boost, their energy levels will quickly plummet, making them more tired than they were in the first place. So during this time they need a diet high in complex carbohydrates such as brown bread, brown pasta, and brown rice, high in fruit and vegetables, with moderate amounts of meat and fish, and relatively low in fat and sugary foods. They also need lots of dairy products for their calcium levels. But try to do the following:

- Keep the variety going.
- Give them plenty of savory foods.
- Eat with them when you can.
- Get them to eat with other children.
- Have regular meal times.

We like what we know (see Chapter 2) and now is the time to get them to know the tastes of the foods you will want them to like later on. It is also the time to start planting the seed of family eating, social eating, and planned eating, all of which are predictive of a healthy attitude as they grow up.

Children 2–5 years

By this stage most children should be eating a balanced diet high in complex carbohydrates and fruit and vegetables with a moderate amount of protein and low in fat and sugary foods. They shouldn't be on a low-fat diet as such and should now be drinking full fat milk and plenty of cheese for their fat and calcium intake. But neither should they be eating lots of high-fat foods such as crisps and deep fried chips. Children at this stage can become quite picky (called neophobia) and often refuse new foods, preferring to eat the same old familiar foods over and over again. Tips for overcoming this are described in Chapter 10, but simple approaches involve sheer persistence (putting it on their plate but not making a fuss about it), getting them to eat with other children, and eating different foods yourself in front of them. Some children seem to go through a stage when they hardly eat anything and live off air, while others seem forever hungry. Tips for managing children who either overeat or undereat are described in Chapters 12 and 13. But often these are just stages that they grow out of and the best way to

help them to grow out of it is to ignore it. Making it into the focus of the dinner table can often make it worse.

Children 5–12

By age 5, recommendations suggest that children should eat the same kind of diet as adults. Ideally they also should be eating at the table, with the family, at regular meal times and eating the same food as everyone else. Obviously this is not always possible due to life getting in the way, but wherever possible try to include your children in with what and when you are eating. Also, have other children round for tea and send your child round to others for tea, to get them used to eating with others and as a means to get the healthy habits of their friends to rub off on them. Social eating and peer pressure are central to the way in which we decide which foods we like (see Chapter 2) and at this age this can be a useful strategy to encourage your own children to eat a more varied diet. Remember at this age you are still mostly in control of what they eat and most of their eating is done at home.

As for the school dinners versus packed lunch debate, I think there are pros and cons of both. You can control a packed lunch and fill it with healthy foods, but they can be very repetitive and children can get stuck in a rut of eating the same thing every day (and you have to buy it and prepare it every morning). School dinners may not always be the healthiest but they are bought and prepared by someone else and varied, and they encourage children to eat what they are given rather than what they have specifically requested the night before. But the choice is yours!

Teenagers 13–18

Children grow hugely in their teens and are bombarded by hormones that can make them starving all the time. It is also the time when they start to eat away from home more, have money to buy snacks, and become more influenced by their friends than by their parents. Nutritionally they need a healthy balanced diet the same as adults. But you might find that they need more snacks between meals, so make sure you have plenty of fruit, toast, cheese, crackers, yoghurt, breadsticks, and biscuits to keep them going.

So even if you can't control what they eat outside of the home, still provide healthy meals for when they are around, still have set meal times

when they have to be back, and try to eat with them at the table as often as possible. Issues with body size might start to surface at this stage and tips for managing a child who feels fat are given in Chapter 14. Chapter 11 also deals with how to get your child to be more active, and Chapters 12 and 13 address overeating and undereating. But the most important factors are being a good role model yourself in terms of what you eat and how you talk about your body size and food, eating as a family, having regular meal times, and making chat, not food, the focus of the table.

Current recommendations for healthy eating in adults therefore describe a balanced and varied diet which is high in fruit and vegetables and complex carbohydrates and low in fat and sugary foods. Children's diets should approximate this, but can be higher in fat and dairy products until the age of 5. Children's diets should also be low in salt.

Why Eat a Healthy Diet?

Healthy eating is important for children as it impacts on health in two key ways: first, eating healthily in childhood helps growth and general development. Second, how we eat in childhood relates to how we eat as an adult and can either protect from or promote illnesses later in life. This chapter will now describe eating to be a healthy child and eating for a healthy life.

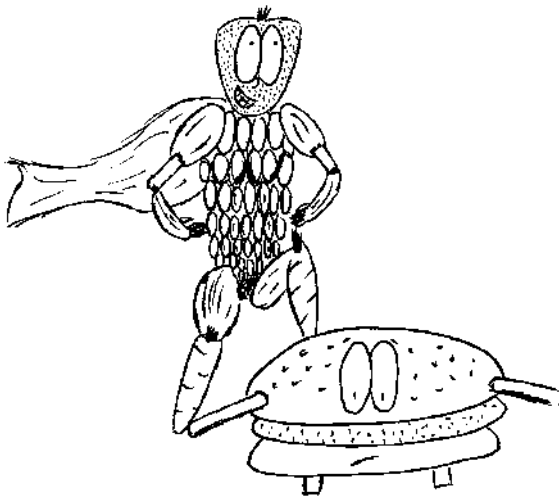


We are what we eat: start off as you mean to go on

Eating to be a healthy child

Children need a healthy diet to help them develop, grow, think, and learn. Every organ that they develop, every muscle they build, and every bone they make comes from the food they eat. So, although we don't understand the exact details of how each cell of our body is produced, it makes sense to give children a varied and balanced diet in order to increase the chances that it contains what they need to grow from tiny babies into fully grown adults.

Recently there has been much emphasis on obesity and the problem of being overweight. But this is only a tiny part of the problem. Regardless of body weight or how fat a child is, they need healthy food to grow strong teeth and bones, to develop a heart that works properly, a digestive system that can do its job, a set of lungs to breathe, and a brain that can keep them alive. And this all comes from food. I remember once reading about how many of the soldiers who died in the Vietnam War had heart disease, even at the age of 20, due to their diet. So even though these men looked at the peak of fitness in terms of their body size and shape, inside they were already diseased. And if children don't have a healthy diet, some may start to feel tired and breathless, suffer from asthma or joint problems, or be unable to keep up with their peers. But most will seem fine. Yet inside they may well be storing up problems for adulthood, as many of the problems adults face have started way before they are detected by the person themselves, let alone the health professionals they come into contact with.



Eating for a healthy life

Understanding children's diets is important not only in terms of the health of the child but also in terms of health later on in life, as there is some evidence that dietary habits acquired in childhood carry on into adulthood. For example, studies show that adults prefer to eat foods that they ate as children. In addition, long-term studies such as the Minnesota Heart Study and the Bogalusa Heart Study indicate that those who choose unhealthy foods as children continue to do so when they are grown up (3, 4). There is also some evidence for the impact of childhood nutrition on adult health. For example, poor fetal and infant growth seems to be linked with problems of managing blood sugar levels at age 64, and the levels of fat in the blood of the child have been shown to relate to adult heart disease. David Barker has specifically examined the role of both childhood and *in utero* nutrition in the development of adult illnesses and has provided evidence for his "Fetal Origins Hypothesis." His research indicates that early nutrition starting in the womb may relate to illnesses such as hypertension, heart disease, stroke, and chronic bronchitis (5).

Eating and Illness

An individual's health is influenced by a multitude of factors including their genetic makeup, their behavior, and their environment. Diet plays a central role and can contribute directly towards health. It can also impact on health through an interaction with a genetic predisposition. The effects of overeating, undereating, obesity, and eating disorders on health are discussed in Chapters 5–8. The impact of the actual composition of a person's diet on coronary heart disease, cancer, diabetes, and gallstones is described here.

Diet and coronary heart disease

The term "coronary heart disease" refers to a disease of the heart involving coronary arteries which are not functioning properly. The most important forms are angina (chest pain), heart attack, and sudden cardiac death. All these forms of heart disease are caused by narrowing of the arteries due to fatty deposits which obstruct the flow of blood. This is called atherosclerosis. Angina is a powerful pain in the chest, which sometimes radiates down

the left arm. It develops when blood flow to the coronary arteries is restricted to such an extent that the heart muscle is starved of oxygen. An acute heart attack occurs when blood flow is restricted below a threshold level and some heart tissue is destroyed. It also seems to happen when a blood clot has further restricted blood flow to the heart. Sudden cardiac death typically occurs in patients who have already suffered damage to the heart through previous heart attacks, although it can occur in patients who previously seemed to have healthy arteries.

How common is heart disease? Coronary heart disease (CHD) is responsible for 43 percent of deaths in men across Europe and 54 percent of deaths in women. In the UK, in 2008 CHD was responsible for 35 percent of deaths in men and 34 percent of deaths in women. It is the main cause of premature death in the UK (i.e. under 75 years) and worldwide it is estimated that 17 million people die from CHD each year, with the highest death rates being in China, India, and Russia. Deaths from CHD have declined in recent years in North America and across Europe, mainly due to the decline in smoking and other lifestyle factors. The highest death rates from CHD are found in men and women in the manual classes, and men and women of Asian origin. In middle age, the death rate is up to five times higher for men than for women; this evens out, however, in old age when CHD is the leading cause of death for both men and women. In the UK about 150,000 people each year survive a heart attack, with women showing poorer recovery than men in terms of both mood and activity levels.

Although biological factors play a part in coronary heart disease, diet is probably the fundamental factor. This is clearly shown by incidence of the disease in immigrant groups. For example, death from heart disease is very rare in Japan, but Japanese people who move to the West quickly show the pattern of mortality of their new environment – probably because they change their behavior. Coronary heart disease usually involves three factors: (i) narrowing of the arteries (atherosclerosis); (ii) a blood clot (thrombosis) and the impact of this, which can be sudden death, heart attack, angina, or no symptoms; this depends on (iii) the state of the heart muscle. Each of these three factors is influenced by different components of the diet.

Narrowing of the arteries The material that accumulates in the arteries causing them to get narrower is cholesterol ester. Cholesterol ester exists in

the blood and is higher in individuals with a genetic condition called familial hypercholesterolemia. Half of the cholesterol in the blood is created by the liver and half comes from the diet. Diet influences blood levels of cholesterol in two ways. First, blood cholesterol can be raised by saturated fat found in animal fat and in boiled, plunged, or espresso coffee (not instant or filtered). Second, blood cholesterol levels can be reduced by polyunsaturated fats found in plant oils, by soluble types of fiber such as pectin found in fruit and vegetables, by oat fiber found in vegetables, oatmeal, and oat bran, and by soya protein.

A blood clot (thrombosis) A blood clot is caused by an increase in the clotting factors in the blood including Factor VIII, fibrinogen, and platelets. Under normal healthy conditions a blood clot is essential to stop unwanted bleeding. If there is already a degree of narrowing of the arteries this can cause a heart attack. The formation of blood clots is influenced by diet in the following ways: a fatty meal can increase Factor VIII; smoking and obesity are associated with increased fibrinogen; alcohol is associated with decreased fibrinogen; and fish oil (found in sardines, herring, mackerel, and salmon) has been shown to help prevent platelets from clustering together and causing a clot.

The state of the heart muscle The general healthiness of the heart muscle may determine how an individual responds to having a thrombosis. An overall healthy diet consisting of a balance between the five food groups is associated with a healthier heart muscle.

Diet and blood pressure

Raised blood pressure (essential hypertension) is one of the main risk factors for coronary heart disease and is linked with heart attacks, angina, and strokes. It is more common in older people and is related to diet in the following ways.

Salt Salt is the component of diet best known to affect blood pressure and can cause hypertension which is linked to heart disease, strokes, and kidney problems. As a means to reduce hypertension, it is recommended that we eat less than 6g of salt per day, which is much less than that currently consumed by most people. Avoiding salt is difficult, however, as most of the salt consumed is not added at the table (9 percent) or added in cooking

(6 percent) but used in the processing of food (58.7 percent). For example, salted peanuts contain *less* salt than bread per 100 g. Many canned foods (such as baked beans) and breakfast cereals also have very high salt levels, which are masked by the sugar added.

Salt is also necessary, particularly in poorer countries where diarrhea is common, as it helps the body to rehydrate itself. In fact Britain imposed an extortionately high salt tax when it governed India, as salt was not only a useful flavor enhancer but also an essential part of the diet and therefore guaranteed a high level of revenue.

Alcohol Alcohol consumption has several negative effects on health. For example, alcoholism increases the chances of liver cirrhosis, cancers (e.g. pancreas and liver), memory problems, and self-harm through accidents. Alcohol also increases the chances of hypertension; heavy drinkers have higher blood pressure than light drinkers and abstainers, and this has been shown to fall dramatically if alcoholic beer is replaced by low-alcohol beer.

In terms of alcohol's impact on mortality, data from the UK show that the number of deaths has more than doubled from 4,144 in 1991 to 8,380 in 2004. Data also show that death rates are higher for men than for women and that this gap has widened over recent years.

Alcohol may, however, also have a positive effect on health and there is some evidence that a glass of red wine per day may protect against heart disease. But, it is just as beneficial to drink cranberry juice, and much of the benefit from that one glass of wine is probably as much to do with stress reduction and the feeling of having a treat at the end of the day as the content of the wine itself.

Micronutrients Several components of the diet have been hypothesized to lower blood pressure but evidence is still in the preliminary stages. For example, potassium found in foods such as potatoes, pulses, and dried fruits, calcium found in hard water, long-chain fatty acids found in fish oils, and magnesium found in foods such as bran, wholegrain cereals, and vegetables have been shown to reduce blood pressure.

Diet and cancer

Cancer is defined as an uncontrolled growth of abnormal cells, which produces tumors. There are two types of tumor: *benign* tumors, which do

not spread throughout the body, and *malignant* tumors, which spread and create new tumors elsewhere (a process known as metastasis).

How common is cancer? In 2008, cancer accounted for 7.6 million deaths worldwide (around 13 percent of all deaths) and it is now the leading cause of death. The main types of cancer are lung (1.4 million deaths), stomach (740,000 deaths), liver (700,000 deaths), colorectal (610,000 deaths), and breast (460,000 deaths). Deaths from cancer worldwide are predicted to continue to rise to over 11 million in 2030. The main causes of cancer mortality in the UK in 2008 were lung cancer (men: 7 percent; women: 5 percent), colorectal cancer (men and women: 3 percent), and breast cancer in women (4 percent). The incidence of newly diagnosed cancer in the UK in 2007 indicates that the most commonly diagnosed cancers in men are prostate cancer (24 percent) and lung cancer (22 percent) and in women breast cancer (31 percent) and colorectal cancer (12 percent).

Diet is believed to account for more variation in the incidence of all cancers than any other factor, even smoking. But how diet affects cancer is unclear. One theory is that all foodstuffs contain natural non-nutrients which can trigger cancer. Such factors have been shown to cause mutations in the laboratory, but there is no evidence that they can do the same in human beings. A second theory claims that a poor diet weakens the body's defense mechanisms. The cancers most clearly related to diet are those of the esophagus, stomach, and large intestine. There is also a possible link with breast cancer.

Esophageal cancer The rates of esophageal cancer vary enormously around the world and are at their highest in China, Iran, and South Africa. The strongest dietary factor in the development of esophageal cancer is alcohol, particularly when the alcohol is derived from apples, and this often works in association with the impact of smoking. Other dietary factors which have been hypothesized to be associated with esophageal cancer include vitamin deficiencies and moldy food.

Stomach cancer The incidence of stomach cancer has halved in the past 25 years in Britain but is at its highest in Japan. Data suggest that salt and pickled and salted foods trigger stomach cancer, while fruit and vegetables, the refrigeration of foods, and vitamin C intake are protective.

Bowel cancer Cancer of the bowel is the second largest cause of death from cancer in Britain and is 10 times more common in Britain and the US than in developing countries. Rates in Scotland have been among the highest in the world. Evidence suggests that wheat fiber and vegetables may be protective, while animal fat and meat (particularly if well cooked) and some types of beer may trigger bowel cancer.

Breast cancer Breast cancer is the largest cause of death from cancer in women in Britain, with the majority of cases occurring in women who are post-menopausal. Possible dietary links with breast cancer include high fat intake and weight gain as predictive, and wheat fiber and soya as protective.

Diet and diabetes mellitus

There are two types of diabetes. Type 1 diabetes always requires insulin and is also called childhood onset diabetes. Some evidence has pointed towards a role for genetic factors, and research has also indicated that it is more common in those children who were not exclusively breast-fed for the first three to four months of life. Type 2 diabetes tends to develop later on in life and can be managed by diet alone. This form of diabetes shows a clearer relationship with diet. Type 2 diabetes seems to be mainly a complication of being overweight, and the risk of developing it is greater in those who show weight around the middle rather than on the thighs or buttocks. It is generally assumed that Type 2 diabetes is associated with diets high in sugar as people with diabetes struggle to manage their blood sugar levels. Evidence for this association is poor, and high fat intake seems to be its main dietary predictor, with high fiber and high carbohydrate intakes being protective.

Diet and gallstones and urinary tract stones

Gallstones are more likely to occur in women and certain ethnic groups. Obesity and dieting with rapid weight loss can increase the risk of gallstones, while moderate alcohol intake and vegetarian and high fiber diets are protective. Urinary tract stones can be made of either calcium or oxalate. Calcium stones are related to diets rich in protein, sodium, sugar, vitamin D, calcium, alcohol, curry, and spicy foods and low in cereal

fiber and water. Oxalate stones are related to diets rich in foods containing oxalates such as spinach, rhubarb, beetroot, and tea, and diets low in water.

Who Has a Healthy Diet?

We therefore know that we should feed our children a diet high in fruit and vegetables and complex carbohydrates and relatively low in fat and sugary foods. We also know that diet is linked to a number of illnesses such as coronary heart disease, cancer, diabetes, and gallstones. So how many people actually eat a healthy diet?

Children's diets

Many children's diets in the Western world are unsatisfactory. For example, a large study in the US showed that the majority of 10-year-olds have diets too high in total fat, saturated fat, and dietary cholesterol. Similarly, surveys in the UK show that 75 percent of children aged 10 to 11 consume more than the recommended level of fat and that the majority of 9–11-year-old British children consume less than half the recommended daily intake of fruit and vegetables, with only 5 percent of children eating more (6, 7). Research also shows that while children's diets tend to be acceptable for protein levels they are often too high in sugar (mostly from fizzy drinks), too high in salt, and lacking in vitamin A, vitamin D, and iron (causing high levels of anemia). Further, about 20 percent of this excess fat intake comes from snacks.

Malnutrition in children Dietary recommendations aimed at Western countries in the main emphasize a reduction in food intake and the avoidance of overweight. Undereating and malnutrition are the key problem for the developing world, however, resulting in both physical and psychological problems and poor resistance to illness. Recent data from the World Health Organization (WHO) concluded that 174 million children under the age of 5 in the developing world were underweight for their age, with 230 million being stunted in their growth. Further, WHO estimates that 54 percent of childhood mortality is caused by malnutrition, particularly related to a deficit of protein and energy consumption. Such malnutrition is highest in South Asia, where it is estimated to

be five times higher than in the Western hemisphere, followed by Africa, then Latin America.

One common problem is the low energy content of the foods used to wean children which can lead to growth problems and ultimate malnutrition. In particular, breast milk is an essential source of fat for children, and is often the main source of fat until the child is 2 years old. Problems occur, however, when children are weaned onto low-fat adult food. These lowered energy diets can sustain health in the absence of illness, but are insufficient to provide “catch up” growth if the child is ill with infections such as diarrhea. WHO states that malnutrition occurs in virtually all countries, as even when the majority of a country’s population has access to sufficient food a minority can still be deprived.

Eating in young adults

Many eating habits are established in childhood. They are then further crystallized in the first years of independence when individuals become responsible for their own food choices and food preparation. Research has therefore explored the diets of young adults. One large-scale study at the beginning of the 1990s examined the eating behavior of 16,000 male and female students aged between 18 and 24 from 21 European countries (8). Overall, the results showed that 39 percent tried to avoid fat, 41 percent tried to eat fiber, 53.5 percent ate fruit daily, 54 percent limited their consumption of red meat, and 68 percent limited salt. These results suggest that the prevalence of these fairly basic healthy eating practices was low in this large sample of young adults. In terms of gender differences the results showed that women were more likely to try to avoid fat and cholesterol, to eat more fiber, to avoid red meat, and to eat fruit daily; men and women were similar in their use of salt. Women across Europe therefore seemed to have healthier diets than men.

In 2001 a similar large-scale survey was carried out to assess the diets of young people aged 19 and 24 years in the UK (9). The results from this survey indicated that 98 percent consumed fewer than the five portions of fruit and vegetables recommended per day (average 1.6 portions). They consumed more saturated fat than is recommended and more sugar, mostly from fizzy drinks, consumption of which had increased from 3–4 cans per week in 1986/1987 to 8–9 cans per week in 2000/2001. Their diets were also deficient in vitamin D, vitamin A, and iron (again particularly those of women). Therefore young people’s diets are not matching the

Take home points

- For adults, a healthy diet is: lots of fruit and vegetables, lots of brown bread, brown rice, and brown pasta, some meat and fish and dairy products, not many sweets or foods high in fat (i.e. fried foods). Adults should also cut down on alcohol and salt.
- For children, a healthy diet is: lots of fruit and vegetables, lots of brown bread, brown rice, and brown pasta, some meat and fish, not many sweets or fried foods. Children should eat more dairy products than adults and can eat more fat. Children should also have a diet low in salt and no alcohol.
- Children need a varied diet.
- Children will eventually eat what their parents eat, so be a good role model.
- Don't make food into a battle for children – it will backfire on you as they get older.

recommended intakes and are particularly high in saturated fat and sugar and low in fruit and vegetables.

Adult diets

Unfortunately, poor diets are also common in adulthood. One large-scale survey in 2001 in the UK (9) reported that although 86 percent of adults surveyed ate less than the five recommended portions of fruit and vegetables per day (average 2.8 per day), intake had increased by 0.4 portions per day since the previous survey in 1986/1987. Adult diets were also found to be too high in sugar, salt, and alcohol and deficient in iron and vitamin D. Compared to 10 years previously, the intake of red meat, meat-based dishes, and processed meat and saturated fat had decreased.

In Summary

Children should eat a diet high in complex carbohydrates such as brown bread, brown pasta, and brown rice and high in fruit and vegetables. After

the age of 5, their diets should be relatively low in fat and sugary foods such as sweets, cakes, and biscuits, which should only make up a small part of what they eat. In addition, their salt intake should be low and they shouldn't drink any alcohol. Children's diets are important as not only does a healthy diet help them grow and develop, but what they learn to eat in childhood will have a huge influence on what they eat once they are adults. Furthermore, once they are adults their diet may cause, or protect them from, a wide range of illnesses such as coronary heart disease, cancer, diabetes, and gallstones. Yet we know that the diets of children and young adults are often poor and particularly low in fruit and vegetables and high in fat and salt.