

Obesity

Despite the fact that in January each year the media attempt to seduce women with even more 'new' methods of restricting their intake of food in order to look more like supermodels, an international effort to halt the worldwide obesity epidemic has recently been launched. According to the World Health Organisation, 'obesity is rising sharply and the current management or prevention strategies are not capable of arresting this epidemic'.

- In the UK alone it is estimated that over one in four people are overweight to some degree. The rate of obesity – those seriously overweight – doubled in men and women from 1980 to 1996 in the UK. In 1996 16 per cent of men and 17.3 per cent of women were classified as obese and many more were moderately overweight. By 1998, 58.2 per cent of people were classed as overweight or obese.
- In the USA and Canada one-third of the adult white population is judged to be obese, and one estimate is that on present trends the entire population of America will be obese by the year 2234!
- Australia and New Zealand follow in the polls; European countries also scored highly, and obesity is even becoming a problem in developing countries.
- According to the Risk Factor Prevalence Study Management Committee Report prepared in Canberra in 1989 obesity in Australia increased between 1983 and 1989 by 15 per cent for women and slightly more for men, bringing the totals to 11.1 per cent for women and 9.3 per cent for men. Additionally, the overweight population increased by between five to seven per cent to 22.4 per cent for women and 36.8 per cent for men.
- The Australian Institute of Health & Welfare's unpublished report of 1993 estimated the direct costs of obesity in 1988-89 at \$672 million, with obesity-related coronary heart disease and hypertension accounting for 62 per cent of that amount. The cost of treatment of obesity within the health-care system was \$393 million.

One could be forgiven for wondering how these trends have come about when millions of people begin weight-loss diets each year all over the world. Booksellers fill their shelves with new diet books which they hope will catch the wave of New Year resolutions, and millions of hopeful, unsuspecting people will fall for the hype.

The majority of people who start a diet this month will be starting new diets again this time next year, hoping that their new shape will make them feel good. Fitting into a new outfit may be the goal of many, but the 'feel good' factor does not necessarily follow, and the lost pounds

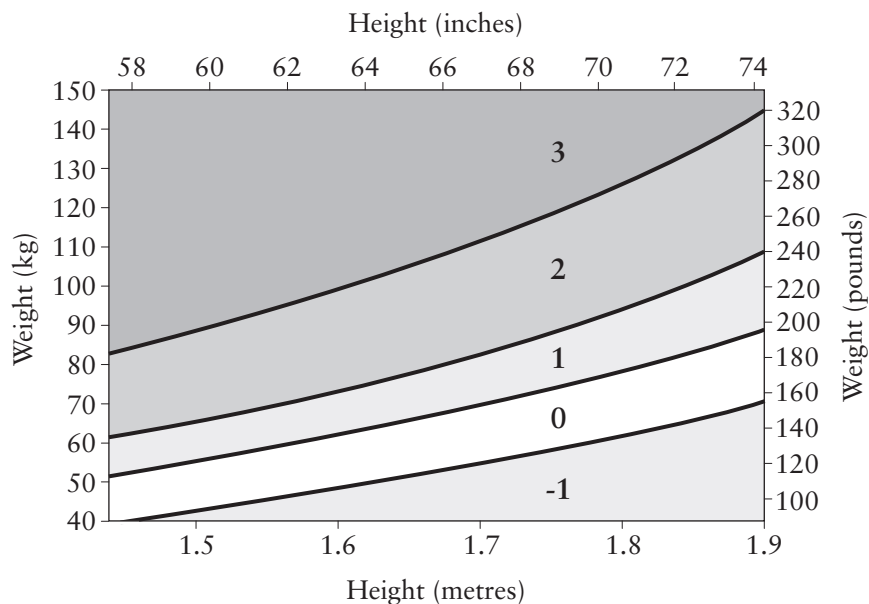
return all too soon. It is acknowledged that weight-loss diets slow down our metabolic rate, which then makes it difficult for us to return to our normal way of eating without putting on more weight than we started with. It follows that after several episodes of 'yo-yo' dieting we will be restricted to consuming very few calories and insufficient nutrients in order to maintain either our weight loss or our sense of well-being.

What is obesity?

In developed countries, obesity is now probably the most common diet-related disorder, while in developing countries obesity is usually a mark of prosperity. Being overweight may be a distinct advantage in a country or community that is used to food shortages; those who are thin and lean may fare less well than their plump counterparts at times of shortage. Unfortunately, we cannot use such excuses for ourselves, and so let's get down to some hard facts; facts which we think will give you an understanding of why you are overweight, and how this can best be tackled, in the short and long term.

First of all, how is obesity defined? The graph below gives measurements for height and weight. It is divided up into five sections, -1, 0, 1, 2, and 3. These are grades of obesity based on weight and height taken from the formula originally devised by a Belgian scientist, Quetelet. Quetelet's Index, which is more usually known as Body Mass Index (BMI), is widely

Height/Weight Chart Showing the Quetelet Grades of Obesity



used in the assessment of obesity. The formula is derived by multiplying the weight in kilos by itself and dividing by the height expressed in metres. The categories are as follows:

- 1: less than 20
- 0: 20–25
- 1: 25–30
- 2: 30–40
- 3: greater than 40

Normal or ideal weight is grade 0. Grade 1 is overweight, usually between 10 and 20 per cent above the ideal weight; grades 2 and 3 are regarded as obese – more than 20 per cent above the ideal weight.

As measured by Body Mass Index, the range associated with the greatest life expectancy and lowest death-rate is 20–25. There is a very slight rise in death rate in those who are mildly overweight, grade 1, but this low rise is so small as to be insignificant. It is grade 2 and especially grade 3 obesity which carry the greatest risk to health. An adult with a BMI of 40 has three times the risk of dying in a year than someone whose weight is ideal. An individual with a BMI of 35 has approximately twice the death-rate of his or her ideal counterpart.

For the majority who are just slightly overweight, grade 1 obesity, the major reasons for dieting are cosmetic and a sense of well-being. Not being overweight, and having a slim, attractive shape, is highly desirable in current fashion. Many of us feel better psychologically when that spare tyre has been whittled away, and if the diet is combined with an exercise programme, there can be a very real improvement in feelings of overall fitness. Medically, there is little change in factors such as blood pressure, and risk of heart disease, though there could be a moderate fall in blood cholesterol level if this is elevated at the start of the diet.

For those with grade 2 or 3 obesity, the potential benefits of losing weight are very real, and the effects on the psychological state of a successful weight loss programme can be dramatic. For example, normal employment may be very different for those who are grossly overweight (grade 3 obesity).

The health risks of obesity

Those who are obese, grades 2 and 3, have a shorter life expectancy, and an increased risk of many illnesses, including diabetes, high blood pressure, heart disease, osteoarthritis, gout, gallstones, reduction in exercise tolerance/level of fitness, and depression. Furthermore, general medical problems may be more difficult to treat in those who are obese. Gastrointestinal disorders, including indigestion, heartburn and constipation, may be more difficult to assess in an obese individual, as the information obtained from a medical examination may be limited.

Additionally, the survival rate of the obese woman with breast cancer is lower than her slim counterpart.

The young obese individual who loses weight to normal or near-normal value may have a substantial improvement in life quality and expectancy, and reduction in risk in practically all of the above. The improvement in arthritis, gout, blood pressure, diabetes, or blood cholesterol level may be dramatic, and evident within a few weeks or months of a dietary programme.

What causes it?

Genetic factors are involved. Analysis of families shows that if both parents are obese, 70 per cent of the children will be obese. If one parent is obese, 40 per cent of the children will be obese, and if both parents are lean, then only 10 per cent of the children will be obese. The predisposition of the parents is thus carried down partially to the children, but of course, we could argue that obese parents eat too much, and thus are likely to over-feed their children, making them obese in turn, and that this has nothing to do with genetics or inheritance. However, in studies of children who have been adopted, the adopted children take after the weight characteristics of their biological parents, rather than those of their adopted parents. This and other work lends substantial support to the idea that the tendency to obesity is to a large degree genetic.

Environmental factors are significant as well. By environment is meant all the factors around us that potentially influence our internal metabolism which we have already seen is initially determined by genetic make-up. With regard to obesity, the most important environmental factors are the food supply, level of exercise, lifestyle and social pressures.

If the food supply, for example, is so meagre that there is barely enough to go round, or starvation conditions exist, then obesity will obviously disappear from the community at large. In such a situation, with a limited food supply, environment is more important than any genetic factor. However, when there is an abundance of food, this allows the obesity tendency to express itself fully. When food is plentiful, some 25 per cent (or more as we have seen in countries like Australia and the USA) of the population may become obese.

The majority of obese individuals will have one parent who is overweight, and only a minority would be the offspring of two obese or two thin parents. At this point you might feel like blaming your mother and father, but this isn't very practical! The only practical solution is in some way to limit the calorie intake of those who are overweight, while taking other steps to improve their rate of weight loss.

In conclusion, it does seem that some people were born to be fat, but are only able to be fat because of the relatively affluent society in which they live.

What your doctor can do

- Check your thyroid to see whether it is underactive.
- Check to ensure that you are not suffering with diabetes.
- Take your blood pressure to determine whether it is high.
- Offer you a simple diet, or refer you to the local dietician.
- Consider drug treatment given with dietary advice over twelve weeks. Many of the older-style appetite suppressants are now banned in the UK. A new drug *Orlistat* acts by inhibiting fat absorption and will cause diarrhoea. It helps approximately one third of patients but prolonged use may lead to vitamin deficiencies and loss of minerals and essential fatty acids.

At the WNAS we have been treating and giving advice to women, many of whom were failed dieters, for some twelve years. We have come to understand that finding the right programme for each individual is the key to both long-term weight loss and, more importantly, good health. Without calorie-counting, we have managed to help thousands of people to understand their body's needs, and as a result to lose weight and reclaim their health. Using our methods people have not only lost weight, but have also overcome common symptoms like migraine headaches, irritable bowel syndrome, fatigue, acne, premenstrual syndrome, eczema and a whole host of other ailments, as well as feeling fitter. The WNAS programme is not just about diet, it encompasses lifestyle, exercise, nutritional supplements when appropriate, and relaxation.

Josephine's story

Josephine was a 46-year-old mother of three who moved with her husband to Geneva thirteen years ago. Her two main problems were gaining an extra 16 kilos and problems with heavy sneezing, especially in the mornings.

I found it difficult to cope in Switzerland in some respects as our children were still in school in the UK and I think the depression concerning that led me to comfort eat. My usual weight was around 60 kilos until the year we moved house. In that year I suddenly gained 16 kilos. Ever since then I have been struggling with my weight. I managed to lose the weight again a year after I had put it on. Then unfortunately it crept back on again and I have been saddled with it ever since. Another problem I have had for many years is constant sneezing. It feels as if I sneeze a million times a day from the minute I get up in the morning. I have been treated with all sorts of anti-histamine preparations and have had tests for asthma in the past.

I contacted the WNAS for help after seeing a piece on television. One of the WNAS patients spoke of similar problems that had been sorted out. I sent for information and made an appointment for my first telephone consultation. I was given a programme aimed at keeping my blood sugar level constant so that I did not get cravings for sweet food and cheese, as I had done previously. I followed the Vitality Diet which is a plan written by the WNAS which involved cutting out all sorts of things initially and then adding them back gradually.

During the first week of the programme I felt half-drugged and had an awful headache. This gradually wore off until I suddenly felt as if I had come out the end of a tunnel. I lost 5 kilos in the first month – the weight seemed to fall off me and then the weight loss slowed down to a more gradual pace. As a result of the diet I found that I could not tolerate chocolate or vinegar, and alcohol made me feel as if I had a hangover. I had also been suffering with irritable bowel syndrome for four years and cutting out wheat, oats and coffee seemed to sort all those symptoms out as well. I reached my target weight and everyone commented on how well I looked and I certainly felt brilliant. I have had no stomach ache or headache since then, as long as I stick to the diet. It has been three years since I followed the diet and I really do feel like a new woman.'

What you can do

- Follow the instructions for The Simple Weight-Loss Diet on page 452.
- Start the diet when you are ready to do so. You will need time; this is not a diet to do in a hurry. You need to plan and set aside time for shopping, preparation and consumption of meals. Go shopping before beginning your diet, preferably after you have eaten so that you are not starving hungry and tempted to cheat. Take a list with you and make sure you stick to it.
- Eat regular meals, at least three meals a day, preferably with two small snacks in between.
- Never miss meals: irregular eating leads to less healthy weight loss and increased feelings of hunger.
- It is useful to eat from a small plate not a large one. A well-stocked medium-sized lunch or breakfast plate looks more satisfying than a large dinner plate only half filled.
- Chew your food well and savour each mouthful. Try not to hurry your meals.
- Eat fresh foods whenever possible. If at all possible, prepare one meal at a time. If this is not practical, try cooking a chicken, for example, to eat cold over a period of several days.

- Grill food rather than fry to keep your fat consumption low and to preserve the nutrients.
- Do at least four sessions of exercise per week to the point of breathlessness, which will help to speed up your metabolic rate, and thus burn the fat off! If you haven't been exercising regularly for some time, take it easy to begin with (see page 32).
- Fibre promotes weight loss by binding with water in the stomach, forming a gelatinous mass which induces a feeling of satiety. The theory is that appetite is switched off and less food is consumed. However, this does not work with individuals who do not have this appetite mechanism, and can eat regardless of whether they are hungry or not. Good fibre supplements are golden linseeds, psyllium and glucomannan.
- Supporting blood sugar levels is important for weight loss. If blood sugar levels are up and down all day, snacking on high fat and sugar foods can be a temptation to provide a quick 'fix' of energy until the next dip. Foods with a low to medium glycaemic index factor (see page 172 for more information) should be eaten primarily. Foods in this category are broken down into sugar slowly, therefore keeping blood sugar levels stable for longer.
- The mineral chromium plays an important role in healthy blood sugar control as it improves the sensitivity of the cells to the hormone insulin. Insulin's action is to drive the glucose out of the bloodstream into the cells for energy. GTF chromium is thought to be the most efficient as it is bound with vitamin B3 and amino acids to facilitate its action.
- 5-HTP, precursor of the amino acid tryptophan plays an important role in the appetite control mechanism. Research shows that those with a lower level of tryptophan never get the message to stop eating, even when they are full. This amino acid appears to function by promoting satiety.
- Consider spending a week at a health retreat to get yourself started – perhaps as part of your annual holiday. Having the appropriate food handed to you literally on a plate, and spending your time being pampered will undoubtedly help you to focus on a new sense of well-being.
- If you have tried endless diets without success, and feel you have a psychological block about losing your weight, ask your doctor about the possibility of having some counselling.

Complementary therapies

If your problem is related to an underactive thyroid or sluggish metabolism, it may be worth investigating what our recommended therapies have to offer. The acupuncturist would be my first port of call, as unblocking the energy channels will help you back to optimum

metabolism. The nitty gritty on overcoming obesity though is to eat less and exercise more.

See also: What's wrong with present-day diet and lifestyle?, The simple weight loss diet, References and Recommended reading.

Osteoporosis

As a result of osteoporosis one in three women and one in twelve men will suffer fractures of the hip, spine or wrist. Apart from the obvious pain and disability, osteoporosis often brings with it a loss of height and curvature of the spine, known in the UK as 'dowager's hump'. Within six months of sustaining a hip fracture it is estimated that some 20 per cent of patients will die from complications associated with the injury itself, or the enforced immobility. This applies mainly to the elderly. However, osteoporosis is both preventable and treatable.

What is osteoporosis?

Osteoporosis is literally a thinning of the bones. The bones are composed of a 'skeleton' or scaffold of connective tissue around which minerals in crystalline form are laid down, rather like bricks being built up on a steel framework. The framework has certain flexibility as well as great strength, and the minerals give the structure resistance to pressure or crushing. So the structure of bone is rather similar to that of reinforced concrete.

We have two types of bone: trabecular, accounting for about 20 per cent of our bone mass, and cortical, which accounts for the other 80 per cent. Trabecular bone is found mainly in the spine, pelvis and ends of the long bones, such as the head of the femur. It is the type of bone most quickly lost after the menopause. Cortical bone is found in the shaft of long bones and the skull, and is lost more gradually. We are continually losing small amounts of bone throughout our adult life, but about 10 per cent of our skeleton is remodelled during the space of a year.

In osteoporosis an imbalance develops between bone loss and the rate at which new bone is deposited. There is a reduction in both the amount of connective tissue and the mineral content of the bone. The loss of bone mass reduces its strength and increases the likelihood that the bone will break when pressure is brought to bear on it.

You are at risk of osteoporosis if you have ever had or suffered from:

- poor diet, low in calcium, especially dairy products
- an early menopause, spontaneously, or following surgery

- thyroid or other hormonal problems
- low body weight, or suffered with anorexia
- petite build
- cigarette smoking
- regular and excessive alcohol consumption
- lack of exercise and sedentary lifestyle
- excessive physical activity, as in athletes or ballet dancers
- steroid drugs
- suffered more than one fracture since the menopause
- a close relative with osteoporosis
- chronic illness affecting digestion, kidney and liver function.

Bone density

There are a number of dietary, lifestyle and environmental factors that influence the strength and density of bones. The mineral content of a woman's bones at the time of the menopause is not so much influenced by her current dietary intake, but by her past intake of calcium over the previous 40 or 50 years.

The strength of bones is determined by:

- diet, especially the intake of calcium during the growing years
- physical activity, particularly weight-bearing exercise
- hormonal factors, particularly the balance of oestrogen
- genetic factors, which determine the size of bones and muscles.

Modern diet has much to do with the risks of developing osteoporosis in the same way as it influences heart disease and cancer. Many of us consume a diet which, though adequate in the short term, does not provide a good or optimum intake of nutrients in the longer term, thus predisposing us to diseases such as osteoporosis.

Calcium

Calcium is particularly important. Average intakes in the UK, for women, are around 700 mg per day, the amount provided by just over a pint of milk. However, many consume less than this and doing so during childhood and early adult life will mean that they reach middle and old age with a low bone mass and a high risk of osteoporosis. A study published in the *British Medical Journal*, by Professor John Kanis, from the Medical Research Council in Leeds, showed that long-term dose in excess of 1,000 mg of calcium per day decreased hip fracture rate by 25 per cent. This amount of calcium is only achieved by a modest percentage of the UK population.

Up to two-thirds of our calcium intake may never reach the bone because of certain dietary factors. Common foods such as bran and fizzy drinks contain high amounts of phosphates and can interfere with the

absorption of calcium from the diet. A diet rich in salt and animal protein can increase the loss of calcium from the urine.

It is vitally important to concentrate on a diet rich in calcium. You will note from the Calcium List of Foods on page 487 that Cheddar cheese contains ten times more calcium than cottage cheese, for example. You will need to take a close look at the list and choose the foods that you enjoy, knowing that they are rich in calcium and other important nutrients.

- *Calcium* in bone also needs phosphorus, another mineral, which is abundantly supplied by both healthy and convenience foods.
- *Vitamin D* This is mainly derived from the action of sunlight on our skin, and only small amounts come from the diet. It is needed to enhance the absorption of calcium from the diet.
- *Essential Fatty Acids* Recent research suggests that the essential fatty acids, EFAs, which are part of a healthy diet, also influence the balance of calcium in our bodies, especially in our bones. There are two types of essential fatty acids, the Omega-3 series and the Omega-6 series. The Omega-3 series are derived from fish oils, oily fish including mackerel, herring, salmon, pilchards and sardines, as well as from some cooking oils such as rapeseed, from linseed, soya beans and walnuts. These oils may help to reduce the risk of heart disease and benefit arthritis, but also may slow the natural loss of calcium in the urine, which includes some lost from our bones.
- *The Omega-6 series of EFAs* are found in sunflower and corn oil – and margarine made from them – almonds, sesame and pumpkin seeds. These help maintain healthy skin and influence the risk of heart disease. They also seem to help in the absorption of calcium from the diet.

Recent dietary evidence from the UK shows that intakes of these essential fatty acids, though generally adequate, show great variation from person to person, and that the body's ability to make full use of them declines sharply with age.

In addition to this, smoking, alcohol, a poor diet and some conditions such as eczema and diabetes, disturb the metabolism of these essential fats and can lead to deficiency states.

It appears that a number of connected minor nutritional deficiencies have resulted in many of us being at increased risk of osteoporosis from middle-age onwards.

- The best sources of calcium are dairy products, white bread, bony fish and hard water.
- Vitamin D may be obtained from sunlight, fortified cereals, margarine, butter and eggs.

- Regular exercise is an excellent way of helping to increase the uptake of calcium by bones.
- To help achieve a healthy calcium balance in the body, it is best to eat a broadly based healthy diet, limiting the intake of sugar, convenience foods, salt, alcohol and excessive amounts of animal protein.
- Daily supplements of Efacal (see page 353) provide additional calcium and essential fatty acids which are necessary for healthy bones.

Oestrogen

An important part of oestrogen's role is to maintain bone mass and help with the constant process of bone remodelling. When oestrogen levels are optimum our bones are constantly regenerating but when levels fall calcium is no longer directed to our bones and the net result is bone loss. Bone mass is at its peak during the early thirties, and from then on it declines, with an annual bone loss rate of approximately one per cent per year. However, for most women the bone loss increases at around the time of the menopause, and for up to ten years afterwards, with a further loss of two to three per cent per year. By the age of 70, approximately one-third of bone mass will be lost.

Women who experience an early menopause, or who stop menstruating because of excessive dieting or exercise, will have depressed levels of oestrogen, and as a result will be at greater risk of osteoporosis.

What your doctor can do

Interest in osteoporosis has increased considerably during the last decade because of the more widespread use of detection methods. The density of bones can now be measured by scanning the hips and the vertebrae of the spinal column. There are a number of tests available that help to determine the degree of bone loss or fracture risk.

Ordinary x-rays are used to detect existing fractures, but a measure of bone mineral density, using a specialised form of x-ray, is needed to measure bone mass and to monitor the results of treatment. In principle, for women at risk measures of bone mineral density are available in the UK on the National Health, but as the technology is relatively new, some areas of the country may not, as yet, be well served with the appropriate scanning machines. Bone density measurement is also available in the private sector, and costs vary per scan, depending upon the type of scan. Those with a high risk, or with established osteoporosis, should be scanned at regular intervals, of between one and two years.

Simple blood and urine tests are being developed to help identify those who are likely to be 'fast bone losers'. This will not replace bone mineral density scanning, but may prove to be a useful screening test. The blood tests are for calcium and bone chemistry; blood and urine tests are for hormones.

There are a number of very different treatments available for those with osteoporosis. Your own doctor will need to assess which of these options is the most appropriate for you. Those undergoing treatment from their doctor or specialist will need to be monitored, as no treatment is universally effective or free from side-effects.

Hormone Replacement Therapy

Although until recently HRT was thought to have been the great bone saver, and indeed after ten years it seems that women taking HRT have a considerably greater bone mass than women who have not, this does not appear to be sustained in the longer term. After 20 years of taking HRT it seems that there is a tailing off effect, and the women who took HRT may only have a three per cent greater bone mass than women who for their own reasons did not. The usage of HRT in the first ten or more years of the menopause is associated with a significant reduction in the hip fracture rate in women. However, up to two-thirds of women who take HRT come off it within the first nine months because of side-effects or dissatisfaction. (See the chapter on The Menopause, page 298).

For women with an early menopause (before the age of 45) and for some of the others in the high risk groups (see page 304), it is probably advisable to discuss with your doctor the risks and benefits of taking HRT. Those women who start their menopause in their mid-40s onwards will be well advised to help themselves to better bone health, certainly if they are unable or unwilling to tolerate HRT. Indeed, research shows us that there are many tools which will help us to preserve our own bone mass.

June's story

June Harmen was a 38-year-old mother of three-grown up children who was keen to stop taking HRT even though she had found she had osteoporosis.

I served in the police force for many years, and was 5 feet, 5 inches tall on my inception. Following a prolapse I had a hysterectomy and although my ovaries were intact, my doctor prescribed HRT in the form of Premarin.

I persevered with the HRT for a few years, but was put off by the awful side-effects of nausea, depression and weight gain. I put on 7.3 kg (16 lb) which took me from a trim size 12 to a large size 14. But I was afraid to stop taking the HRT as I noticed from comparing height with other family members that I had lost 2 inches in height. Additionally I knew that my mother had lost 6 inches off her height, and my father had osteoporosis after long-term use of steroids.

I eventually came off HRT because I felt so awful, and the night sweats and flushes that followed were flattening. My skin became very dry and the condition of my hair had deteriorated. One year later I read a magazine article about the Women's Nutritional Advisory Service's holistic approach to the menopause, and as the case history in the article sounded just like me I decided to book an appointment at their clinic.

During my consultation a programme of diet, exercise, relaxation and nutritional supplements was worked out, and I got started straightaway. I adjusted to the programme quite quickly and soon noticed that I was feeling better in myself. Within two months the flushes calmed down, my libido started to return, and I generally felt more positive.

A year on I have gone from strength to strength. I feel well, I no longer suffer with symptoms of the menopause, and the condition of my skin and hair has improved. I have continued to take the multi-vitamins and the Efacal the WNAS suggested and am managing my health myself. I never did have a bone-density scan so I have nothing to compare, but I haven't lost any more height and I feel more agile than I have for years.'

Calcium supplements with Etidronate or Alendronate

Etidronate (Didronel PMO) and Alendronate (Fosamax) are two synthetic compounds based on phosphorous which combine with calcium in the bones and help to prevent its loss. They reduce bone loss in the spine, and in the case of Fosamax, in the hip and the forearm. Fracture rates may also be reduced. These treatments are usually combined with calcium or a calcium-rich diet. They are available on prescription and need to be taken for a two to three year period in order to reduce established osteoporosis.

Calcium supplements alone

At a dose of 1,000 mg per day by itself these are mildly effective for some men and women with osteoporosis, and have been shown to reduce hip fracture risk by 25 per cent. It is a cheap, simple and safe treatment, but nowhere near as effective as HRT. Calcium absorption varies greatly from person to person, and is influenced by many dietary factors (see page 346).

Calcium supplements with vitamin D

These are a useful treatment for the very old and those with poor sunlight exposure. Low levels seem common in elderly Europeans, especially if they are housebound. Although vitamin D is necessary for the absorption of calcium from the diet, most of us synthesise enough from sunlight.

Giving strong vitamin D supplements to those who are not deficient can actually cause bone loss due to excess stimulation of the bone-dissolving cells. Supplements containing vitamin D should therefore be taken with caution unless there is a proven deficiency.

Calcitonin

This is a hormonal treatment given by injection, which can be quite effective. This hormone influences the movement of calcium around the body. It is not a sex hormone. Its inconvenience limits its popularity.

What you can do

Do not underestimate the benefits of self-help measures. Each of the diet and lifestyle changes will, by themselves, make little difference in the short term, but over a period of years are likely to be of substantial benefit. Many of the measures will help not just osteoporosis, but also help reduce the risk of heart disease and stroke. What you have to do is:

- change and improve your diet
- take regular weight bearing exercise
- make lifestyle changes
- consider taking nutritional supplements
- see your doctor if you are a high risk case to discuss assessment and other treatments.

Dietary and lifestyle tips

New research shows that it is important to consume a regular amount of plant oestrogens, called phytoestrogens. These allow us to top up on naturally occurring oestrogen on a daily basis, and include:

- soya beans and soya bean products like flour, tofu and soya milk
- golden linseeds, sunflower, pumpkin and sesame seeds
- alfalfa, lentils, chickpeas
- the herb red clover.

It is well established that Japanese women, who already eat a diet particularly rich in plant oestrogen in the form of isoflavones, have far fewer problems with bone loss. On average they consume between 50–100 mg of isoflavones per day, compared to 3g in the UK. At the WNAS we recommend a glass of 'So Good' each day, a soya drink that provides approximately 25 mg of isoflavones. Organic golden linseeds with breakfast cereal, and soya milk, and at least one or two further servings of phytoestrogen rich food through the day, will maintain your blood levels.

There are now also isoflavone rich supplements which have been

shown in clinical trials to regenerate bone. Ipriflavone, the daidzein based product is used exclusively in Europe and a trial on a very new product made from formononetin, from the red clover plant, recently showed four per cent bone regeneration in six months. Overall the studies seem to show that it effectively helps to improve bone density at a dose of 600 mg per day combined with 1000mg of calcium. However, a recent study concluded that it covers the count of white blood cells which are an important part of our immune function. In the UK it is now being marketed as an over-the-counter supplement distributed by Solgar, and is available in most health-food shops.

The herb red clover is a particularly important phytoestrogen as it contains the four dietary isoflavones that are present in typical diets of Eastern, Latin American and Mediterranean communities, which are absent from the typical UK diet. Novogen red clover is an advanced food supplement developed specifically for women over 45, providing 40mg of dietary isoflavones per tablet. We use this at the WNAS in conjunction with a phytoestrogen rich diet. One study showed that taking 40mg of Novogen red clover for one year suppressed the loss of spine bone mineral density compared to placebo. The newest bone support supplement from Novogen is Rimostil. Rimostil has been formulated using a specific combination of isoflavones for the prevention and treatment of osteoporosis. In a recent clinical trial on 50 women over six months, there were highly significant increases in bone density ranging from 2.9 per cent to 4.1 per cent.

- Concentrate on eating foods rich in calcium (see page 487).
- For those women around the time of the menopause and beyond, consume foods that contain naturally occurring oestrogens.
- Make sure your diet contains a variety of foods rich in essential fatty acids (see page 489).
- Limit your consumption of alcohol to a maximum of three to four drinks each week.
- If you smoke, try to cut down gradually or, better still, give up altogether.
- Consume foods rich in Vitamin D if you do not get much sunlight exposure. They include dairy products, margarine, semi-skimmed milk, reduced fat cheese, or fortified cereals like Cornflakes and Rice Krispies.
- Try the menus on page 482.

General health tips

- Avoid excessive consumption of sugar and foods rich in sugar such as fizzy drinks, sweets, cakes and biscuits. Such foods are low in essential nutrients, especially calcium, and high in calories.
- Reduce your intake of salt, both added to cooking and at the table and avoid salty foods like bacon and kippers.
- Eat vegetables and salads daily.
- Eat at least two servings of fresh fruit per day.

- Limit your intake of saturated animal fats by consuming leaner cuts of meat, reduced-fat dairy products, and avoiding fried foods. This is particularly relevant if you are overweight.
- Reduce your intake of tea, coffee, cola and chocolate which all contain caffeine, and use alternatives now available in most supermarkets and health-food shops.

Regenerating lost bone?

A diet rich in essential nutrients and regular exercise can affect bone mass, and so too can a relatively new supplement called Efacal, a specially formulated product produced by Efamol. A number of studies suggest that combining calcium with EFAs from evening primrose oil and marine fish oil may be an effective way of treating osteoporosis. A recently published study, conducted by Dr Kruger and her colleagues from the University of Pretoria, South Africa, tested the effect of these oils on calcium balance in a group of women with osteoporosis. After a four-month trial period there were a number of changes which suggested increased absorption of calcium from the diet and increased uptake of calcium by the bone. Efacal has been shown to:

- improve the uptake of calcium from diet through the gut wall
- decrease the amount of calcium lost through the urine
- help direct calcium to sites of deposition in the bone and may thus help prevent the bone-thinning process. It is effectively the stamp on the envelope that makes delivery far more likely.

Each capsule of Efacal contains 400 mg of Efamol pure evening primrose oil, 44 mg of marine fish oil and 100 mg of calcium. Those at risk of osteoporosis should take four capsules every day with the evening meal. For preventative purposes, four capsules should be taken every day for an initial twelve-week period, followed by a daily dose of two capsules per day.

Exercise

Exercise is a valuable tool at all stages of life to promote good health, and is an acknowledged way of helping to protect against heart disease and to help keep bones strong. Plenty of exercise in childhood, including sport at school, helps to build up a high peak bone-mass.

From the time bones reach their peak mass, which is approximately in the mid-30s, the destiny of bone health for many rests in their own hands. It is influenced by diet, as you have seen, and also by lifestyle. At the time of the menopause, when women are most at risk of bone loss, exercise must become a vital part of the everyday schedule. Research has shown that weight-bearing exercise, in other words anything that involves putting weight through your bones, helps to stimulate the regeneration of bone tissue by reducing calcium loss.

The consensus from studies is that you need to exercise moderately

three or four times each week, for 30–45 minutes each time, so long as you do not suffer with cardiovascular disease. The pay off, apart from helping to strengthen your bones, will be that within twelve weeks you can expect to feel more energetic, cope with stress more effectively, sleep better, have increased resistance to infection and feel a lot better generally.

Anything that involves putting pressure on your bones is classed as weight bearing. Examples are:

- jogging
- brisk walking
- playing racquet sports
- lifting weights
- a workout
- skipping
- press-ups
- squeezing tennis balls

Walking helps to preserve the hips and the spine, but hand and wrist exercises, which consist of gripping and rotating, are necessary to strengthen the wrist bones. The disabled, the bedbound – even if it is only for a few weeks – and the housebound are very much at risk, as are astronauts because of the weightlessness.

However, too much exercise can be damaging. It is now known that young female athletes, gymnasts and ballet dancers are high-risk groups for osteoporosis. Their intensive training and low body weight often prevent them from menstruating, resulting in lowered levels of oestrogen, which subsequently affects their bone mass.

It is important that those who exercise vigorously have an adequate and nutritious diet in order to maintain their body weight. Failure to do so will further increase the risk of osteoporosis. Some performance athletes and young ballet dancers may need nutritional supplements in order to ensure dietary adequacy.

Avoid smoking and alcohol

Smoking and drinking alcohol to excess are two of the easiest ways of increasing your risk of osteoporosis.

- Women who stop smoking and drinking at the time of the menopause may reduce their hip fracture rate by as much as 40 per cent.
- Both smoking and drinking alcohol have a broad spectrum, anti-nutrient effect, and accelerate the loss of nutrients.
- Smokers and those consuming lots of alcohol usually have different diets and different essential fatty acid levels too, but it's never too late to stop!

See also: The menopause, What's wrong with present-day diet and lifestyle?, Thyroid disease, Prevent osteoporosis, sample high calcium menu, References, Recommended reading (*Cruising Through the Menopause, The WNAS Guide to Better Bones*).

Painful Ovulation

Painful ovulation, or *Mittelschmerz*, as it is also known, is quite common and isn't usually severe. The pain is usually on one side of the abdomen and in many cases only lasts a few hours. Slight mid-cycle spotting may also accompany the pain.

Mittelschmerz, literally 'middle pain', can occur in women of all ages. At its most severe, it can feel like a needle-piercing pain combined with severe cramp, as if someone is squeezing your insides, and this can last for several days. The pain often starts as a gnawing sensation with an ache in the groin, which then builds up to a crescendo.

First, let us look at the process of ovulation. It's a natural process that takes place in any fertile woman. It's the body's way of preparing for pregnancy, and it occurs once a month. An ovum or egg is produced by a follicle in the ovary approximately halfway through a regular menstrual cycle. The common signs of ovulation include an increase in body temperature, and changes in the amount and constituency of cervical mucus.

When an egg grows each month it develops inside a small cyst. By the time it is ready to be released, it will have reached about 2.5 cm (1 inch) in diameter. If you are examined on an ultrasound scan immediately prior to ovulation, the cyst would show up on the ovary, and this would be entirely normal. When the cyst ruptures, the fluid from it leaks into the abdominal cavity. Often some blood will escape from the cyst as well, and this too spills into the abdomen. Under normal circumstances the body deals with these fluids through its natural wastage system. Both the fluid, and the blood, are capable of irritating the lining of the abdominal cavity and it is this irritation that causes the *Mittelschmerz* pain in some women.

Why some women suffer ovulation pain and others don't remains a mystery to doctors. Sometimes the ovulation pain signals the beginning of the unpleasant symptoms of premenstrual syndrome, but ovulation pains can just as easily occur in women who do not suffer with PMS. In some cases women suffer with ovulation pain for several days, followed by nearly two weeks of awful PMS symptoms which takes them into a heavy and painful period. This only leaves them with one normal week per month in which to recover!

If you suffer with excruciating pain mid-cycle, and it occurs on a regular basis, you should consult your doctor to ensure that there is nothing more sinister involved. It's a good idea to chart your symptoms to ensure that they do occur mid-cycle, and are not being confused with a grumbling appendix, for example, or another abdominal problem.

As these cycles differ from month to month, the pains may start by themselves, or they may begin after childbirth, but then again they can occur for the first time after childbirth. So there is no hard or fast pattern.

What your doctor can do

- Examine you to determine whether the pain is related to ovulation or something entirely different, like an inflamed appendix or bowel. As everything is so close together it is sometimes difficult to tell, unless you chart your symptoms over a few months, to confirm a mid-cycle pattern.
- Most doctors will recommend the contraceptive pill as a solution, as this usually prevents the body from ovulating. When this happens, the cyst that causes the pain when it erupts isn't able to develop, and as a result the *Mittelschmerz* doesn't occur. So the Pill may be a good solution if you are looking for contraception as well, and if it suits you.

At the Women's Nutritional Advisory Service, we have been treating women with period-related problems since 1984. Initially, we set out to help women over their premenstrual problems but as an added bonus we discovered that we were also helping to lighten and regulate periods as well as helping to overcome period pains and mid-cycle ovulation pains.

Low levels of nutrients, particularly magnesium, iron and B vitamins, can affect brain chemistry, and thus the ability to deal with ovulation and the muscle contractions of the uterus. Pregnancy and breast-feeding place substantially greater nutritional demands on women's bodies, and often, when women are under-educated about foods that are rich in the important nutrients, these nutrients are not replaced.

We know from experience that by improving diet, taking specific nutritional supplements and exercising, you stand every chance of overcoming menstrual symptoms, including mid-cycle ovulation pain.

What you can do

- Try to reduce the number of teas and coffees you drink to no more than a total of four per day. Try decaffeinated varieties and the herbal alternatives. One particular herbal tea, which is a tea lookalike, called Rooibosch Eleven O'Clock, has been shown to decrease muscle spasm, so may well be worth trying.
- Have a salad and three portions each of fruit and vegetables daily. Include green leafy vegetables like broccoli, cabbage or spinach as these are potentially high in magnesium.
- Cut down on sweets, cakes, biscuits and chocolate and eat more wholesome snacks instead, like nuts and raisins, Ryvita and spreads, or fresh fruit and yoghurts.
- Avoid animal fat and use lean cuts of meat.
- Reduce your alcohol consumption to no more than three or four glasses of wine or the equivalent per week.

- When the pain occurs, place a heat pack or hot water bottle over your abdomen, and try to rest, lying face down on your tummy, for 10–15 minutes.
- As well as making dietary changes you may be helped by taking some specific vitamins and minerals which are rich in magnesium. Optivite, a multi-vitamin and mineral preparation which has been through four properly conducted clinical trials for premenstrual syndrome, is useful in regulating other period problems.
- You may also need to take some extra magnesium supplements around mid-cycle.
- Regular exercise is helpful throughout the cycle as it will help to keep your muscles toned.
- Yoga and other methods of relaxation are a useful tool, especially around the time of ovulation, as they will help you to relax.
- Massage is another effective way of helping to reduce muscle spasm. Try the self-massage using aromatherapy oils described on page 31.

Complementary therapies

Acupuncture and cranial osteopathy would be top of our list of therapies to try, both of which are good ways of unblocking the energy channels. Herbal and homeopathic remedies would be worth a try too. If you are self-medicating you could try Colocynthis, Naja, Lycopodium or Palladium, all of which are homeopathic remedies. Herbal medicine prepared by a qualified practitioner would also be worth trying. If you would like to consult an expert, you will find the addresses of the relevant associations in the Useful addresses list.

See also: Standard references.

Palpitations

The term palpitations is used to describe rapid or irregular heartbeats. They are felt as a thumping or fluttering sensation in the chest and may last just for a few moments or persist for hours or days depending upon their cause. Associated symptoms include shortness of breath, giddiness or sudden blackout, chest pain or an urgent desire to pass water. The heart has its own clock which keeps it beating at around 70 beats per minute. An impulse is generated at the top part of the heart called the atrium and this is spread to the other parts of the heart by a conducting system which is distinct from the muscles of the heart. The pacemaker or its conducting system may be at fault.

What causes them?

- ischaemic heart disease
- disorders of the heart pacemaker system itself
- disease of the valves of the heart
- an overactive thyroid gland
- infection
- side-effects to drug therapy
- nutritional problems
- alcohol excess
- caffeine sensitivity

What your doctor can do

- Assess the type of palpitation and its possible cause. This always needs an ECG electrical heart tracing, blood tests and often specialist examinations if they are severe.
- Treat the palpitations with a variety of drugs. Occasionally this means using powerful drugs with significant side-effects. These may be minimised by some of the self-help measures.
- Treat any underlying heart problem or other cause.
- For some types of palpitations, treatment with aspirin or another anti-clotting drug is needed as there can be an associated risk of a stroke.

What you can do

- Avoid alcohol.
- Avoid caffeine (see page 6) mainly in tea, coffee, cola-based drinks and some painkillers.
- Exercise regularly if possible and appropriate. This can help to establish a more normal heart rhythm and over-ride the tendency for certain types of palpitations.
- Try and cut short an attack of rapid heartbeat with the following manoeuvres:
 - Lie down, take a deep breath in, pinch your nose, close your mouth and try to breathe out but do not let any air pass.
 - Massage the mid-point at the front of the neck at the level of the Adam's apple. This is where nerves that control heart rate and blood pressure are situated.
 - Close your eyes and press quite firmly with your fingers on them.These measures all help to send a certain signal to the heart which can help switch off certain types of usually non-serious palpitations.

- Supplements of vitamin B and magnesium might be helpful. A strong B complex and about 30 mg per day of magnesium would be appropriate. Check with your doctor first before trying this. It should be combined with The Very Nutritious Diet (see page 437). You will need to follow this routine for three to four months before any real benefit can be seen, but the result is unlikely to be powerful enough to control palpitations of a serious nature.

See also: Standard references.

Pancreatic Disease

The pancreas is a large gland situated just below the stomach, and has two main functions. The bulk of the gland is involved in producing digestive enzymes needed for the breakdown of fats, and its other responsibility is the production of the hormone insulin.

What are the symptoms?

Poor function of the pancreas causes diarrhoea due to the poor absorption of fats. The stools are typically pale, offensive smelling and associated with abdominal bloating and wind. Abdominal pain usually occurs at some stage, and can be severe; typically it is situated in the upper abdomen and may pass through to the back.

What causes it?

The main causes are:

- alcohol excess
- in association with gallstones
- following certain infections including mumps virus
- in association with a variety of rare conditions
- after radiation therapy for cancer

What your doctor can do

- If possible, remove the cause.
- Give digestive enzymes to replace those usually provided by the pancreas.
- Consider surgery if the structure of the pancreas is very distorted.

What you can do

- Do not drink alcohol.
- Do not smoke cigarettes – they reduce pancreatic function.
- Follow the recommendations for The Very Nutritious Diet (see page 437).
- Eat little and often, avoiding very fatty foods. Regular snacks between meals of fruit with small amounts of nuts, bread with small amounts of nut or seed spreads, or milk-based beverages should be tried.
- Nutritional supplements are often needed. Multivitamins with vitamins A and D are likely to be an appropriate supplement. Supplements of zinc and selenium may also be necessary. Vitamin C may help relieve the pain from this condition.

Pelvic Pain

Pain in the pelvis can vary from fleeting mild discomfort to severe gripping pains that take your breath away. These can prevent you from taking another step, and they can wreck the quality of your life. The pain may pass up into the abdomen or up into the buttocks and down into the legs. There are a variety of underlying causes for the pain, some of which are more serious than others:

- the presence of fibroids
- cysts on the ovaries
- infected Fallopian tubes
- endometriosis or adenomyosis (endometriosis growing within the muscular coat of the womb)
- an ectopic pregnancy
- pelvic inflammatory disease
- appendicitis or other non-gynaecological condition.

We have covered the conditions that cause pelvic pain that we can influence with self-help measures. They are listed in alphabetical order. See *fibroids*, *endometriosis*, *pelvic inflammatory disease*, *ovarian cysts* and *polycystic ovaries*.

FIBROIDS

Between 20 and 25 per cent of women over the age of 35 have fibroids. They are benign (non-cancerous) tumours or fibrous lumps, which grow in the muscle lining of the uterus wall, and are the commonest reason why women experience regular heavy periods. One-third of women with

fibroids bleed so heavily that they become anaemic (see page 60). The fibroids are composed of a combination of smooth muscle and connective tissue. Their size can vary from that of a small pea to that of a large orange, or even larger, which would greatly increase the volume of the uterus.

Fibroids grow slowly, and can cause heavy bleeding, back pain, pelvic pain and, when large, place pressure on nearby organs or structures like the bladder, bowel or rectum. When there is pressure on the bowel constipation can occur, and when pressure is placed on the rectal or pelvic veins, haemorrhoids or varicose veins in the legs can develop. Only very rarely do they develop into cancer.

What are the symptoms?

- long heavy periods
- infertility
- pressure in the abdomen which may press on other organs like the bowel, and cause constipation, or the bladder and cause frequent urination
- swollen abdomen
- backache

Fibroids can occasionally cause problems in pregnancy. A fibroid may grow in a place which blocks the exit of the baby thereby resulting in a difficult labour or creating a situation where a caesarean section is required. Also, there is a greater than normal chance of the baby lying in an abnormal position in the womb and of heavy bleeding after birth.

What causes them?

- Fibroids are thought to depend on oestrogen, as they do not occur prior to puberty and become smaller after the menopause. Just why they occur in some women and not others is not fully understood.
- There is a higher incidence of fibroids amongst obese women who have above average levels of growth hormone and blood glucose.
- It is thought that genetic factors may also play a part in the predisposition, as black women in the USA, for example, are three to nine times more likely to develop fibroids than their white counterparts.
- Fibroids are also more common in women who have not been pregnant or have small families.

What your doctor can do

- Eliminate the possibility of pregnancy by testing your urine and examining you.

- Perform a cervical smear to eliminate the possibility of cancer of the cervix.
- Give routine blood tests to check for anaemia, any underlying infection or sinister growth.
- Prescribe a supplement of iron (to be taken with fruit juice) if you are anaemic.
- Give a vaginal ultrasound to check the appearance of the uterus and other related structures. This is easy to perform and is an excellent test.
- Refer you to a gynaecologist for a laparoscopy, a minor investigative operation that, with the use of a laparoscope inserted through the abdominal wall, examines the pelvic structures.
- The surgeon may suggest removing the fibroids if they are potentially troublesome, and this procedure is called myomectomy. Laser therapy is sometimes used also these days.

In the main, small fibroids are not troublesome, and are best left alone. If they do become large, and there is fear of them pressing on a nearby organ or blocking the cervix or the Fallopian tubes they will need to be removed. Women with fibroids are often advised to have a hysterectomy. If you receive this advice, and you are not too troubled by your symptoms, then you should certainly question it, (see page 243).

What you can do

- Waiting to see whether the fibroids cause symptoms that affect the quality of your life is a reasonable policy. If not, they are probably best kept away from the surgeon's knife.
- In theory a diet that prevents oestrogen surges may help to control fibroids. Concentrate on eating a high-fibre, low saturated fat and low sugar diet (see Eating for Health, page 437).
- Avoid or severely limit meat and dairy products unless they are organic. These foods contain an abundance of synthetic hormones and antibiotics. Dairy products are also a primary source of arachidonic acid – the precursor to the pro-inflammatory series-2 prostaglandins. The high saturated fat content of many dairy products is a risk factor for excess oestrogen levels in the body.
- New research shows that it is important to consume regular amount of plant oestrogens, called phytoestrogens. They have a modulating effect on our body's oestrogen, raising levels if they are too low and conversely lowering them when there are signs of 'oestrogen dominance'. Phytoestrogens predominate in soya beans and soya bean products like flour, tofu and soya milk, golden linseeds and the herb red clover (tablets, or sprouted seeds).

- Increase your intake of fibre in the form of wholegrains and fresh fruit and vegetables, especially if you suffer with constipation. Fibre promotes oestrogen excretion.
- Women with fibroids should avoid alcohol entirely or consume it in small amounts. Alcohol is stressful to the liver and can affect the liver's ability to metabolise hormones efficiently. Alcohol also depletes the body's B-complex vitamins and minerals such as magnesium.
- Sugar, like alcohol, depletes the body's B-complex vitamins and minerals, which can impair hormone metabolism in the liver and can worsen muscle tension and irritability as well as nervous tension and anxiety.
- Essential fatty acids (EFAs) are beneficial in the treatment of fibroids particularly where menstrual cramps are severe. EFAs are converted into anti-inflammatory hormone-like substances called prostaglandins. These prostaglandins have muscle-relaxant and blood vessel relaxant properties that can significantly reduce muscle cramps and tension. The best sources of EFAs are sunflower oil, safflower oil, walnut oil, raw flaxseed oil, pumpkin seed oil and oily fish such as pilchards, mackerel and sardines.
- Lose weight if you need to as well.
- The B vitamins and magnesium may also help to regulate oestrogen metabolism, so you could try supplements of these. Any response to these treatments is likely to take months if not years. So be patient!

Complementary therapies

Herbal medicine may have quite a bit to offer. It will take an experienced herbal practitioner to work out the right prescription. Homeopathic remedies are worth a try, and so too is acupuncture.

ENDOMETRIOSIS

Endometriosis, where the tissue forming the lining of the womb grows outside the womb, around other organs, is the most common cause of chronic pain in women of child-bearing age. The pain nearly always coincides with the menstrual period, and may also be experienced at the time of ovulation, approximately mid-cycle. The pain can also be triggered by sexual intercourse, a bowel motion or emptying the bladder, and sometimes causes spotting between periods.

The extraneous endometrial cells (womb lining) not only grow outside the uterus, but they also mimic the function of the endometrium, in that they have a monthly bleed. In mild cases the blood is reabsorbed by the body, but in more severe cases cysts form, which then weep and cause pelvic irritation. The length of time a woman suffers varies from person to person. Some women only suffer for a few months, whilst others suffer

all their menstruating lives. It is often better during pregnancy, which is why becoming pregnant may be offered as the solution.

Endometriosis can be very painful, restricting your lifestyle and physical abilities. It is associated with infertility, but it seems that many sufferers do manage to conceive without too much difficulty. Reports of just how common this condition are varied probably because it is difficult to assess precisely. The diagnosis has to be made during a laparoscopy, a telescopic look into the abdominal cavity, which is not something most well women would undergo just to pass the time of day! Therefore, it is impossible to assess how many women without symptoms may or may not be suffering to some degree. The current medical view is that some women are born with a predisposition to endometriosis.

The symptoms are:

- period-like cramp pains which may be quite severe
- heavy bleeding
- inability to conceive
- painful intercourse.

What your doctor can do

To some degree the cause of endometriosis is still somewhat of a mystery, and the choices doctors have at their disposal are limited to drugs and surgery.

- Eliminate the possibility that anything other than endometriosis could be causing the pain, by taking a careful history, examining you and doing routine blood screening. Infection causing PID (pelvic inflammatory disease) must be excluded.
- Drugs such as progestogens and Danazol are able to cause the endometrial tissue to shrink. They work by blocking the action of oestrogen, which seems to be an important factor in the multiplication of endometrial cells. The treatment would need to be continued over several months, and would only mask symptoms. Most of the drugs used do have a list of side-effects, so it is often a question of making a choice between existing symptoms or the drug-induced symptoms. The success rate using drug therapy is in the region of 40 per cent.
- More powerful drugs called gonadotrophic releasing hormone agonists. These hormone suppressing agents switch off the whole menstrual cycle, producing an artificial menopause. They are very effective, but can only be used in severe cases and for a limited period of time. Hot flushes and osteoporosis are inevitable side effects.
- A skilled surgeon may be able to remove the endometrial cells and cysts from the unwanted places in the pelvic cavity by laparoscopy. Laser treatment seems to be equally good at destroying these unwanted

cells as the scalpel. The success rate following surgery is in the region of 80 per cent, double that for drug therapy, but surgery is not without risks.

What you can do

There is no clear benefit from the many branches of complementary therapy, although it is always worth trying new options as research evolves. The nutritional guidelines are very similar to those for fibroids (see page 360).

- Try following a diet high in fibre and low in animal fat, as this may prevent oestrogen surges (see page 446).
- Eating unsalted nuts and seeds contain beneficial essential fatty acids to relieve the pain and inflammation.
- Take supplements of multi-vitamins and minerals, with extra magnesium (300 mg) and evening primrose oil with marine fish oil, for their hormone-regulating and anti-inflammatory potential. Efamol marine fish oil is the purest form, containing *no* trace of heavy metals. Efamol is one of the only brands authorised by Greenpeace for its purity.
- Take a supplement of zinc, a mineral necessary for correct metabolism of essential fatty acids and conversion into hormone-like prostaglandins. Three types of prostaglandin exist – series one, two and three. Series one and three have powerful anti-inflammatory properties, while series two, derived from arachidonic acid potentiate inflammation. Zinc deficiency results in impaired prostaglandin one and three synthesis, therefore increasing inflammation and pain associated with endometriosis.
- Reduce consumption of wheat and bran which contain phytic acid. Phytic acid binds with zinc, inhibiting its absorption.
- Take the amino acid DLPA which is thought to relieve the pain associated with endometriosis. DLPA works by inhibiting the enzymes which normally rapidly inactivate the natural pain-killing endorphins produced by the brain.
- Eat organic foods where possible. Some research has shown a link between pesticides such as dioxin and PCBs which are toxic to the immune system and interfere with hormones.
- Limit meat and dairy products unless they are low fat and preferably organic. These foods contain an abundance of synthetic hormones and antibiotics. Dairy products are also a primary source of arachidonic acid – the precursor to the pro-inflammatory series 2 prostaglandins. The high saturated fat content of many dairy products is a risk factor for excess oestrogen levels in the body.

PELVIC INFLAMMATORY DISEASE

This is a term used to describe inflammation caused by micro-organisms to any of the female organs, including the Fallopian tubes, ovaries, vagina, cervix, endometrium or uterus. The discomfort it causes can vary from none or very little, to in extreme cases substantial pain and a life-threatening situation. It often causes scarring around the organs, and repeated episodes can cause irreversible damage to the Fallopian tubes, a major cause of infertility.

Pelvic inflammatory disease (PID) is common. It is estimated that 10 per cent of women up to the age of 45 have experienced it, and in three out of four of the cases it affects women who are under 25. There are two separate organisms that have been isolated, *Neisseria gonorrhoeae* and *Chlamydia trachomatis*, present in 80 per cent of the cases of PID in women under 25. This clearly means that this condition is sexually transmitted. It is most common in promiscuous women who smoke, drink or take recreational drugs.

What are the symptoms?

- dull continuous pelvic pain varying from mild to severe
- fever or chills with flu-like symptoms
- increased or changed vaginal discharge in two-thirds of cases (meaning that in one-third of cases there may be no discharge and very few symptoms)
- bleeding between periods, or spotting
- painful periods
- backache
- painful intercourse
- infertility

What your doctor can do

- Exclude the possibility of any other acute problem like an ectopic pregnancy, where the embryo grows in the Fallopian tube, or appendicitis, through physical examination, urine and blood tests.
- Question you about your sexual behaviour to determine whether you are a likely candidate for PID.
- Perform a cervical smear to determine what sort of organism is growing.
- Treat you with any one of a number of antibiotics, depending on the organism.
- Insist that anyone with whom you have had recent sexual contact be screened too.
- In severe cases where an abscess has developed emergency surgery may be necessary.

As one in four women with proven pelvic inflammatory disease will suffer from either infertility, ectopic pregnancy or chronic pelvic pain as a result of PID, it is vital that treatment be started as soon as it is diagnosed. Remember, in extreme cases PID is a life-threatening condition.

What you can do

- Take the medication prescribed by your doctor religiously.
- Make sure your partner is screened.
- Use a condom.
- If the infection is not clearing with the antibiotics, try taking strong multi-vitamins and mineral, plus 30 mg of zinc per day, for between three and six months.
- Follow the recommendations for The Very Nutritious Diet on page 437.

Complementary therapies

This is one of the times when there is no substitute for a drug. By all means try homeopathic remedies and herbs, but do not rely on them.

OVARIAN CYSTS

An ovarian cyst is a balloon-like structure with a thin wall of cells or fibrous material which contains a liquid jelly-like material. Normally, at the time of ovulation the follicle containing an egg is designed to burst so that the egg can be released. Sometimes, instead, the follicle continues to grow, accumulating fluid and other tissue, and like the ovary itself, it becomes oestrogen producing. Ovarian cysts vary in size, from pea-sized to the size of large oranges, or larger. Some cysts disperse themselves, but others linger on and eventually become surrounded by ovarian tissue.

Single small cysts on the ovaries come and go, usually without being noticed. A large cyst, however, will cause the abdomen to swell, and can be felt on external examination. The majority of cysts are benign (non-cancerous) but approximately five per cent of cysts do become malignant, and your chances of having a malignant cyst increase with age. When a large cyst is present it usually disrupts the menstrual cycle in some way. Apart from the swelling of the abdomen, which could be mistaken for the result of eating a little too much good food, you may notice a change in your menstrual pattern. Either periods become irregular, or disappear completely, and when the cyst is large it is likely that it will put pressure on organs and structures in the vicinity, causing further discomfort, and in the case of the bladder, a desire to urinate frequently.

What your doctor can do

- Feel your abdomen externally, and give you an internal examination. An ultrasound scan will confirm whether one or more cysts are present.
- If the cyst or cysts are small, a wait and see policy may be adopted, in the hope that they disperse themselves anyway. If a large cyst is detected, you will be referred to a surgeon, with a view to having the it dispersed or surgically removed.
- If the cyst is found to be malignant, and it is thought that the cells may have penetrated other structures, it is likely that the Fallopian tube and ovary it is attached to will be removed also as a precautionary measure.

What you can do

- Follow a high fibre and low animal fat diet, as this will help to control oestrogen surges, (see page 446).
- Keep your weight in the normal range, as women who are overweight are more prone to ovarian cysts.
- Possibly take daily supplements of multi-vitamins and magnesium, together with evening primrose oil and marine fish oil. These nutrients have the potential to influence the ovary's response to hormonal signals from the pituitary.
- Introduce naturally occurring plant oestrogens, better known as phytoestrogens into your diet. Phytoestrogen rich foods are predominantly soya, linseeds and pulses (see Phytoestrogen Rich Menu page 480). These compounds have a modulating effect on the body's own supply of oestrogen which is useful for treating any type of hormonal imbalance.
- Take a phytoestrogen rich supplement like Novogen red clover. This provides 40mg of isoflavones which can be taken in conjunction with a phytoestrogen rich diet to help balance hormone levels.
- Take the herbal supplement agnus castus which has been used for centuries for its ability to regulate the menstrual cycle and hormone levels.

Complementary therapies

Herbal medicine and homeopathic remedies are worth a try. See a qualified practitioner, as well as consulting your doctor.

POLYCYSTIC OVARIES

This is a syndrome in its own right, and is characterised by a necklace-like structure of at least ten cysts surrounding each ovary. On an ultra-

sound scan the ovaries would appear on average to be three times the size of normal. This syndrome was originally associated with women who were of child-bearing age but whose periods had ceased, with an overgrowth of hair in unwanted places, and with a tendency to be considerably overweight, known as Stein-Leventhal syndrome.

It is now thought that up to 90 per cent of women with infrequent periods and 30 per cent of women whose periods have ceased prematurely have this syndrome. It has also been suggested that as many as 20 per cent of the normal population have mild polycystic ovarian disease, which can be detected by ultrasound, although in women whose periods are regular it is thought to be in the region of only seven per cent.

What causes it?

- There is undoubtedly an hormonal disturbance in women with polycystic ovaries, with an excess of LH (luteinising hormone) from the pituitary and androgens (male hormones).
- The development of obesity is thought to be a precipitating factor.
- Medical conditions where there is an over-production of other hormones may stimulate the ovaries to develop this condition.
- Binge-eating as in bulimia nervosa (see page 184) has also been found to be associated with polycystic ovaries. In one study, published in *The Lancet*, it was discovered that it was rare for bulimics to have a normal ovarian picture on ultrasound. It is thought that the fluctuating levels of the hormone insulin, brought about because of the bingeing, may also stimulate the underlying tendency to polycystic ovaries.

What your doctor can do

- Examine you physically to determine whether there is any other underlying problem.
- Arrange for you to have an ultrasound scan.
- Suggest that you lose weight, if you are overweight.
- Prescribe the oral contraceptive pill or other hormonal therapy depending on whether you are hoping to conceive or not.
- In severe cases surgery is performed. The current favoured approach is laser or diathermy during a laparoscopy, which aims to pepper the ovarian surface, and is less likely to cause adhesions (fibrous tissues that sticks to other organs).

What you can do

- Lose weight if you are overweight by following The Simple Weight Loss Diet on page 452. This is vital. One study from St Mary's

Hospital in London revealed that even modest weight loss from a low-fat high-fibre diet can correct the hormonal abnormalities, reduce the hirsutism and improve the chances of conceiving. Don't worry if you do not reach an ideal weight. A 6–7 kg (one stone) weight loss can produce a real change in body chemistry.

- Possibly cutting down on wheat (bread, cakes, biscuits and pasta) and relying upon rice, green vegetables and fish, might help hormonal balance.
- Reduce or completely avoid dairy products and use alternatives made from soya, rice, oats and nuts. Follow the Sample phytoestrogen-rich menu on page 480.
- Severely limit your intake of sugar as women with PCOS have a higher risk of developing adult onset diabetes.
- Take a good quality B-complex providing between 50–100mg per tablet. B vitamins are essential for the metabolism of oestrogen in the liver. Magnesium can also be taken in conjunction with the B-complex to help the process.
- Take a supplement of the herb agnus castus which is used successfully in balancing female hormones. The berries contain a wide range of active compounds, including flavonoids.

See also: References.

Peptic Ulcers

Ulcers in the stomach and duodenum are referred to as peptic ulcers. In both conditions there is a break in the important protective lining of the stomach, or the first part of the duodenum. Once breached, the acid from the stomach, the digestive juices and bile from the liver can all irritate the exposed tissues and contribute to the development of a chronic peptic ulcer.

For much of the twentieth century the treatment consisted of dietary change, a variety of antacid medications and surgery. The last ten years has seen nothing short of a revolution in the treatment of peptic ulcers which precipitated a breakthrough in identifying their cause. This work was led by a young gastroenterologist, Dr Barry Marshall, from Perth in Western Australia. As a consequence, highly effective treatment programmes have been developed making surgical treatment nearly a thing of the past.

What are the symptoms?

The symptoms of a peptic ulcer are shared by many other common digestive problems including irritable bowel syndrome and gallstones.

Typically there is pain in the upper abdomen, which may be worse

after eating, or worse when the person is hungry. Loss of appetite and weight are more a feature of ulceration in the stomach. Either type of ulcer may bleed with the person vomiting bright red or processed blood. Alternatively processed dark or blackish blood will be passed in the stool. Occasionally the whole illness is silent until the ulcer actually perforates when severe abdominal pain is experienced.

What causes them?

The research of Dr Barry Marshall led to the discovery that peptic ulcers are virtually always associated with the presence of the bacterium *Helicobacter pylori*. The eradication with antibiotics and other drugs leads to resolution of the ulcer and, unlike many other treatments, there is a greatly reduced chance of the ulcer recurring! Approximately 80 per cent of gastric ulcers are complicated by the presence of this bacterium. The infection is often acquired in childhood and may lie dormant for years. Its presence is also associated with a number of other less common types of inflammation of the stomach.

However, important though *Helicobacter* might be, it is not the only factor and the other long understood one is acid production by the stomach. Very high levels occur in association with duodenal ulcers, and moderately elevated levels with gastric ulceration. If no acid is produced then, ulceration of this type is not a problem. A number of factors either stimulate acid production or damage the protective layer of cells and mucus lining the stomach and duodenum.

- Smoking, alcohol and, to a lesser extent coffee and soft drinks are all associated factors.
- Lower socio-economic status is also a risk factor, and this may simply reflect standards of hygiene or intake of essential nutrients.
- Ulcer-causing drugs like anti-arthritis drugs, aspirin and steroids. They certainly can encourage an existing ulcer to bleed and may contribute slightly to the development of an ulcer in the first place.
- Stress is often blamed, but whilst it may aggravate symptoms it does not cause them.
- Long-term intake of aspirin and other non-steroidal anti-inflammatory (NSAIDs) preparations are associated with a significant increase in the risk of peptic ulcers. The combination of NSAIDs and smoking is particularly harmful.

What your doctor can do

- Assess your symptoms and try to determine the likelihood of there being an ulcer. A chronic ulcer in an older patient requires rather more active treatment.

- Prescribe simple treatment of antacid medicines based upon magnesium or aluminium salts. These may produce rapid relief of pain but the dose often needs to be repeated very frequently. If the symptoms truly subside with this and other simple measures, then it is unlikely that it was a chronic peptic ulcer.
- Arrange for definitive investigations, usually examination of the upper part of the gut by use of a specialised flexible telescope (endoscopy) or a barium meal.
- Test for the presence of *Helicobacter pylori* either from a biopsy at the time of endoscopy, or by a blood test or a new breath test. Its presence alone is not indicative that there is an ulcer present.
- Treat you with powerful antacid medicines called H₂ receptor antagonists of which Cimetidine and Ranitidine are two examples (a low dose of the former is now available over the counter from pharmacies in the UK). This treatment is not enough if *Helicobacter* is present.
- Treat *Helicobacter* infection with a mixture of antibiotics and H₂ receptor antagonist drugs, and sometimes a drug containing bismuth is added.
- Make sure that this germ has been eradicated by repeating the endoscopy or the breath test but not the blood test. This is particularly important if there was a gastric ulcer or if the ulcer had bled.
- Consider surgical treatment for unhealing gastric ulcers or ulcers that have bled repeatedly.

What you can do

Your role is still important, but the advances in medical care have meant that the emphasis on diet for treatment of ulcers has rightly lessened. This doesn't mean you can eat what you like, instead simple sensible measures are worth following, especially in the early stages. Many cases of non-ulcer indigestion may benefit from a change in diet and prevent the need for further investigations.

- Stop smoking as this will greatly improve the response to medical treatment and reduce the chance of recurrence.
- Only consume moderate amounts of alcohol and never on an empty stomach.
- Eat little and often, to minimise the surge of acid with a meal.
- Avoid large amounts of coffee and sugar as there is some evidence that they may stimulate acid production.
- Avoid foods that you feel make it worse. There is too much individual variation, and no set diet is universally successful. It is better to trust your own judgement. Foods to which the odd individual is genuinely

allergic could stimulate the production of acid because of the action of histamine released at the time of an allergic reaction.

- De-stress. If symptoms are severe, some time off work or away may be needed. Take time to consider what lifestyle changes need to be made.
- Chew some liquorice. It contains chemicals that may promote the healing of ulcers. The effect is small and it should not be used by the elderly, those with high blood pressure or kidney problems or fluid retention as it promotes salt and water retention.
- Eating Manuka honey from New Zealand can eradicate *H.pylori* due to its natural antiseptic and antiviral properties. It owes its medicinal properties to the bees feeding on tea tree flowers which are inherently antiseptic. Clinical research has been published in *The Lancet*.
- Aloe vera for its ability to speed healing and reduce pain might be a useful adjunct to the recommended programme.
- Taking a supplement of iron might be necessary to address possible anaemia which occurs with bleeding ulcers. Do not take iron unless anaemia is diagnosed.
- Vitamin A is used to heal and protect the mucous membranes of the stomach and intestines. Take as part of an antioxidant formula containing vitamins C and E for maximum benefit.

Complementary therapies

Again there may be benefit from acupuncture, homeopathy and herbalism, but if you have a proven peptic ulcer make sure you tell your medical specialist what you are doing.

Kay's story

Kay was a happy go lucky 34-year-old play group leader. She really came looking for a diet to help her lose weight. Even though she was only 5ft 3ins, her weight had crept up to 76 kilos, about 18 kilos over her ideal weight. She made light of her other problems which included irregular periods, excessive facial hair growth, fatigue and indigestion. Three years earlier she had been admitted as an emergency because of bleeding from her stomach. Investigation then found that she was bleeding from a duodenal ulcer which had been treated with acid suppressing drugs but not antibiotics.

Clearly she was likely to benefit from a weight-reducing diet but it was likely that there was more than this going on. Blood tests showed a high level of antibodies against the germ *Helicobacter pylori*, suggestive of active or recent infection. There were also mild

deficiencies of vitamin B and zinc. Her irregular periods and hair growth were very suggestive of polycystic ovaries.

She began on a weight-reducing low-fat diet, antibiotics for her *Helicobacter* infection and supplements of zinc and multivitamins.

Her 'indigestion' cleared up and she was referred on to a hospital gastroenterologist to make sure that the infection was fully resolved. Falling weight and improved nutritional status may well help her irregular periods but these too may require investigation.

Period Problems

PAINFUL PERIODS

Period pains commonly affect mainly younger women, but not exclusively, as older women may sometimes experience them as well. When periods first begin in early teens, they are usually not painful, but may become so in mid to late teens or later depending upon the reason for the onset of the pain. The development of pain with menstruation is usually taken to indicate the presence of ovulation, the time when the egg is released, within each menstrual cycle.

What causes them?

Period pain or to use the medical term, dysmenorrhoea, most often occurs because of excessive muscle contractions of the uterus with each period.

Four common gynaecological problems may, however, cause the periods to become painful and they include:

- infection of the tubes or ovaries
- fibroids
- endometriosis, where the lining of the womb is found in other tissues such as the wall of the uterus or around the ovaries
- a deficiency of the mineral magnesium, the most commonly deficient nutrient in women of child-bearing age, which is needed for optimum muscle function.

Any woman with excessively painful or heavy periods, in particular if there is pain throughout the month or an irregular menstrual cycle, should see her general practitioner for a gynaecological check-up. A simple examination would normally determine if one of these problems is present.

Often no cause is found and simple dysmenorrhoea is diagnosed. In

this situation periods are often painful for the first 24 or 48 hours and perhaps even for the day before the onset of menstruation. Period pains are often felt as mild to severe cramp-like pain or discomfort in the lower abdomen. It can also be felt as low back pain or aching down the legs and, when severe, can be accompanied by giddiness, faintness, nausea and even occasional vomiting. These other symptoms are probably due to the hormonal and chemical changes that occur with menstruation.

Symptoms of premenstrual syndrome such as irritability, mood swings, depression or breast tenderness may also be present, but are not particularly related to the presence of period pains.

Ilana's story

Ilana was a 30-year-old barrister, who had endured severe period pain and vomiting every month for seventeen years.

'It was like someone jerking a knife into my stomach. I'd be doubled over with pain and I'd always have to spend the first day of my period in bed. I experienced nausea and bloating and found it very difficult to function properly at work. I'm a barrister, so I have to be able to think clearly. Taking time off every month was affecting my reputation and career prospects adversely. I had so many symptoms before my period which meant that I was really only normal for seven days each month.'

I read about the WNAS and went along to their London clinic. I was asked to follow a very restricted diet initially, which was pretty tough, and to take supplements and to exercise. Within the first month, to my utter amazement I had no pain. The nausea went as well as the bloating, I just couldn't believe it. That was nine years ago, and I haven't had any period problems since. I am able to relax my diet, but I know if I go back to my old ways my symptom will start to return. This programme was a complete cure for me, it totally revolutionised my life. I feel healthy and stable and am extremely grateful to the WNAS.'

What your doctor can do

A variety of treatments already exist that may be helpful, and could be suggested by your doctor when you seek advice.

- *Magnesium check* Measure your red cell magnesium, to see whether you have a deficiency. This is a simple blood test, and should be readily available.
- *Painkillers* Your doctor may recommend the use of certain types of painkillers or hormonal products. Some mild painkillers may not be

very effective for severe pain but a more powerful sort, which are either prescribable (*mefenamic acid-Ponstan*) or are available on the advice of your pharmacist, can be particularly useful. It may be necessary to try a number before finding the most effective one for you.

- *The contraceptive pill* A number of hormonal preparations are available but often the most useful, particularly in young women who require contraception, is to use the oral contraceptive pill. The more modern low dose pills have much fewer side effects than older preparations.
- *Iron* Your doctor can prescribe iron supplements if you are anaemic as well.

What you can do

There are a number of avenues you can explore to help reduce painful periods:

- Physical exercise may sometimes be helpful with a variety of gynaecological problems, and may help your tolerance of pain. Try to exercise three or four times per week. During a painful period try to do some gentle yoga exercises instead of strenuous exercise.
- Heat seems to have a soothing effect. Applying a hot water bottle or a thermal heat pad can be very soothing.
- Changing and improving your diet can help also with minor hormonal abnormalities some of which are thought to underlie such gynaecological problems. Ensuring a well balanced diet without excessive consumption of fatty foods, and with a good intake of fibre from fruit and vegetables may help control hormone metabolism and can reduce some of the excessive hormonal swings that occur during the menstrual cycle.
- Eat a diet rich in EFAs, especially fish oils (see page 489). Women with period pains are known to have a lower intake of these oils, which may have anti-inflammatory, and painkilling properties.
- Some minerals may also be helpful. Magnesium is particularly important in muscle and hormonal functions. Its balance with calcium influences the contraction of uterine muscle and one study suggests that taking supplements may help reduce period pains. Good dietary sources of magnesium include all vegetables, especially green ones, nuts, seeds, beans, peas and lentils. Sugar, sweets, cakes and biscuits are low in most important minerals.
- If your periods are heavy, ensuring a good dietary intake of iron is also important, and this is found in red meat, fish, chicken, eggs, nuts, seeds and vegetarian protein.

Magnesium supplements can be obtained from health-food shops. At the WNAS we tend to use magnesium amino acid chelate. A magnesium rich

multi-vitamin, multi-mineral supplement might also be helpful, but too much magnesium may cause loose stools.

Remember if your period pains do not respond to these self help measures or painkillers you must consult with your general practitioner or family planning clinic.

Complementary therapies

When period pain is due to muscular spasm, acupuncture and cranial osteopathy will be obvious choices as they both help to free up pockets of blocked energy in the body. Herbal and homeopathic remedies are also worth a try. If the pain is caused by an infection, this will need to be dealt with by conventional medicine. However, complementary therapy will help to boost the immune system which increases your resistance to infection in the long-term. Often when nutritional deficiencies have been addressed, particularly low magnesium levels, and the muscles are functioning normally, the period pains subside. It may therefore be worthwhile following the advice given in this chapter for a few months before seeking further advice.

HEAVY PERIODS

The average blood loss for each menstrual period is approximately 35 ml, or just over two tablespoons. A heavy period, or menorrhagia as it is technically known, constitutes a loss of 80 ml (just over five tablespoons) of blood loss per period, which is considerably more than average. It is enormously difficult to assess the actual loss of blood during a period. Even studies that counted the number of sanitary towels or tampons that women get through were inaccurate, as it was discovered that women change after collecting differing amounts of blood.

Generally women find that their periods get heavier as they grow older, particularly those who have had children. Flooding can occur in the years leading up to the menopause, resulting in soiled top clothes, as well as underwear. Apart from the sheer embarrassment and hassle of dealing with heavy periods, they can also result in iron deficiency anaemia.

What causes them?

Excessive blood loss at period time is a problem for approximately 10 per cent of menstruating women. Once again there are many possible underlying causes:

- Approaching the menopause, the lining of the uterus can become thicker, resulting in heavier blood loss.
- The presence of fibroids in the uterus can increase the flow of a period.

- A recently fitted IUD can result in heavy periods, which usually settle down after the first few months.
- A hormonal imbalance in the body.
- According to our experience, heavy periods can be caused sometimes by nutritional deficiencies.
- An early miscarriage. Sometimes a woman may conceive without realising, but because it is an unviable pregnancy the body terminates it, in the form of what appears to be a very heavy period.

Alison's story

Alison was a 36-year-old proprietor of a fashion business and mother of three who had experienced irregular, heavy and painful periods all her life.

'My periods had always been irregular heavy or painful, but they became even worse after I gave birth to my third child. I hated taking painkillers and dreaded the thought of each period. As I was unable to function for several days each month I couldn't keep my mind on my work. I was embarrassed to go out of the house in case I flooded. My GP suggested a hysterectomy, which I wanted to avoid if possible.

I read about the WNAS in Prima magazine and in desperation contacted them for help. I went on an elimination diet, which involved cutting out certain foods and then gradually re-introducing them to see if I had a bad reaction to them. I discovered that what upset me most were things I ate a lot of, such as wholemeal bread and muesli, and drinking fresh coffee. I was also advised to exercise and to take Optivite, a magnesium-rich multivitamin and mineral supplement, and Efamol evening primrose oil.

Within four months of following this regime my periods were back to normal, in fact better than they had been for years. No more heavy bleeding and clots, and regular – I could hardly believe it. That was six years ago and my periods have remained regular. I still follow a modified version of my programme and feel extremely well generally. I don't think my success was due to any one thing – but a combination of diet, supplements and increased exercise that worked. I am very grateful to the WNAS for their help as is my husband who says "I am more like my old self again, the girl he married 24 years ago".'

What your doctor can do

If your periods become unmanageably heavy, or you have a sudden episode of flooding you should consult your doctor for advice. After taking a history of the problem, your doctor will:

- Examine you to determine whether there are any fibroids present or any other physical abnormalities – in which case you would then be referred to a gynaecologist who would decide whether you needed minor surgery.
- Take some blood for a serum ferritin test to check whether your iron stores are in fact low, in which case you would need a course of iron.
- Remove your IUD, if you have one, to see whether that alters the flow.
- Prescribe hormone pills to reduce the flow. The first choice for a younger woman might be the oral contraceptive pill, failing that, Duphaston, a progestogen preparation; and if that fails to work, then Danazol, which has considerable side-effects.
- Prescribe tranexamic acid a drug that helps excessive bleeding. It can be more effective than hormones.
- Suggest a hysterectomy, which should be regarded as a last resort (see page 243).

What you can do

- Eat plenty of green leafy vegetables, red meat (organic/additive-free), free-range eggs and other foods rich in iron.
- Take a good strong multi-vitamin and mineral supplement, with extra B vitamins and magnesium
- Take at least 500mg of vitamin C with bioflavonoids together with an iron supplement to enhance its absorption.
- Avoid too much wheat and bran which contain phytic acid, a compound which inhibits iron absorption.
- Rest when the flow is heavy, and avoid important social engagements until the bleeding has reduced.

Complementary therapies

Try herbal medicine or homeopathy. If your periods are exceedingly heavy, it is better to consult an expert rather than attempting to self-treat.

IRREGULAR OR ABSENT PERIODS

Women were designed to have regular periods, somewhere between every 23 and 35 days, which end a cycle or 'failed conception'. Each month the body should release eggs whose job it is to find a sperm to merge with. When this fails, a period arrives, approximately some two weeks later. After the first year, periods usually establish a pattern, which become the normal cycle, and for many this continues until they reach their menopause. Others experience irregular periods, or an absence of periods altogether, which means they are not releasing eggs (see Painful Ovulation page 355).

What causes them?

The medical term for an absence of periods is amenorrhoea, and there are two types. Primary amenorrhoea is when no period ever arrives, which is rare, and secondary amenorrhoea, is when periods have ‘disappeared’ for in excess of four cycles. Primary amenorrhoea may be associated with late puberty or a defect in the hormone and reproductive system, and there is little that can be done to correct that. There are many underlying causes of secondary amenorrhoea though, most of which can be addressed. Your periods can become irregular or disappear because of:

- Pregnancy and breast-feeding – but this is perfectly normal. Very often when fully breast-feeding, periods will not return for between six months to a year.
- Sudden weight loss due to any illness, including the slimmers’ disease, anorexia nervosa.
- Over-exercising. Athletes and ballet dancers often develop amenorrhoea, and as a result, decreased oestrogen levels, which greatly increase their chances of developing osteoporosis later in life.
- Episodes of extreme stress, e.g. bereavement or divorce.
- Undetected and therefore untreated thyroid disease.
- Anaemia and monitored deficiencies, especially of vitamin B.
- Long-term medication.

Susan’s story

Susan was the first woman in Britain to break 70 minutes for the half marathon, in 1988. She is a well known Olympic marathon and cross country runner who, with her twin sister, has been training since the age of 20. Her periods stopped for ten years as her diet did not meet her energy requirements.

‘Both my sister and I have discovered that we were at risk of having osteoporosis. When we began our training long-term damage didn’t really seem relevant to us then. We felt fit and healthy and had the chance of going to the Olympics. At that time it would have been hard to persuade us about a possible risk in 30 years time.

I was conscious that I was a little on the plump side for a runner, and as I ran better when I was lighter I paid far too much attention to dieting. Looking back I realise that I was not eating an adequate diet to meet my energy output, and was certainly not consuming anything like enough calcium in my diet. I’m 5ft 4 in tall, and at one point weighed as little as 46.8 kg (7st. 5lbs). My weight was so low that my periods stopped for ten years, which I now know would have reduced my oestrogen levels, and increased my chances of

getting osteoporosis. I used to eat fruit only for breakfast, a scone for lunch and a slice of quiche and salad with fruit for my evening meal.

I sometimes felt pretty weak, and I became very susceptible to injury. In my career I have experienced three stress fractures in my legs, with a fourth suspected. Because of this record the British Olympic Association included both myself and my twin sister in a bone-scanning survey that they were conducting. We were both found to be at risk of osteoporosis and put on a course of HRT and calcium. My sister came off HRT after the first course, but I stuck it out for six or eight months before giving up. I felt bloated, moody and my running was impaired whilst on the HRT, but once off it my running performance improved again.

I was due to compete in the Commonwealth Games in Auckland in 1990 but had to pull out because of a stress fracture, and at that point I realised that I would have to call a halt to my running career.

I got married in 1991 to Geoff who is also an international marathon runner and after eating a better diet, my periods returned and we managed to produce twins. I am delighted to say that a recent test showed that my bone mass has improved and I no longer have signs of osteoporosis.

If I had my time again I would undoubtedly have eaten more sensibly, and I would not encourage a young female athlete to diet as we did.

I still run 40 miles per week, and work as a PE teacher in Nottingham. I have improved my diet, and I now take Efecal with the hope that I can maintain my new bone mass.'

What your doctor can do

If your periods haven't arrived by the age of sixteen or seventeen it is time to ask your doctor for some advice. You will need to be investigated by your doctor initially, and subsequently by an endocrinologist.

If you had established periods, but they have since disappeared there are a number of things your doctor can do:

- Check to see whether you are pregnant.
- If you are taking prescribed drugs – assess your programme to see whether they are interrupting your cycle.
- Take blood to check your thyroid and iron levels.
- Assess the function of your pituitary gland, which is responsible for hormone function.
- Refer you for gynaecological investigation to check that your ovaries are functioning, and that there are no other obvious problems.

What you can do

- Follow the recommendations for A Very Nutritious Diet on page 437.
- Take regular vitamin and mineral supplements.
- Introduce naturally occurring plant oestrogens, better known as phytoestrogens into your diet. Phytoestrogen rich foods are predominantly soya, linseeds and pulses (see Phytoestrogen-rich menu page 480). These compounds have a modulating effect on the body's own supply of oestrogen which is useful for treating any type of menstrual irregularities.
- Take a phytoestrogen-rich supplement like Novogen red clover. This provides 40mg of isoflavones which can be taken in conjunction with a phytoestrogen rich diet to help balance hormones.
- Take the herbal supplement agnus castus which has been used for centuries for its ability to regulate the menstrual cycle. The first major clinical study on the use of agnus castus was published in 1954 showing positive results on women with menstrual irregularities and even amenorrhea. It is the fruit of the agnus castus which contains essential oils, glycosides and flavonoids.
- Get some help with sorting out any stressful situations that face you or counselling if you are bereaved or recently separated or divorced.
- If you are an athlete, a professional dancer or an exercise addict, work hard to ensure that you are meeting your calorie requirements.
- If your weight is low for your height and frame, actively work to increase your weight to the optimum range.

Complementary therapies

Many complementary therapies would be worth investigating. Consult a qualified homeopath or medical herbalist, as they will certainly have numerous remedies for you to try. A burst of acupuncture wouldn't go amiss, as acupuncture is very good at unblocking the energy channels in the body.

See also: Standard references and Recommended reading.

Peripheral Vascular Disease

Just as the blood vessels supplying the heart muscle can become narrowed, so can the main arteries to the legs. The blood vessels in the upper limbs are almost never affected in this way; consequently all the symptoms relate to below the waistline.

What are the symptoms?

The first symptom is usually pain in the calf on exercise. The pain is often severe, causes the sufferer to stop walking or to walk with a limp, and clears after a few minutes' rest. This clinical picture is called intermittent claudication (limping). Cold feet, changes to the skin colour, loss of hairs on the legs and in men loss of the ability to have an erection are other features.

What causes it?

Essentially much the same factors as for ischaemic heart disease and atherosclerosis apply. Smoking, an elevated blood cholesterol and diabetes are the three most important and treatable factors. Increasing age is also important too.

What your doctor can do

Anyone presenting with intermittent leg pains on walking, that clears with rest, should be assessed for the main risk factors for atherosclerosis.

Examination of the legs and abdomen will give a good idea of the severity of the disease. Those with severe symptoms, absent pulses in the feet, and younger patients may need specialist assessment. Surprisingly accurate assessment of the degree of atherosclerotic narrowing can be made from measuring the blood pressure levels in the leg, and the from the use of an ultrasound pulse detector.

In those in whom major disease is suspected then specialist x-rays to look at the blood vessels can be undertaken. From this the appropriateness of surgical correction can be ascertained.

Drug treatments are not very effective at all. More important is control of elevated blood fats, both cholesterol and triglycerides. These latter can contribute to atherosclerosis and are more important in peripheral vascular disease than in coronary artery disease. Being overweight, drinking alcohol or consuming sugar to excess, or being diabetic raises this type of fat greatly. Combined drug and dietary treatment is known to control the elevated fats and can even reverse the atherosclerotic process if followed assiduously.

What you can do

- Stop smoking completely.
- Walk, walk, walk! Painful though exercise might be, it helps to keep open the existing blood vessels. Daily walks to the limit of exercise tolerance are mandatory.
- Lose weight if you are overweight.

- Follow The Very Nutritious Diet (see page 437), keeping the total fat content very low.
- Take supplements of vitamin E, at least 300 IU per day. These are prescribable on the National Health in the UK and are of proven benefit even though in coronary heart disease their benefit is uncertain.
- Other supplements might be helpful but this is not certain. Multi-vitamins, anti-oxidants such as vitamin C and selenium and the trace element chromium look like the best bets.

Complementary therapies

Acupuncture and herbalism might be able to encourage the opening up of blood vessels. Worth a try, but don't rely on them.

See also: Standard references.

Preconception

When a couple decide to have a family they are taking on one of the most important jobs in the world, so they must be in good health to ensure a healthy baby.

The ova, female eggs, and sperm may be adversely affected by inadequate diet, and by social and environmental factors. The egg is at its most vulnerable for about 100 days leading up to ovulation, the time when it is released, and sperms are also particularly vulnerable for approximately 116 days before they mature. So eating well, having a wholesome lifestyle and environment will contribute to the health of the next generation. It's an awesome task, and one that requires careful planning *at least four months* before conception.

What your doctor can do

- Check your serum ferritin levels if you suffer with fatigue, have pale skin and heavy periods. This will determine whether you have low iron stores.
- Check to see whether you are up-to-date with your rubella immunisations. It is important to be immune to German measles because it can cause so much irreversible damage to an unborn child if contracted in the first few weeks of pregnancy.
- Arrange for you to have a thorough check up to ensure:
 - your blood pressure is in the normal range
 - you are free of diabetes
 - you have no pelvic problems
 - you have no vaginal or bladder infections

- you are not an HIV carrier
- you do not have any sexually transmitted disease.
- Remove an IUD if you have one. This needs to be done at least six months before you plan to conceive. An IUD can also increase the risk of vaginal infection.
- Advise on medication. Ideally you should not be taking any medication during pregnancy that is not absolutely necessary. If you are taking prescribed drugs, discuss the situation with your doctor to see whether there is any need for you to reduce your medication or to switch to an alternative prior to trying for a baby.
- Prescribe supplements that contain folic acid and vitamin B 12 to help prevent neural tube defects (see page 386).

What you can do

Here are some simple dietary recommendations which should be followed in order to help achieve an adequate intake of all the essential nutrients. This is especially important in the preconceptual phase and in the first twelve weeks of pregnancy as it determines the growth and development of your baby.

- Eat three regular meals a day. Doing so will give you the best chance of obtaining a balanced intake of all essential nutrients. Do not miss meals.
- Eat one cooked main meal per day. Cooked meat, fish or vegetable based meals will again allow a good intake of essential nutrients, especially protein.
- Eat at least one portion (120g/4oz) of meat or fish or vegetarian protein, such as beans, peas or lentils. Many convenience or prepared meals are low in protein, vitamins and minerals.
- Ensure a good intake of foods rich in folic acid, including green leafy vegetables, fortified breakfast cereals, oranges and orange juice, eggs, almonds and sweetcorn. You can eat cooked liver once a month if you wish until you are pregnant, when you should stop.
- Enjoy good sources of calcium, including dairy products, milk (whole, skimmed or semi-skimmed) and cheese, but avoid soft cheese and cottage cheese. Soft cheese may contain the infecting organism *Listeria*, and cottage cheese is low in protein and B vitamins.
- Eat at least three portions of fruit per day, and two portions of green leafy vegetables or green salad per day. This is in line with the latest recommendations for healthy eating for the general population, and will help maintain a good intake of fibre, vitamins and minerals.
- Eat two or three slices of wholemeal bread per day. White bread may be acceptable if the rest of the diet is well balanced. Some will need

more bread than others, and those on weight-reducing diets may need to consume less.

- Use good quality vegetable oils, which are high in essential fatty acids, especially sunflower, safflower, rapeseed and walnut. Olive oil is not rich in essential fatty acids. Use margarines based on these oils, e.g. sunflower, or you can use a small amount of butter. Again cut down on these if you need to lose weight.
- Eat from a selection of foods rich in essential fatty acids. These include oily fish like mackerel, herring, salmon, pilchards and sardines, and walnuts, almonds, hazelnuts, pecans (peanuts are not so nutritious in this respect) and beans, especially pinto beans.
- Trim the skin and fat from meat and poultry. These tend to be high in the less helpful saturated fats, and most of the environmental toxins, if present, will be found in the fatty portions of them.
- Get your partner to follow the same dietary recommendations. The health of the father-to-be can also be a factor in the health of your future offspring.

Current thinking on nutritional supplements

Many multi-vitamins from chemists are not suitable for the preconceptual phase as they contain animal vitamin A (retinol) and inadequate amounts of folic acid (not enough to prevent neural tube defects). However, in recent years, research demonstrating the need for extra folic acid and vitamin B12 during the preconceptual phase, and the first trimester of pregnancy, has resulted in a number of new products arriving on the shelves.

- Folic acid alone, at a strength of 400 mcg, is now widely available, and is recommended to be taken by all women prior to conception. The research shows that when this is taken with vitamin B12, the protection against developing a neural tube defect is even greater.
- A much higher dose of folic acid, 4 mg, is recommended for those women who have already given birth to a child with a neural tube defect and wish to conceive again.
- Pregnavite-Forte is NHS preparation designed for women who have already given birth to a child with a neural tube defect.

A preconceptual programme

- If you have been taking the contraceptive pill you will need to stop six months before you plan to conceive. The pill can interfere with essential vitamin and mineral levels.
- Use natural methods of contraception during your preconceptual programme. Getting to know your body and learning to recognise when you are ovulating will help you in the long term to know when it is right to conceive.

- Follow the diet plan outlined above for at least four months before conception, and get your partner to follow a similar diet, perhaps eating extra quantities if he is larger than you.
- Take care to avoid all the foods and drinks which have been shown to impede the absorption of good nutrients or might harm your chances of a healthy baby (see page 390).
- Do not consume any alcohol. This is probably the best advice, though it is obviously hard for some to follow. You should not drink from about day ten of your cycle until when your period begins, when your egg is at its most vulnerable. Ideally both you and your partner should avoid drinking alcohol. At most, consume no more than three units per week.
- You should spend at least four months in a smoke-free environment. That means that neither you nor your partner should be smoking, and you should avoid smoky atmospheres.
- Take a multi-vitamin and mineral supplement that contains 400 mcg of folic acid and vitamin B12 but not vitamin A (as retinol). The pharmacy or health-food shop will be able to show you the range of products now available.
- If either you or your partner are concerned about your nutritional status, you could contact one of the organisations listed in the Women's Health section of the Appendix to arrange for appropriate blood tests.
- Take three or four good sessions of exercise per week, and try to get outdoors as often as possible, especially when it is sunny.
- If either you or your partner use street drugs you will need to stop, either with the support of each other if it's a social habit, or with the help of a clinic if you are addicted.
- Avoid chemicals wherever possible. You should:
 - use lead-free petrol
 - use ecologically safe cleaning creams at home
 - avoid using aerosols
 - avoid using any chemicals if you are a keen gardener or grow vegetables
 - eat organic food where possible
 - avoid sitting for too long in front of a VDU on a regular basis
 - not use copper or aluminium saucepans
 - only use the microwave for reheating or defrosting
 - keep away from busy main roads – if you live on one try to move
 - not spray pets with chemicals to prevent fleas
 - avoid paint which contains lead, and should not sleep in a freshly painted room
 - not use a sunbed whilst you are pregnant
 - use a hot water bottle to heat your bed rather than an electric blanket
 - sort out areas of stress in your personal and work life before you conceive.

Once you have conceived, you will need to continue with a healthy regime throughout your pregnancy. Refer to Pregnancy (see below), for extra help and advice. Additionally, we now know that the type of diet our babies are fed during the first year of life will also play a major role in determining their long-term health prospects, so adopting a sound weaning plan thereafter is advisable.

See also: What's wrong with present-day diet and lifestyle?, Nutrition is the key to health, References, Recommended reading (*Healthy Parents, Healthy Baby*).

Pregnancy

The effect that diet, environment and lifestyle before and during pregnancy have on our unborn children should never be underestimated. Research shows quite clearly that we can 'programme' the health of a baby and influence its growth and development, at least four months before it is even conceived (see Preconception, page 384), and during the first three to four months of pregnancy. We can affect the shape and size of the baby, the health of its important little organs, its intelligence in later life, and even its fingerprints!

Examples of how our diet and lifestyle can influence the unborn are many.

- Babies who are small for their dates are likely to have high blood pressure in later life and have a different fingerprint pattern to normal weight babies.
- Low birth-weight babies are seven times more likely to develop blood sugar problems or get diabetes than babies whose weight is in the normal range.
- Impaired lung growth during the developmental stages and early infant life, due to inadequate nutrition and environmental conditions, point to potential abnormal lung function and increased chances of suffering bronchitis, asthma and chronic chest infections.

There is enough new evidence to convince even the most sceptical amongst us that diet and environmental factors influence the well-being of the unborn child not only in infancy, but also in adult life.

From the time of conception, each minute bodily system has its own timetable for development, and the supply of essential nutrients and timing of contact with a toxin, will determine the type of damage that results. According to relatively recent research data, babies who are undernourished in the first four weeks of development stand a much higher chance of developing heart disease, a major cause of death in

middle age, and brain disorders, present from birth, which show up later in life in one in eight adults.

Low birth-weight babies, those born at term who weigh under 2.5 kg (5.5 lbs), if they survive, suffer higher rates of childhood illness, and stand a greater chance of being mentally retarded, of suffering from cerebral palsy, behaviour disorders, impaired vision or deafness.

Dietary requirements

Despite the fact that many of us feel incredibly hungry during pregnancy, our actual requirement for extra calories does not increase significantly in the first six months, and only by an additional 10-20 per cent during the last three months of pregnancy. What does increase is our need for good quality, nutrient-dense foods, which are rich in folic acid, vitamin B12, EFAs, and the mineral zinc and iron in particular (see below).

We experience the largest demand for nutrients during pregnancy and breast-feeding. Besides looking after yourself, you have the needs of a growing baby to meet, as well as the increased tissue of the uterus, placenta and blood. All this new tissue requires more calories, proteins, vitamins and minerals.

It is normal to gain nearly 12.5 kg (27-28 lb) during pregnancy, but weight gain can vary depending on individual metabolic rate. Some women hardly notice any change in appetite, whilst others feel like they are eating for an army! Studies show that women who gain in excess of 13.5 kg (30 lb) during pregnancy have significantly more healthy babies. Slim women, who only experience a small weight gain, can have babies with a low birth weight. You should be eating enough to gain weight at the rate of 225-450g ($\frac{1}{2}$ -1 lb) per week, unless you are overweight.

- Folic acid deficiency and vitamin B12 insufficiency are now clearly linked to neural tube defects.
- Zinc deficiency during pregnancy has been linked with low birth weight, under 2.5 kg (5.5 lb).
- Vitamin A is another nutrient linked to growth, and in fact it has long been recommended by the Department of Health in the UK, that all pregnant and breastfeeding mothers take supplements of vitamin A as beta-carotene the non-animal source (not as retinol) as well as vitamins D and C, in order to build up vitamin stores that can then be passed across the placenta.
- Essential fatty acids (EFAs) are vital for growth and development of the baby, particularly for the brain and the central nervous system. Recent research suggests that a deficiency of these long-chain polyunsaturated fatty acids in the tissues of growing babies results in low birth weight,

which may have life-long implications. We now know too that adequate intakes of EFAs in the new-born infant seem to influence vision and subsequent intelligence.

Babies born after an apparently normal pregnancy often have borderline levels of EFAs, as do premature babies. Breast milk, from a well-nourished mother, is a good source of EFAs, which probably explains why some breast-fed infants make better progress than bottle-fed ones. Trials feeding Efamol Marine (a combination of evening primrose and marine fish oils) to pregnant women during the final three months of pregnancy have produced raised EFA levels in newborn babies. Good sources of essential fatty acids can be found on page 489.

Sadly, many of these important medical facts, which undoubtedly affect the welfare of our unborn children, are kept almost as trade secrets. The health and well-being of your growing baby is undoubtedly in your hands and, with a little knowledge, there are many positive steps that you can take to ensure your baby has the best possible chance in life.

What your doctor can do

- Give regular checks to ensure that the growth of the baby is on target, and that you are in good health.
- Prescribe iron supplements, should your levels drop below the normal range.
- Offer screening facilities for prospective mums who are either at risk or over 35 years of age.
- Refer you to a specialist if there are any concerns during your pregnancy.

What you can do

- *Eat a wide variety of nutritious foods* The best are those rich in protein, such as lean meat (preferably additive-free or organic), fish, free-range chicken, nuts, seeds, peas, beans and lentils. Foods that are particularly nutritious and should be consumed regularly through pregnancy are:
 - lean meat
 - eggs, preferably free-range
 - all green vegetables
 - wheatgerm
 - nuts
 - wholemeal bread (up to three slices per day)
 - fortified breakfast cereal.

- *Include vegetable rather than animal fats* Use polyunsaturated margarines and cold-pressed oils, rather than animal fats which are high in saturated fats and low in essential nutrients. Beware of seemingly healthy vegetable fats that contain hydrogenated vegetable oils. These fats have been chemically altered to make them stable at room temperature, and have the same adverse effects as saturated fat. Trim any visible fat from meat or poultry and don't eat the skin.
- *Eat plenty of foods containing calcium and other good nutrients* Dairy products such as milk, yoghurt and cheese are all important sources of calcium. So too are the small bony fish like whitebait, sprats and sardines and nuts, seeds and green vegetables. Aim for 300-600 ml (1/2-1 pint) of milk and yoghurt per day, and 175-225 g (6-8 oz) of cheese per week.
- *Feast on organic salad, vegetables and fruit* Aim to eat a salad daily, plus three portions of vegetables, including one green leafy vegetable, and at least two portions of fruit each day. These are important sources of vitamins, minerals and fibre.
- *Don't use pregnancy as an excuse to pig out on sweet food* Many women develop cravings for sweet foods during pregnancy, and use their lost waistline as an excuse to indulge. Sweet food, like puddings, cake or chocolate are permissible, but only in addition to nutritious food. Sweet foods are normally a very low source of good nutrients, and should never replace wholesome food. As long as you are not overweight to start with, have your treats after meals.
- *Increase fruit juice, and reduce tea* It is vital to make the most of all the dietary iron during pregnancy, as your growing baby will be steadily stocking up on iron to last through the first few months of life. Drinking tea, which contains tannin that binds with iron from vegetable protein, will reduce the amount of iron that you are able to absorb by about half. Choosing citrus fruit juices, like orange or grapefruit, which are rich in vitamin C, you will approximately double the iron that is available to both you and your baby. Other foods and drinks rich in vitamin C are listed on page 486.
- *Use tea and coffee substitutes* You will see from the list of alternatives on page 7 that there are many different varieties to try. It is worth noting that Rooibosch/Redbush Tea, which is a caffeine-free tea look-alike, has shown positive results in South African trials on babies with colic. It contains a mild muscle relaxant. Raspberry tea could be consumed before delivery as it is thought to relax the perineum.
- Raspberry leaf tea helps with uterine contractions. It is available loose and in tea bag form. Consumption should be limited to one cup a day.
- Morning sickness can be alleviated by chewing on crystallised ginger or drinking an infusion of root ginger in boiling water.

- *There's nothing better than regular exercise* Sticking to a regular exercise routine during pregnancy will help to keep you feeling healthy and will tone your body for the delivery. The endorphin release which results from exercise (see page 32) not only raises your mood, but also that of your baby. Research has shown that endorphins cross the placenta, and the baby is therefore able to share your sense of well-being!
- *Continue with all the relevant steps in the Preconceptual Programme* (See page 386). Avoid alcohol, cigarettes, street drugs plus environmental chemicals and hazards.

Potential dangers during pregnancy

There are a number of bugs which can be very dangerous, particularly during pregnancy. Avoid them and the foods that might harbour them at all costs.

Listeriosis

Even in a mild form, listeriosis can cause miscarriage, severe illness in a newborn baby, or a still birth. It presents as a flu-like illness that is caused by the *Listeria monocytogenes* bug, found in some common foods. It is therefore imperative to avoid:

- Roquefort, Stilton and other blue-veined cheeses.
- Unpasteurised cheese such as Camembert and Brie or dairy products including goat and sheep's products.
- Liver pâté of any type.
- Cook-chill meals. These are ready-cooked, and kept cold, but not frozen, and are designed to be eaten cold or reheated at home. Preferably avoid them altogether, or cook them until they are piping hot to kill off the listeria.
- Undercooked meat of any description.
- Pre-prepared salads.
- Soft ice-cream from a machine.
- Food that is past its best-before date.

Salmonella

This is a bacteria responsible for more food poisoning than any other, and manifests itself in sickness and diarrhoea. Poultry and eggs are probably the most common foods to be contaminated with Salmonella, but thorough cooking often eliminates it.

- Don't eat anything that contains raw or uncooked egg, and don't forget less obvious foods like mousse and mayonnaise.
- Only eat eggs that have been cooked so thoroughly that the egg yolk is hard.

- Always wash your hands thoroughly if you have been touching raw meat, especially poultry.
- Don't let raw meat come into contact with any other food. This includes any spillage that may occur in the fridge.
- Use a special board to prepare meat and poultry, kept only for that purpose. Scrub it very thoroughly with hot water after use, and do the same with any surface touched.
- Cook all meat and poultry thoroughly so that the bacteria are destroyed.

Toxoplasmosis

This is again a flu-like illness, which is caused by an infection by the bug called *Toxoplasma gondii*, sometimes found in raw meat, especially lamb, and also in cat faeces. As it can affect the unborn child it is important to take precautions.

- Never eat undercooked or raw meat.
- Wash your hands thoroughly after preparing meats.
- Wash all food preparation surfaces with very hot water or bleach.
- Clean and scrub all vegetables thoroughly to ensure that all soil and dirt is removed. If cats have soiled the earth, food can be contaminated.
- Don't let your cat have kittens at the time you plan to be pregnant, as kittens carry toxoplasmosis.
- Clear up cat mess with boiling water or bleach.

Unpasteurised milk

Milk that has not been heat-treated may contain bugs that are harmful to health. Avoid 'green top' unpasteurised, or any milk that has not been heat-treated, from the time you start to plan your baby, until you have finished breast-feeding.

Current thinking on nutritional supplements

There is broad medical agreement that supplements containing 400 mcg of folic acid and possibly vitamin B12 should be taken for four months prior to conception, until the end of the twelfth week of pregnancy, in order to prevent neural tube defects. However, opinions vary about what to do after that.

If you are eating an exceptionally healthy diet, which includes organic produce, and drinking very little tea, coffee or alcohol, then the chances are that you will be getting many of the nutrients that you and your baby need. However, if you have a poor appetite, have an unplanned pregnancy, or have not been eating very well, then as a precaution it would be advisable to take a multi-vitamin and mineral supplement, without animal vitamin A (retinol), each day anyway. It is far better to err on the side of caution.

Additionally, recent research shows that it may be advisable for some women to take supplements of evening primrose oil and marine fish oil for the last three months of pregnancy and during breast feeding. Another study on breast-feeding mothers using Efamol evening primrose oil from between two to eight months of feeding, showed improved levels of essential fatty acids at a time when the natural supply in the milk would be tailing off.

The mineral zinc plays a fundamental role in the health of the foetus. Zinc is also useful to reduce the risk and of stretch marks and speed healing. According to Dr Neil Ward at the University of Surrey, deficiencies of zinc have been linked to low birth weight babies with a smaller head circumference.

Knowing that you can influence the health prospects of your new child may be rather daunting. There are countless rewards, though, to be had if you prepare your body for pregnancy and look after yourself to the best of your ability whilst pregnant. Creating a new little person is such a miracle, it's important to ensure that you are well enough to savour it, and that you do all in your power to enhance the miracle rather than damage it inadvertently.

See also: References and Recommended reading (*Healthy Parents, Healthy Baby*).

Premenstrual Syndrome (PMS)

Premenstrual syndrome, or PMS as it is more commonly known, is a collection of symptoms that occur up to two weeks before the menstrual period and tail off as bleeding begins. For many women it brings with it fear, misery and incapacitation. Sufferers often describe it as the Jekyll and Hyde Syndrome, which comes upon them relentlessly at a similar time each month.

One of the difficulties of PMS is that it is not a syndrome which shows up under the microscope. Furthermore, despite the fact that women have been suffering for centuries, to this day doctors are unable to agree on the cause. Whilst some schools of thought class it as a hormone imbalance, others feel that it is associated with brain chemical metabolism, or indeed is actually all in the mind!

The WNAS have spent many years researching premenstrual syndrome, and our conclusions show that although all of these hypotheses are partially correct, the underlying factor is related to nutritional and

lifestyle inadequacies which, once corrected, result in relief from symptoms within a matter of months for over 90 per cent of sufferers.

What are the symptoms?

The symptoms of PMS are always cyclic, and there are of some 150 variations. The most common 'mental' symptoms include:

- anxiety
- irritability
- mood swings
- nervous tension
- depression
- confusion
- forgetfulness
- crying and loss of libido.

Some of the most common physical symptoms include:

- breast tenderness
- headaches
- cravings for sweet food
- abdominal bloating and fatigue.

According to one WNAS survey 73 per cent of women of child-bearing age suffer with PMS, and over half of all sufferers have experienced suicidal feelings at some time premenstrually. In addition many women report feeling violent and aggressive during their premenstrual phase, lashing out physically, and verbally abusing their partners and children. Productivity at work is effected by as many as five days per month, and working sufferers often organise their calendar around this monthly nightmare.

Judy's story

Judy was a 36-year-old mother of two who had been working part-time as a secretary until she was knocked sideways by her uncontrollable premenstrual syndrome.

I didn't suffer from PMS until my second child was born. Even then I didn't realise what the problem was. I knew that PMS could cause bloating and breast tenderness but I thought the other symptoms were in my head – I thought I was going mad.

I'm normally a calm person but for two or three days a month I became a madwoman – especially at night when I couldn't sleep. I'd scream, swear, smash milk bottles and slam doors. My physical strength was frightening. I'd rip towels apart, and once I tied a nylon comb into a knot. I felt my brain was going to burst. I'd even punch and kick my husband, Robert, when he was asleep. I tried to slash my wrists and, when I took an overdose of tranquillisers, I bit right through Robert's thumb as he was trying to get them out of my mouth.

I just couldn't control my emotions. I'd pinch myself until I was bruised, cut my skin with glass and bang my head against the wall, then spend hours crying. I felt ugly and worthless, convinced my husband didn't love me. But he didn't know what to do with me. Confused he'd just sit and stare into space while I was ranting.

When I yelled the kids huddled in bed together, crying – sometimes my husband had to take them out at night to get them away from me. Then when my son Steven was eleven he developed pains in his stomach and a twitch in his eye. He was referred to a paediatrician and eventually to a child psychiatrist. During the fifth visit Steven announced 'I'm scared Mummy's going to kill herself, or leave me!' I felt awful. I thought 'I've done this to him'. I knew then I needed help.

By chance, a few days later I read about a woman with PMS who'd stabbed her husband and for the first time I realised just how extreme PMS could be. When I read she was cured by diet I was disappointed – I'd tried the popular remedies like evening primrose oil and vitamin B6 and they hadn't helped. I didn't see a doctor as I didn't want to admit I wasn't in control but Robert urged me to try the diet so I contacted the WNAS. They told me I was one of the worst cases they'd had. I had every symptom of PMS.

They put me on a diet of fresh fruit and veg, meat, fish, corn and rice, plus nutritional supplements. I could drink only mineral water or herbal tea. It was tough but worth it. At the end of the third month I wrote in my diary: 'No PMS!' I was finally free after ten years of hell.

I began re-introducing foods to check my reaction and that's when I found caffeine had been the culprit. I used to drink 6–8 cups of coffee a day and I craved chocolate before a period.

I haven't had PMS since. I feel I've been reborn – the diet saved my marriage and my kids. We're all so close now, but I really believe if I hadn't had help Brian would have left with the kids and I'm sure I'd have committed suicide. PMS would have killed me one way or another. I've taken up amateur dramatics again. I'm now writing a book about my experiences in the hope it'll save other women from the same nightmare.'

What causes it?

A hormonal cycle requiring production of oestrogen and progesterone by the ovaries is necessary for the development of PMS. However, contrary to early theories, there is rarely a lack of either of these two hormones in the average PMS sufferer.

Research has shown us that over 50 per cent of women with PMS have

low levels of magnesium, which is a mineral vital for normal brain chemical metabolism, hormone function and smooth-muscle control (the uterus and the gut are both smooth muscles). Other nutrients like B vitamins, zinc and essential fatty acids may also be in short supply.

Women often go through episodes in their lives that place extra nutritional demand on their bodies. Pregnancy and breast-feeding are two classic examples, where Mother Nature has deemed that the baby is served with nutrients first in order to develop and the mum is second in the queue. Therefore symptoms of PMS commonly get worse after pregnancy or weaning, or indeed may occur for the first time in a mother who is suffering with nutritional depletion.

Our bodies have very specific nutritional requirements. Just as our cars would not run well lacking oil or petrol, the brain will not be able to send out correct messages, and hormones will not be produced in adequate amounts at the appropriate time of the cycle, when levels of important nutrients are at a low ebb.

The WNAS programme, which successfully helps the majority of women over their PMS, is designed to redress the balance, by putting back into the body what time and nature have taken out. In the short term it will undoubtedly involve making certain dietary sacrifices until nutritional levels have been restored and symptoms abated, but the general consensus is that the medium- to long-term plan is immensely enjoyable.

In addition to making dietary adjustments, the WNAS programme consists of taking regular exercise, and scientifically based supplements (at least in the short term) that act as a nutritional prop.

What your doctor can do

Although many experts now believe that the nutritional approach to PMS is the best first-line treatment, the majority of doctors remain uneducated. According to a WNAS survey, 92 per cent of general practitioners have little or no nutritional training. Therefore what is on offer from your doctor is likely to be more drug or hormone oriented.

Hormone treatments

Many of the hormone treatments for PMS were designed on the premise that this syndrome was associated with a lack of a particular hormone, but research over the last decade had shown that this is not so. However, when artificial hormones either abolish or suppress normal hormone function it is likely that they may influence PMS symptoms. Whilst some hormone treatments may suppress symptoms, they do not address the root cause and thus alleviate symptoms in the long term. Additionally, most hormone treatments produce significant side effects, presenting the sufferer with additional hurdles.

Progesterone

This is one of the two main hormones produced by the ovaries, and is used by many doctors as a pessary inserted into the vagina. It was once one of the commonest medical treatments for PMS, and yet only one of many studies on progesterone suppositories has shown only a small benefit in PMS.

Synthetic progesterone

Known as progestogens, this is taken by mouth and has been shown to have modest success in two out of four clinical trials.

Oestrogen implants

These are inserted under the skin of the abdomen by a small surgical procedure and are sometimes considered for older women with PMS. Implants are not without side-effects, however, and in cases where these occur women have to wait for the implant to wear off, which can further add to their existing burden of symptoms. For women who still have their uterus, the hormone progesterone must also be taken in conjunction with oestrogen in order to prevent the risk of cancer of the uterus. Implants are best reserved for older women with PMS symptoms who are also approaching the menopause.

Hormone injections

These are now on offer to some women, but once again they can often precipitate side-effects which a woman has to live with until the effect of the injection wears off, usually three months at least.

Other hormone-related products

Danazol and Bromocriptine are powerful agents that are not suitable for long-term use. Danazol, for example, suppresses ovulation and may bring side-effects of hair growth and deepening of the voice.

The oral contraceptive

This can improve PMS symptoms in some, but in others it makes matters worse or has no effect at all. Perhaps a useful treatment for mild PMS in younger women.

Diuretics

Water pills have been popular treatments in the past. However, many of the older preparations lead to loss of important minerals that may already be in short supply. Spironolactone, a newer type of diuretic has been shown to be moderately helpful with water retention, but is not recommended by the manufacturers for long-term use in younger women. The good news, however, is that most of the symptoms of fluid retention

respond to dietary adjustments anyway, especially salt restriction, within a few months.

Anti-depressants

These are not regarded as appropriate treatment for PMS, but some of the newer preparations may be helpful for severely depressed or suicidal women. Studies show that Prozac (Fluoxetine) has been shown to help PMS depression but it is not effective in every case.

Vitamin B6

Pyridoxine is prescribed by some doctors, but has not been shown to be consistently effective in clinical trials. PMS is a multi-factoral condition that is unlikely to respond to one single nutrient in the long-term.

Efamast

Evening primrose oil, has been shown to be effective in clinical trials for premenstrual breast tenderness, and it is available on prescription from your doctor. It needs to be taken every day of the cycle at a dose of between 6-8 capsules per day, for at least four months.

What you can do

Here are some simple dietary recommendations:

- Never miss a meal. You will need to eat little and often in order to maintain optimum blood sugar levels, and to keep a constant supply of good nutrients flowing through to the brain and the nervous system.
- In your premenstrual week, your calorie requirements increase by up to 500 additional calories per day. In order to avoid dips in blood sugar, and temptation to eat chocolate or other processed sweet food, you will need to eat both a mid-morning and a mid-afternoon snack as well as your breakfast, lunch and dinner. (See Menu for PMS on page 474.)
- Ensure you have a daily salad, three portions of vegetables – including one green leafy vegetable, which is particularly rich in magnesium and iron – and at least three portions of fruit per day.
- Aim to eat three portions of oily fish per week – mackerel, herring, salmon, pilchards and sardines are all good examples. These can be eaten fresh, or tinned for convenience, with a salad at lunch-time.
- If you follow a vegetarian diet ensure you eat plenty of vegetarian protein each day: unsalted nuts, seeds, beans, lentils, peas, brown rice, soya bean products and sprouted beans.
- Eat some protein with your lunch and again with your dinner: chicken, fish, lean meat, low-fat cheese, eggs or a vegetarian protein.
- Avoid caffeine in the form of tea, coffee, cola or chocolate and choco-

late drinks. Do not drink more than two decaffeinated drinks per day as they contain other chemicals called methylxanthines that can aggravate other symptoms. Use alternatives like Rooibosch/Redbush Tea, which is a tea lookalike, other herbal teas or coffee substitutes like Barley Cup, and Dandelion Coffee (see page 7).

- Sodium salt and salty food should be avoided as salt tends to drag fluid into the cells and can make you feel bloated. You can use a potassium-rich salt substitute like Lo Salt in small amounts, or fresh herbs, garlic, ginger, spices and black pepper to flavour your food.
- Instead of eating foods that contain a large amount of sugar like cakes, biscuits, puddings, chocolate and sweets, aim to eat intrinsically sweet foods, like dried or fresh fruit, nuts and seeds, as these are much more nutritious. The PMS diet is not a weight-loss diet, and so it is acceptable to eat wholesome cakes and biscuits. You will find a selection of menus and recipes in *The Beat PMS Cookbook*, details of which can be found on page 493.
- Keep your dairy consumption down to the equivalent of milk in your cereal, milk in your drinks and one other serving of dairy per day, like yoghurt or cheese.
- Concentrate on eating a diet rich in the minerals magnesium, iron, zinc and chromium, and vitamins B, C, E and essential fatty acids. For details about rich sources of these nutrients refer to the Nutritional Content of Foods on page 483.
- Take the herbal supplement agnus castus which has been used for centuries for its ability to regulate the menstrual cycle and balance hormone levels. The first major clinical study on the use of agnus castus was published in 1954 showing positive results on women with menstrual irregularities and even amenorrhoea. It is the fruit of the agnus castus which contains essential oils, glycosides and flavonoids.

Constipation, abnormal wind and bloating

It is best to avoid products that contain phytic acid such as wheat and bran and, in some extreme cases, oats, barley and rye, for an initial period of at least six weeks. If you suffer with constipation take two tablespoons of golden linseeds with your breakfast cereals each day. You may also need to take some additional supplements of magnesium, preferably in the form of magnesium amino acid chelate – up to 800 mg per day. Magnesium needs to be taken to gut tolerance level as eventually it will cause diarrhoea. See chapters on constipation, abdominal wind and bloating, plus refer to the menu for irritable bowel syndrome on page 472.

Migraine headaches

Women commonly experience cyclical migraine headaches, which are sometimes associated with diet. Root or crystallised ginger taken as the

headache begins often helps to relieve symptoms. There are also a number of foods associated with migraine headaches which you can read about under that heading.

Other conditions

Thrush, Fatigue, Craving for Sweet Food, Acne, Eczema, Loss of Libido and Panic attacks often occur premenstrually. Details of how to overcome these problems can be found in the relevant chapters. A suggested menu for PMS can be found on page 474, menu for fatigue is on page 472, menu for sugar craving is on page 476, and the menu for acne is on page 470.

Exercise

You will need to do three or four sessions of exercise per week, to the point of breathlessness. Following aerobic exercise, when the heart increases its number of beats per minute, the brain releases chemicals called endorphins, which raise mood, energy levels and influence the hormones positively.

Cycling, swimming, brisk walking, jogging, skipping, racquet sports, gym work or a workout are all suitable forms of exercise. Choose the sort of exercise you will enjoy and make yourself an exercise schedule that fits in with your lifestyle. If you cannot easily get out of the house to exercise, try using an exercise video at home. We recommend the YMCA 'Y' Plan videos which are scientifically based, and present twelve minute blocks of exercise to get you started. Details of these can be found on page 509.

Nutritional supplements

In the short term at least, until the symptoms are well under control, it is likely that you will need to take some nutritional supplements to speed up your recovery. There are a few scientifically based supplements which we recommend at the WNAS which have been through properly conducted clinical trials.

- *Optivite* This is a multi-vitamin and mineral supplement that has been through four properly conducted clinical trials. It has been shown to influence both brain chemicals and hormones, and is the general recommended supplement for PMS. Severe sufferers will need to take between 4–6 tablets per day, every day of the cycle. The dose should ideally be split between breakfast and lunch.
- *Normoglycaemia* A supplement rich in B vitamins, magnesium and the mineral chromium, all of which have been shown to be necessary for normal blood sugar control. It was formulated by the WNAS some eight years ago, and has been a very useful short-term tool in helping to overcome cravings for sweet food premenstrually. It needs to be

taken at a dose of between 1–2 tablets, before breakfast and/or lunch, every day of the cycle for at least the first two cycles.

- *Efamol evening primrose oil* has been shown to be extremely effective in helping to alleviate premenstrual breast tenderness and eczema. It is the only form of evening primrose oil that has been subjected to extensive research and is recommended by the WNAS as part of their programme at a dose of between 6–8 x 500 mg capsules per day. Once again the dose should be split between breakfast and lunch, and should be taken for at least a four-month course.

Complementary therapies

Herbal medicine may be useful in helping to normalise hormone levels. Herbs such as black cohosh, damainana, raspberry leaf, vitex agnus castus, wild yam and dong quai are all used to correct hormone levels. Herbal ‘tranquillisers’ like Quiet Life or Valerina Night, a combination of soothing herbs, may help to reduce symptoms of anxiety, irritability and nervous tension.

Cranial osteopathy is a particularly good method of getting your body into correct balance. Tension in the neck and back, or trauma following childbirth, can prevent the body from functioning normally. If you have had a neck or back injury or feel this is a weak area it may be worth having a consultation with a cranial osteopath. Unlike ordinary osteopathy, this form of treatment is extremely gentle and relaxing. To find the address of your nearest practitioner, contact the European School of Osteopathy (see page 515).

Acupuncture and acupressure are two valuable ways of helping to return your body to normal function (see pages 36 & 37). These traditional Chinese methods can be used at two levels: self-help with acupressure which involves finger pressure, or acupuncture, with needles, which should be administered by a qualified practitioner. Acupuncture is particularly valuable for stubborn, chronic and severe problems. For details of your nearest qualified practitioner contact the British Acupuncture Council (see page 513).

Massage is a lovely way of helping to relax your mind and body, and is easily accessible and inexpensive. You could either treat yourself to a massage, or persuade your partner or a friend to volunteer their hands, or you could literally reach many parts yourself. Aromatherapy massage oil makes the massage extra soothing. Try using a combination of ylang-ylang, clary sage and neroli.

A combined programme of diet, exercise and scientifically based nutritional supplement has been shown to be the most effective approach to overcoming symptoms of PMS. Following these recommendations is likely to help you over your PMS and to leave you feeling better generally than you have felt for some time.

Further information about the WNAS programme for PMS can be found in our books *No More PMS!*, and *Beat PMS Cookbook*. Details of these and other books can be found on the suggested reading list on page 493.

Eleanor's story

Eleanor was a 32-year-old wife and mother of two who worked as a nanny in Surrey. Her PMS began after the birth of her second daughter, and the final straw came when she was found screaming and naked in the road in the middle of the night by her husband. She was unable to control her behaviour before her period and as a result her relationship with her husband and children was severely threatened.

'I felt as if an alien had taken over my body each month, as I struggled to control my raging temper and mood swings. I was a real Jekyll and Hyde. I am usually pretty laid back and sociable, but about ten days before my period I'd turn into a 'hag from hell' and refuse to go out of the house. I was also plagued by headaches and water retention.

I'd snap and shout at my husband and the children for no real reason. I began throwing plates and clenching my fists with the children, and wrote off a car. I was lucky I didn't kill myself, but things got so bad I did seriously contemplate suicide.

My husband read an article about the WNAS and phoned them in desperation. I reluctantly went with him to a consultation at their clinic, during which time a programme was tailor-made for me. I changed my diet, took supplements of Optivite and regular exercise, and within three months my symptoms completely disappeared. At first I was wary as I was sure it was a fluke, but to our utter delight I have remained symptom free. PMS is gone and I've got my family back.'

See also: Depression, Breast problems, Food cravings, What's wrong with present-day diet and lifestyle?, Nutrition is the key to health, Menu for PMS, Menu for breast tenderness, References and Recommended reading (*No More PMS!*).

Prostate Disorders

The prostate is a gland at the base of the bladder which performs a number of functions. Its main function is to contribute secretions that assist in the ability of semen to fertilise an egg. It also produces chemicals

with anti-bacterial properties and helps to minimise the risk of men developing urinary tract infections. The gland itself can occasionally become infected, increase in size with age causing outflow obstruction to the bladder and may also become cancerous.

There has been considerable progress in the treatment of prostatic related problems over the last 30 years due to earlier detection and more effective treatments.

URINARY AND PROSTATIC INFECTION

What are the symptoms?

Urinary tract infections are much less common in men than women. The symptoms are similar, with pain on passing urine and frequency.

What causes it?

In young men, the most common cause is usually urethritis with an infection caused by sexually transmitted organisms. These individuals are best referred on to a genito-urinary medicine clinic and require treatment with antibiotics, sometimes for prolonged periods of time.

What your doctor can do

- Any male developing a simple bacterial urinary tract infection requires examination for associated prostatic disease and antibiotic treatment.
- Usually an x-ray of the kidneys needs to be performed to exclude any anatomical abnormality or kidney malformation.
- Bacterial prostatitis produces symptoms of a urinary tract infection together with pain at the base of the penis. Urine samples, sometimes taken after prostatic massage will help identify the organism and treatment with antibiotics is usually for several weeks and sometimes several months.

What you can do

- In order to prevent the bacterial flora in your gut from being upset, take a course of high strength acidophilus daily whilst you are taking the antibiotics.
- Take the antibiotics conscientiously, especially if they are for a prolonged period.
- Avoid alcohol completely whilst the condition persists.

- Eat a nutritious healthy diet. See page 437.
- Consider taking supplements of zinc – 20 to 30 mgms daily and a strong multivitamin supplement to help boost resistance to infection.
- Limit intake of tea and coffee as occasionally this will aggravate the symptoms of urinary frequency. See page 7 for suggested alternatives.
- Take cranberry juice or cranberry juice extract on a regular basis.
- If sexually transmitted urethritis is confirmed, use a condom to protect your partner.

PROSTATIC ENLARGEMENT

What is it?

Prostatic enlargement is a very common problem, the main risk factor for which is age with well over 50 per cent of men experiencing some problem during the course of their life. As the prostate gland enlarges, it compresses the urethra – the outlet tube which passes through its substance and also pushes up on the base of the bladder. This produces symptoms of outflow obstruction, poor flow, dribbling and incomplete emptying and other symptoms of frequency, urgency, sometimes with incontinence and a need to pass water at night (nocturia).

Many sufferers put up with these symptoms, particularly in the early stages but would usually report to their doctor, particularly if there is any degree of incontinence or severe difficulty passing water. Acute retention recurs when the prostatic enlargement has completely obstructed the flow of urine which then needs to be relieved with the passage of a catheter – a fine tube.

Who gets it?

- Those increasing in age – affecting up to 90 per cent of men aged 85 and above.
- Those living in western and developed societies are much more at risk for prostate enlargement compared with those living in South East Asia.

What your doctor can do

- Examine you to see if the prostate is enlarged or whether the bladder is not emptying properly. In severely affected individuals, damage to the kidneys can occur with a rise in blood pressure. A urine test to look for infection and the presence of blood is also important.

- Men with severe symptoms, blood in the urine, a urinary infection or at risk for prostate cancer should be referred.
- Drug treatment with drugs termed alpha-blockers may help to reduce symptoms. A trial of these drugs for two weeks will help determine those who are likely to respond and may then be continued for several years.
- Referral for surgery, usually performed through a telescope passed along the length of the penis, can be highly effective but it is not without risks. Mild incontinence, erectile dysfunction and retrograde ejaculation are all known as significant complications, though more modern techniques have reduced the frequency of these problems.

What you can do

- Limit fluid intake if you are drinking excessively and, in particular, limit intakes of tea, coffee and alcohol, all of which have diuretic effects.
- Try eating foods with potential effects to reduce prostatic enlargement or prostatic symptoms. These include soya products which are rich in isoflavones that block the stimulatory effects of testosterone upon prostate tissue. Pumpkin seeds have been through a successful trial to reduce urinary symptoms due to prostatic enlargement. Try sprinkling these on your breakfast cereal or consuming them as a snack. Other good dietary sources include lentils, seeds, chick peas and beans.
- Phytoestrogen products are worth considering. Trinovin is an extract of red clover which contains four potentially important isoflavones – genistein, biochanin, daidzein and formononetin – all of which may potentially influence prostate health.
- Saw palmetto has also been used with some success in helping prostate related symptoms. Extract from this palm-like plant, native to North America, has been popular and it too contains phytoestrogen chemicals which inhibit the potential adverse effects of testosterone upon the growth and enlargement of the prostate gland.
- Extract of rye grass has also been used with some success in the treatment of prostate related disorders.

PROSTATE CANCER

Cancer of the prostate is the third leading cause of cancer deaths in men in the UK. Early detection is vital to its successful treatment and this has been aided by the development of the blood test PSA (Prostate Specific Antigen). There has been much debate in the last few years as to whether

this would be a useful test to perform in the general population, to screen for the early detection of cancer of the prostate. As yet no recommendation for this test to be used has been made. However, refinements of the test may lead to greater usefulness and thus it may become appropriate for men aged 50 or 60 years or older to then be screened.

Symptoms of prostate cancer

These are usually symptoms of prostate enlargement but they may be complicated by the presence of blood in the urine or blood in seminal fluid, pain typically at the base of the penis or on urination. Other symptoms relating to the cancer may occur if it has spread to the liver or bones.

What your doctor can do

- Early referral to a specialist centre is of course vital. Treatment involves a number of approaches including radiotherapy, use of potent drugs to block the action of testosterone and occasionally castration – removal of the testicles. Modern drug treatments have become increasingly effective so that radical surgery is not required.
- Surgical treatment to remove cancerous tissue may also be required but if the cancer is early and is not producing symptoms of outflow obstruction then this may not be necessary.

What you can do

- Consume a diet rich in phytoestrogens from foods such as soya and linseeds together with supplements of red clover. These phytoestrogens may in theory inhibit the growth of cancerous tissue in the same way that they may also inhibit the growth of breast cancer. Refer to the phytoestrogen-rich menu on page 480. Aim to have three servings of phytoestrogen-rich food or drink each day. For example sprinkle linseeds and pumpkin seeds on your cereal and use soya milk. Later in the day have a soya fruit milk drink or a glass of soya milk and have a soya milk dessert after dinner or a slice of cake or fruit loaf made with soya flour. For further suggested menus and recipes see *The Phyto Factor*, details on page 494.
- Also consume a diet rich in fruit and vegetables as there may be other plant derived products that generally inhibit the growth of this and other cancers.

See also: Standard references.

Psoriasis

Psoriasis is a common, often chronic, skin complaint where red patches of variable size are covered with fine scales. The patches, which are well demarcated, are found most commonly on the trunk or concentrated over the elbows and knees. Other areas that can be affected are the scalp, which becomes very scaly, shedding large amounts of dandruff, and the nails which may be thickened with scales at their edge or pitted by minute craters. The face is rarely affected. Very often the disease varies from month to month with spontaneous remissions occurring. Some patients develop an associated arthritis. The effected skin is very active, growing at ten times the rate of normal skin and can contain a very high concentration of chemicals that are produced in situations where there is a lot of inflammation. Just what triggers this change is uncertain.

Who gets it?

Psoriasis effects two per cent of the white population, and is less common in populations originating near the equator. Some forms of the rash may develop in childhood, especially the form that looks like a series of raindrops.

What causes it?

- It may follow an infection such as a sore throat.
- It can run in families, and is more common in smokers, especially when it affects the palms or soles of the feet.
- Deficiencies of folic acid, selenium, possibly zinc and sometimes calcium are known to occur, especially if the skin involvement is widespread and severe.

What your doctor can do

A number of different medicines seem to help, although certain drugs can worsen psoriasis. Long-term use is usually the order of the day.

- Creams based on coal tar, like Dithranol, are smelly but effective.
- Steroid creams and ointments can be used but are often limited if the psoriasis is widespread.
- Calcipotriol cream and ointment are derived from vitamin D and are quite effective at reducing the inflammation and scaling of psoriasis. They cause less irritation and are less smelly than some of the tar preparations.
- Phototherapy with ultraviolet light is highly effective. UVA light is used

and the patient is given a dose of a medicine called apsoralen that sensitises the skin to light. The treatment is thus often called PUVA.

- Shampoos usually based on tar preparations are useful for excessive scalp scaling. Sometimes an anti-fungal shampoo (Nizoral) is worth trying, and oral antifungal agents are sometimes effective too.
- A powerful vitamin A derived drug, Etretrinate, is occasionally used.
- Powerful anti-inflammatory drugs or immune-altering drugs are now used for severe cases.

What you can do

- *Stop smoking* This can worsen psoriasis.
- *Sunbathe* This is helpful in up to 75 per cent of patients. Some sunbeds may be helpful too (check with your specialist) and how about a trip to the Dead Sea where the combination of sun, low humidity, mud and mineral salt applications can be effective.
- *Eat a diet rich in essential fatty acids* These fats influence skin quality and inflammation. A high intake of the Omega-3 essential fatty acids is known to help psoriasis. Follow The High EFA Diet on page 446. If you are overweight then you will need to lose weight as well for this to be effective.
- *Take supplements of fish oils* Usually 4–6 high-strength fish oil capsules will suffice. It is the content of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) that you are interested in. Taking an EFA supplement is useful because in psoriasis there is often faulty utilisation of these essential fats.
- *Vitamin A* has been scientifically proven to slow down the rate of keratinisation (the process of skin cell growth and development) which is important in the treatment of psoriasis.
- *Vitamin B-complex* is necessary for normal cell division.
- *Take a supplement of acidophillus* to improve colon health as the skin and digestive system are intrinsically related.
- *Try avoiding wheat, oat, barley and rye foods* A recent report noted that 10 per cent of those with psoriasis may have evidence of sensitivity to these types of cereals. Generally exclusion diets do not seem to work well for psoriasis in the way that they do for eczema, but it might be worth trying to exclude these cereals for six to eight weeks to see if this helps.
- *Try taking supplements of multi-vitamins, zinc and selenium* The first two may influence skin quality, and the requirement of all three may well be increased in long-standing widespread psoriasis. Zinc at a dose of 30 mg per day might be particularly useful for psoriasis affecting the palms and soles, and is known to help the arthritis associated with this skin condition.

Complementary therapies

Homeopathy and herbalism are perhaps the two most worth considering. These therapies can be comfortably combined with both conventional and nutritional approaches.

See also: Standard references.

Raynaud's Disease and Poor Circulation

Sometimes poor circulation is due not to furring up of the arteries but to a reversible spasm of the muscles in their wall. Typically this happens in the hands and feet. These extremities change colour, become cold and tingle. The skin follows a sequence of pale then blue then a dusky red. This phenomenon was first described by a French physician Raynaud in the nineteenth century.

Who gets it?

Typically young women are affected. Both hands are usually involved and there are a number of triggering factors and sometimes causative diseases. Some researchers have associated this problem with irritable bowel syndrome and migraine, two conditions where spasm of muscles in the gut wall and the blood vessels of the head may play a part.

What causes it?

Common trigger factors include:

- cold weather
- emotional upset
- trauma
- smoking a cigarette.

Sometimes the condition is associated with other illnesses such as arthritis, skin diseases, pressure on nerves in the neck (following use of vibrating equipment, chain saws, for instance), in association with an increased stickiness of the blood which may sometimes follow an infection.

What your doctor can do

- Mainly examine you for some of the rare underlying causes.
- Prescribe a vasodilating drug, but they are not usually very effective.

What you can do

- Wear gloves. Obvious but effective.
- Wear a silk scarf around your neck.
- Regular physical exercise may improve cold tolerance.
- Stop smoking.
- Try some nutritional supplements. None is of proven value but the following might help:
 - Fish oils and plenty of oily fish in the diet.
 - Supplements of magnesium might help. They could in theory reduce the tendency to spasm of the blood vessels.
 - Supplements of nicotinic acid up to 300 mg per day; try it as 100 mg three times a day. This form of vitamin B3 can cause a flush reaction so always take it after food rather than on an empty stomach.
- Take a supplement of co-enzyme Q10 to improve tissue circulation.
- The herb ginkgo biloba appears to function by increasing the blood supply to the brain and throughout the body's network of blood vessels that supply blood and oxygen to the organs. In addition, it also has an anti-clotting action, preventing the blood platelets from clumping together. It is becoming an increasingly popular treatment for Raynaud's. However, it may contraindicate with some anti-coagulant medication so check with your GP before introducing the herb.
- Ginger is an age-old remedy for improving circulation, so incorporate it into your cooking or perhaps chew on crystallised ginger. Ginger infusions are simple to prepare by placing some root ginger into a mug of boiling water and adding a little honey to sweeten.
- Garlic is renowned for its circulatory benefits. However, supplements are often preferred to eating whole cloves of garlic!
- Combined supplements are now available which contain ginger, garlic and ginkgo biloba, but as with most complementary therapies, improvement is likely to be seen after approximately three months, so do persevere.

See also: Standard references.

Stress

More than half the adult population claims to be suffering with stress to some degree. It's not only the high flying executives that are suffering, but also exhausted mothers, the unemployed and the homeless. And it's not just nineties hype either. A paper published recently in the *British Medical Journal* confirmed that women who developed breast cancer were far

more likely to have experienced bereavement, redundancy, homelessness, violent crime or family crises within the past five years than their healthy counterparts. We also know from a study of Danish bus drivers that those who faced the worst traffic died earlier than their colleagues who drove country routes.

There is scientific evidence linking stress to certain diseases, perhaps not as a cause, but certainly as an underlying factor, although the nature of the link between stress and disease is not fully understood. These stress-related disorders include:

- High blood pressure
- Headaches
- Facial pain
- Irritable Bowel Syndrome
- Ulcerative colitis
- Stomach ulcers
- Infections
- Rheumatoid arthritis
- Anorexia nervosa
- Asthma
- Period problems, including irregular periods and PMS.

There is a fine line between stress and distress. Professor Hans Selye, the founder of modern research into stress described it as ‘the rate of wear and tear on the body’. He distinguished between good and bad stress. Good stress can be reasonably healthy as it stretches us to capacity and keeps us on our toes. Dealing with challenges as they present themselves is good for our morale. However, when we get the point of overload the stress becomes bad. The product of modern-day lifestyle is that it leaves many of us feeling overwhelmed and under-par. If these conditions continue for anything other than a short period of time, it can take its toll on our health.

What are the symptoms?

The rational ones amongst us do not usually take on our ‘case load’ all at once, we don’t ask to be overwhelmed, it just grows on us gradually. We collect our responsibilities as we go along. Perhaps we have been coasting along quite successfully, then a promotion comes along which demands more from us, and at the same time a close relative gets sick, or our partner gets made redundant, and then we find we are pregnant again and so on. Additionally, when asked to commit to a project some of us have not learned to say ‘no’. And so we soldier on as martyrs, believing that we can manage somehow, until one day our body sends out the warning. Whilst this scenario is occurring we are snacking instead of eating properly and not doing much in the way of exercise or relaxation.

The most common symptoms of stress include:

- Disturbed sleep and early morning waking
- Insomnia
- Panic attacks
- Palpitations
- Headaches
- Loss of appetite
- Compulsive eating
- Desire to increase consumption of alcohol
- Excessive smoking
- Fatigue
- Irrational thoughts
- Minor illnesses.

The first warning for some of us could be a bout of 'flu, or the onset of headaches. Alternatively our digestive system or our energy levels could be affected. Were we to re-evaluate our runaway lifestyle at this point, and invest time in getting our body back into shape, we might well be able to circumvent the health crisis brewing. Invariably, in our blind state, we get up from our sick bed, and go into the ring for the next round.

Many of us feel that we have to soldier on, no matter what. There does not seem to be an obvious alternative. And so we continue, until our body says 'no'. We all have both physical and mental limits, and the body can only tolerate so much abuse. It is a vicious circle. Because we feel so awful, usual tasks are more demanding, and looking after ourselves becomes even less likely. When something goes wrong with the car the warning light goes on, and when the computer doesn't like the conditions it makes a noise or puts up a message, but our poor body fails to communicate its troubles. Most of us wouldn't recognise the body's signal anyway until the writing was on the wall.

We don't necessarily have a nervous breakdown, but we develop a weakness in some area of our body as a result of an immune system dysfunction. Some of us develop migraine headaches, other get recurrent thrush, irritable bowel syndrome, panic attacks, depression, chronic fatigue or a nervous rash. The unlucky minority will simply have a fatal heart attack or develop a serious medical condition. New research reported in *The Lancet* show that people who bottle up their emotions are more likely to die early, and in particular to have heart attacks.

The adrenal glands are responsible for maintaining the balance of many bodily functions by secreting several important hormones. An abnormal adrenal response, either deficient or excessive hormone secretion, significantly alters an individual's response to stress. Often the adrenal glands become exhausted as a result of the constant demands put on them. Various nutrients and herbal substances can be very useful in

supporting and enhancing adrenal function, particularly during times of stress. Vitamin C, vitamin B6, zinc, magnesium and vitamin B5 are essential nutrients for the manufacture of adrenal hormones, and if the body is under constant stress, these nutrients are rapidly depleted.

What your doctor can do

- Eliminate the possibility of any underlying cause to your symptoms by giving you a physical examination, and performing routine tests to check your iron levels, thyroid function, plus checking for underlying infection or early diabetes.
- Suggest some counselling to help you sort out the stressful situations you face.
- If you are suffering with panic attacks your doctor may prescribe a low dose of beta blockers to help you cope with anxiety symptoms.
- Alternatively you may be offered tranquillisers, but these should not be taken for longer than a few weeks.

Whilst all this has been going on it is likely that many of us will have become regular visitors to our doctors surgery, and have begun taking the ‘appropriate’ medication. So we are now treating the symptoms, and at best suppressing them. You might even get labelled as ‘neurotic’ if you are really persistent. What we actually should be doing at this point is looking seriously for the root cause of the problem and addressing it. Whilst some doctors are enlightened and may question you about your troubles or refer you for counselling, they are used to dishing out ‘a pill for an ill’. They do not usually have the time in their short consultation to really find out what underlies your symptoms.

What you can do

Many of us have the ability to cope with near tragedy or disaster, and it is not until it is over, and the dust has settled, that we feel it is safe to ‘fall apart’. With hindsight, the warning signals were all there and we could have reversed the situation had we come to our senses in time.

Here are some tips to help you next time!

- Eat regular wholesome meals and have a supply of nutritious snacks. Don’t fall into the trap of missing meals and eating junk food or chocolate instead. Follow the recommendation for The Very Nutritious Diet on page 437.
- Concentrate on a diet rich in magnesium and vitamins B and C to support the adrenals. Good sources include wholegrains, fresh fruit and vegetables, low-fat dairy produce and lean poultry and meat.

- Panax ginseng has been used for centuries as a tonic, due to its ability to enhance adrenal gland function and improve reactions against a variety of stresses. Ginseng is described as an adaptogen which means it has a unique ability to normalise bodily functions.
- There are also plenty of foods that should be avoided, such as ‘simple’, highly refined carbohydrates and sugar, which can affect mental symptoms by causing blood sugar abnormalities and triggering stress.
- Excessive alcohol consumption can also exacerbate stress as it substantially decreases the ability of the body to extract nutrients from the food we eat.
- Make sure you have some sacred time for yourself. Time to think, and time to switch off from your responsibilities.
- Tell your family how you feel, and ask for their support whilst you get yourself sorted out.
- If your stress comes from work, discuss with colleagues how you can make changes, or if you are self-employed you will need to re-evaluate.
- Try to get away, even if it’s only for a few days. Sometimes we can see things more clearly from a distance.
- Learn not to take on too much – if you feel fully committed learn to say ‘no’.
- Prioritise your responsibilities and see if you can off-load or delegate some of the lesser important tasks.
- Take time each week to exercise – you should be doing three or four sessions of exercise per week, even if its just skipping or a workout to a video at home.
- Make time each day to relax formally – you will need fifteen minutes, with no interruptions. Really switching off is an art, you may need some instruction or to read a book on the subject.
- Get your partner or a close friend to give you a massage, preferably using some relaxing aromatherapy oils like geranium or lavender.
- Watch an entertaining film or make time to read a good book.
- Make sure you laugh occasionally. Laughter is so good for us, and yet when we get absorbed with problems in life we forget about our sense of humour.
- If you can’t see a solution to your current stresses find someone to talk it through with, or get some professional help (don’t forget Useful addresses on page 512).

Complementary therapies

When the symptoms you are experiencing are related to stressful events in life, the most effective thing to do is handle the stress – but it is not always that simple or instantaneous. As well as following the recommendations suggested here there are several complementary therapies that would be helpful. Massage and any method of relaxation would be good

to incorporate into your lifestyle on a regular basis. Acupuncture will help to boost your immune system so that you feel more able to cope, and cranial osteopathy may help to ease the tension that has built up in your body as a result of being stressed.

There are homeopathic remedies to try, or even the Bach Rescue remedy to help you cope with stressful moments. There are also some very effective herbal tranquillisers like Valerina Day and Valerina Night which can be taken when needed, and do not have any addictive properties. However, herbal products do not have an immediate benefit, so you need to persevere if you want to see results.

Bernice's story

Bernice was a 34-year-old mother of two who, despite her apparently normal life, was at breaking point through stress.

My husband, who is a conservative, high-powered, executive said I should have been able to "pull myself together" but I was unable to. He wouldn't discuss my upset over the termination I had had after the birth of our last child, or the problems we were experiencing with our sex life, which was non-existent. I was so anxious and tearful, I honestly don't know how I got through each day. Everything seemed too much, I couldn't even bring myself to answer the telephone when it rang. The most frightening thing of all, which I didn't bring myself to tell anyone, was that I kept seeing "little people" out the corner of my eyes. I knew they weren't there, but they seemed so real. I really thought I was going insane.

Formerly I was such an organised and rational person. I have a very idealistic brain in my head and usually like things to be just so. I used to entertain a lot and loved doing activities with my two children. I have many friends and lots of close family, but I couldn't cope with seeing them as I felt antisocial. One minute I'd feel violent and aggressive, and then I'd think morbid thoughts about dying. I also had chronic back pain and as well as the sleeping pills I took regularly, most days I took at least eight painkillers, which made me very constipated.

My doctor suggested that I got in touch with the Women's Nutritional Advisory Service, and in sheer desperation I did. My diet was overhauled, I was sent off to the cranial osteopath, and took Optivite and Efamol. Once my back was feeling better I started to exercise gently and was able to stop taking all the painkillers and sleeping pills. I found the WNAS programme hard to stick to for the first few weeks but was so determined to give it my best as I honestly felt this was the last resort for me.

It did get easier and within a month I was feeling considerably

better. Miraculously the osteopath sorted out my back problem, so that I no longer suffered constant pain. My constipation cleared up and the "little men" disappeared thank goodness. After following the programme for three months my symptoms had vanished, and my husband felt that his wife had returned. I was relieved too. I hate to think what might have happened to me and to my family if I had not been pointed in the right direction when I was at such a low ebb.'

See also: Standard references.

Thyroid Disease

The thyroid is a gland in the neck which produces the hormone thyroxine that essentially controls the metabolic rate of all cells throughout the body. A fall in the production of thyroxine leads to an underactive thyroid, also termed hypothyroidism. An excessive production produces an increase in metabolic rate and is termed hyperthyroidism.

What are the symptoms?

Symptoms of hyperthyroidism include:

- weight loss
- rapid pulse rate
- palpitations
- fine tremor of the hands
- increased sweating
- intolerance to heat
- increased appetite.

Symptoms of hypothyroidism may cause:

- fatigue
- muscular aches and pains
- weight gain
- intolerance to cold
- slow pulse rate
- an elevation in blood pressure
- dry skin
- hair loss and a variety of other changes if the disease is prolonged
- changes in facial appearance, especially puffiness which may be noticed by friends and relatives.

Who gets it?

Thyroid disease is common and often runs in families. It can be associated with diabetes, rheumatoid arthritis and pernicious anaemia and either an under- or over-active thyroid gland can affect over one per cent of the adult population. These disturbances occur more easily in women than they do in men. In women of child-bearing age menstrual disturbance, including premenstrual syndrome, may occasionally be due to an under-active thyroid.

What causes it?

- Antibodies against the thyroid gland are a common cause of an under-active thyroid gland and they also may lead to over-stimulation of the thyroid. This is termed auto-immune thyroiditis. This can be detected by blood tests which are different to the measurements of the actual level of thyroid hormone.
- An over-active 'nodule' in the thyroid.
- A virus infection which may produce a temporary rise in the production of thyroid hormone. This is often associated with painful swelling of the thyroid gland.
- Radiation treatment for an overactive thyroid gland. The thyroid may become under-active many years later.

What your doctor can do

- Tests for thyroid function are very sensitive and will easily detect an over- or under-active thyroid gland.
- Tests for thyroid antibodies will help decide on the cause and best treatment available.
- Treatment for an over-active thyroid involves:
 - drugs to control the level of thyroid hormone
 - surgical removal of part of the thyroid, or
 - use of radio-active iodine to partially destroy part of the thyroid gland.
- Treatment for an under-active thyroid gland involves giving replacement thyroid hormones usually as thyroxine, and occasionally as triiodothyronine.
- Continual blood tests to monitor progress of treatment are vital. Complicated patients may require the services of a thyroid specialist. This is especially true for those with an over-active thyroid.

What you can do

- Be a good patient. This is one situation in medicine where standard medical treatment produces excellent results.
- Do not take kelp or other forms of iodine. These do not boost or lower thyroid function and may disturb the test that your doctor wishes to do. Iodine is often put into slimming pills and cellulite pills which should not be taken by anyone on thyroid medication.
- Research does show that goitrogens found in cabbage, broccoli, mustard greens, radishes, horseradishes, turnips interfere with thyroid hormones. Other foods are soya beans, peanuts and millet. Cooking does destroy some of the goitrogenic activity, but caution should still be taken. However, it should be noted that exceptionally large quantities of these foods would need to be eaten to cause any interaction.
- Natural sources of iodine predominating in sea vegetables, including wakame, dulse, arame, nori, and kombu provide nourishment for the thyroid.
- Vitamins E and A, together with the mineral zinc are necessary for the manufacture of thyroid hormones. Zinc is also necessary for the conversion of beta-carotene into vitamin A. This conversion process is often compromised in the hypothyroid patient.
- There are natural thyroid formulas which claim to support thyroid function, but are often contraindicated with thyroxine medication.
- If you are not making satisfactory progress, let your doctor know. Especially in the treatment of an under-active thyroid, hypothyroidism, the adjustment of the dosage of thyroid hormone depends upon not only your thyroid hormone tests, but how you feel.

Complementary therapies

Don't even think about it!

See also: Diabetes, Rheumatoid arthritis, Anaemia, Standard references.

Tonsillitis

The tonsils are swellings formed by white cells, blood vessels and supporting tissues, which are situated at the back of the mouth on either side. They are essentially lymph glands of the mouth, and are there to fight infection. Sometimes they become badly infected themselves either by a virus or a bacterium called *Streptococcus*. These infections can also

occur even after the tonsils have been removed. Infected tonsils are common in childhood and should be treated as Influenza (see page 262) although a number will require treatment with antibiotics, most commonly penicillin, if bacterial infection is suspected. Sometimes the tonsils remain enlarged though they are not always infected.

Removal by operation is appropriate for enlarged, repeatedly infected tonsils. If they are not infected, but just large, they can still cause problems of pressure in the throat, discomfort on swallowing, and snoring! (Snoring is also related to being overweight, high blood pressure, alcohol consumption or other distortions of the upper airway).

What you can do

For enlarged, repeatedly infected tonsils, treat as for recurrent infections (see page 262). For those who have enlarged non-infected tonsils it may sometimes be worthwhile trying The Simple Exclusion Diet (see page 460). Sensitivity to dairy products seems to be the most likely situation in such cases, and avoidance for as little as a week may make a noticeable difference. You can also follow the advice about supplements given in the chapter on Influenza, recurrent coughs, colds and sore throats (see page 262). To relieve the pain gargling with aspirin is quite effective.

See also: Standard references.

Ulcerative Colitis

Ulcerative colitis is a chronic non-infective disease, producing inflammation of the lining of the colon and the rectum. It is a relatively common disorder with about five to ten new cases per 100,000 of the population per year. Adults aged 20 to 40 years are especially vulnerable, but children, including infants, may be affected.

What are the symptoms?

Diarrhoea with blood and mucus are typical symptoms. Abdominal pain and weight loss are not as commonplace as they are in Crohn's disease. Often the symptoms start gradually but may be of sudden onset. Sometimes constipation is a feature if the disease is confined to the rectum; this is termed proctitis. In more severe cases there may be inflammation in other organs, causing arthritis, mouth ulcers, liver problems, eye pains and skin rashes.

What causes it?

As with Crohn's disease, there appears to be a mixture of genetic and environmental factors. The genetic element seems to be smaller than that for Crohn's disease. Some 10–20 per cent of sufferers have a near relative also with the disease. It is more common in some Jewish communities around the world. The possible environmental factors include:

- *Infection* The bacteria in the colon are continually changing, and some relatively normal bacteria, present in the colon of those with colitis, have the potential to produce chemicals that could damage the lining of the colon. Whether they actually cause colitis is not clear.
- *Allergy or intolerance to foods* This is possible in a minority of adults. Cow's milk appears the most likely culprit. Intolerances to wheat, yeast and other foods are a possibility too (see page 422). In infantile colitis, food allergy is in fact the rule.
- *Sulphur in the diet* There is some recent evidence that sulphur in the diet together with other factors lead to the production of hydrogen sulphide (bad eggs) gas in the colon. This is a highly toxic compound and is particularly noxious to the cells lining the wall of the colon. It interferes with their energy metabolism. A diet low in sulphur – which is found mainly in beer, wine, bread, preserved meats (salami and sausages) and any other food containing sulphite preservative (E220–227) – should be excluded especially if you suffer with smelly wind.
- *An intolerance to some strong vitamins* A side-effect of high-dose vitamin E in infants is colitis. We have seen a few patients experience abdominal pain with passage of blood in the stools after taking either vitamin E or a strong multi-vitamin preparation containing it. This is rare though.
- *Not smoking cigarettes or being an ex-smoker* This is one of the great oddities in medicine. Several studies show that smokers are protected against ulcerative colitis. Ex-smokers, however, have a particularly high incidence. For them we cannot recommend re-starting cigarettes, but nicotine patches may be a possible therapy. We await further research on this.
- *Following use of painkillers* These do not cause colitis but they may account for its aggravation. This applies to paracetamol and anti-arthritic drugs. Occasionally there may be marked sensitivity to aspirin and food containing salicylates. Such patients are made much worse if they take aspirin or are given a drug often used in colitis called sulphasalazine. If this makes the bowel condition worse, then a low salicylate diet is worth a try. This can occasionally lead to a complete resolution. Such a diet is complicated and requires expert management as many fruits, vegetables and spices need to be avoided.

What your doctor can do

- Assess the extent of the disease using a barium enema x-ray or colonoscopy (examination of the large bowel with a flexible telescope).
- Assess the severity of the disease from blood tests, frequency of bowel movements, the presence of blood in the stool and if there is a fever.
- Exclude the presence of any bowel infection, including home-grown as well as tropical infection.
- Prescribe drug treatment with:
 - Steroid by mouth, or in the form of an enema for those with disease confined to the last part of the bowel. Steroids are useful for controlling a flare up, but have no benefit as a maintenance therapy, so every attempt should be made to withdraw them from the patient once the disease is controlled.
 - Anti-inflammatory drug based on 5-aminosalicylic acid (sulphasalazine and related compounds). Again this comes as tablets or as an enema and is useful for maintenance therapy.
- Suggest hospital treatment which may involve blood transfusions and fluids and specialised feeding intravenously.
- Recommend surgical treatment to remove a diseased colon or part of it. Cancer can develop in the colon usually after fifteen years of disease. Regular examinations of the whole of the colon are recommended for many patients with colitis, even if their disease is quiet.

What you can do

In theory there should be a diet or diets for colitis, but this has not really proved to be the case. There are a number of possibilities to consider though it is probably best to discuss these with your specialist first.

- A diet free of cow's milk products and lactose is perhaps worth most sufferers trying at some stage. Calcium supplements are necessary if followed long-term.
- Ask your doctor about a low salicylate diet for those made worse by drug treatment or if there is a history of aspirin sensitivity (see Asthma and Rhinitis pages 89 and 226).
- A diet avoiding foods that commonly irritate the gut which include coffee, wholemeal bread, bran and other wholegrain products, sweet-corn, beans and other high-fibre foods. It may be useful to avoid these foods during an attack and when in remission. Even when the disease is not active, the bowel habit is often erratic, and this may respond to the avoidance of these or other foods.
- A diet low in sulphur containing foods could work if there is a lot of foul-smelling wind due to hydrogen sulphide. These sorts of compounds are found at a high level in those with active disease and

the drug 5-aminosalicylic acid inhibits their production. It may therefore be prudent to avoid the main sulphur-containing foods which are: sulphite preservatives E220–227, wine and beer, bread, eggs and dried fruit.

- Take supplements if there has been significant weight loss, or you need to follow a restricted diet. The following may be needed:
 - iron, if there is anaemia from blood loss
 - multi-vitamin and multi-mineral, if there is weight loss
 - folic acid, if on 5-aminosalicylate
 - calcium, if on a dairy-free diet long term
 - fish oils may help to reduce the inflammation slightly, and may reduce the need for steroids. They are perhaps worth considering if there is an associated arthritis and you cannot take anti-arthritic drugs.
- Take a probiotic supplement providing ‘friendly’ bacteria to repopulate the colon. Acidophillus or bifido bacteria are the most frequently used probiotics.
- Vitamin A is necessary for healing of the gut lining and its antioxidant properties protect the mucous membranes from free radical damage.
- Take L-glutamine, an important amino acid for healing the gut lining and is the primary metabolic fuel for growth and replication of intestinal cells.

Complementary therapies

There is a real possibility that some herbal preparations might influence the degree of inflammation in the colon. Expert advice from a qualified herbalist is needed.

See also: Standard references.

Urticaria

Urticaria is an itchy skin rash, characterised by short-lived, sometimes severe, swellings called weals. It may occur as a one-off episode, or several episodes may happen over the course of a few weeks. Sometimes it is chronic, lasting for three or more months with the eruption appearing suddenly, then disappearing and changing from day to day. In these instances there is a strong need to try and identify the cause. The rash and irritation are due to the release of histamine and other chemicals into the skin. Allergies often play a part but are by no means the only cause. A severe form, where there are large deep swellings which may effect the lip, tongue or airways is called angio-oedema, may occasionally be life-threatening.

What causes it?

There are many possibilities to consider and often in one-off episodes no clear cause may be identified.

- A food allergy. Egg white, fish, tomatoes and cows' milk are known possibilities.
- A food intolerance reaction. This can happen with strawberries, artificial colours (Tartrazine E 102 and Sunset Yellow E 110), the preservative benzoate (commonly found in fizzy drinks), salicylates in food and shellfish.
- Reaction to a drug. Antibiotics, aspirin (a salicylate) and, rarely, others are all possibilities.
- Contact allergies to housedust and animal fur, saliva and, rarely, semen.
- Genetic factors, as this condition may run in families.
- Exercise can be a trigger, and this may interact with other triggers, especially foods.
- Exposure to cold and occasionally heat.
- Pressure may trigger localised urticaria.
- Infection, especially hidden parasitic infection causing chronic urticaria.
- Candida infection is another known, albeit rare, trigger.
- Insect bite or sting, jellyfish sting and, of course, stinging nettles.
- In association with various diseases.

What your doctor can do

Investigations are necessary only for those with chronic urticaria (lasting three months or more), if the reactions are very severe or if there is a family history. Usually the likely trigger is decided from the history and an awareness of the events and circumstances preceding repeated attacks. Allergy tests are not very helpful but may uncover a food allergy or sensitivity to *candida albicans* (thrush).

Treatment, as a rule, is by use of one of several antihistamines. Many of these are now available without prescription. Their use is limited by drowsiness which is the main side-effect and by their inability to control all of the reaction. Many chemicals other than histamine are released in a reaction and thus antihistamines do not always control the reaction. Other drugs with antihistamine-like effects can be used, and adrenaline by injection is needed for the severe life-threatening reactions.

What you can do

- Try and find the cause. Make a list of all activities, food and drink consumed, and any medicines or other pills (including vitamins)

consumed in the 24 hours before an attack. Collect several of these and go and discuss them with your doctor.

- Exclude common likely triggers such as all drugs, aspirin, foods containing artificial colouring agents, beverages containing benzoates, foods rich in yeast and yeast-derived beverages (all forms of alcohol except those that are filtered e.g. gin and vodka).
- Take some supplements. Vitamin C at a dose of 1g twice a day can halve the level of histamine in the blood after two weeks. So it may be useful for those with chronic urticaria. It probably won't replace a good antihistamine in the short term.
- Magnesium helps to stabilise the allergy cells called mast cells that release histamine and other chemicals. Supplements of this mineral at a dose of 300–400 mg per day combined with The Very Nutritious Diet (see page 437) might reduce the intensity of the rash after two or more months. Zinc may also help in a similar fashion (supplements of 10–20 mg) and vitamin B6, pyridoxine, is needed by the body's own enzymes that break-down and detoxify histamine.
- Be patient. It sounds terrible but many resolve spontaneously disappearing as mysteriously as they came.

Complementary therapies

Again homeopathy is perhaps the most promising. Homeopathic preparations of bee sting and stinging nettle are available and are worthy of use for symptomatic relief at least.

Veronica's story

For twelve years Veronica, a 37-year-old teacher, had experienced recurrent itchy red swellings on her face. Urticaria had been diagnosed but no cause had been found, though she herself was suspicious that there were a number of dietary triggers. In fact she felt better when following a high-protein, high-dairy product diet. Her rash had been so severe that she had used steroids in the past but had stopped these.

A few simple skin allergy tests did not reveal any obvious potential triggers. It therefore seemed possible that she had a degree of salicylate sensitivity. These compounds are found widely distributed in a number of fruits, vegetables and yeast derived products. She began a low salicylate diet and took supplements of vitamin C and magnesium for their antihistamine effects. Over several months her skin reactions diminished though occasional episodes still occurred for reasons that were not entirely clear. The general conclusion was that she was likely to have a degree of salicylate sensitivity though there is no specific test to confirm this.

See also: Standard references.