

Dementia

Dementia is the subject of many jokes, has numerous terms to define it, and is something we often casually admit to suffering ourselves. But true dementia is really no joke. It is characterised by a loss of cognition, which means a loss of the ability to use one's mind in a variety of ways; this includes memory, use of language, visual awareness of space, perception, thinking, problem-solving and personality. Significant loss of two or more of these functions in someone would qualify for a diagnosis of dementia. Underlying psychiatric problems such as depression or a physical illness that reduces the level of consciousness (e.g. heart disease) must first be excluded. One in five elderly people aged 80 years or more will develop dementia. There are in fact many causes, a few are treatable and there may be some with a nutritional element. Alzheimer's disease accounts for approximately two-thirds of cases.

How to recognise early dementia

This information is presented as an aid to relatives and friends of those who might be developing a problem. The majority of such cases present slowly, almost insidiously, and it is not usually until there have been several events that real suspicion should arise. Then only assessment by an experienced doctor will lead to a proper diagnosis. There are a number of questions to be asked, such as, 'Is the problem really dementia, or is there some other illness?', 'What is the likely cause?' and 'Is it treatable?'

The most useful information for the health professional comes from a close relative or similar witness. They should be asked to describe suspicious events where the person's mental functions may have failed them. Then the following checklist should be appraised:

- memory, both for recent events and for distant ones
- use of language, finding and using words correctly, understanding what is said or written, reading and writing ability
- numeracy, especially with money when shopping
- perception: of self as in appearance and dressing; of nearby objects; and of where they are, and ability to find their way around
- thinking, planning and problem-solving
- personality and conduct toward others
- features of depression
- delusions or hallucinations.

Many other details are important to assess the general level of health including:

- consumption of alcohol and tobacco
- use of drugs
- past health, especially heart disease, and if there is a history of a stroke
- a recent fall or injury
- the presence of a severe headache
- loss of control over the bowels or bladder
- recent weight loss or fever
- type of diet consumed
- the cause of death or state of health of all first degree relatives.

What your doctor can do

After assessing the problem the next step is to examine and then investigate the patient. This will mean a number of tests including those for:

- anaemia and infection
- kidney and liver function
- calcium, sodium and potassium
- vitamin B12, folic acid and possibly vitamin B1
- thyroid function
- chest x-ray
- x-ray of the brain – CT scan.

The purpose of these tests is to exclude causes of dementia other than Alzheimer's disease, and identify those that are treatable. Particular thoroughness should be shown if the patient is young, the deterioration is rapid, there is an unsteady gait, loss of control of eye movement, a loss of bowel or bladder control, a tremor, or features to suggest repeated small strokes, infection or a disturbance in metabolism.

Treatment may involve drugs, surgery and occasionally correction of nutritional deficiencies or treatment of an infection or a metabolic problem. Very often the diagnosis is one of Alzheimer's disease which can only be confirmed by the exclusion of other conditions, as there is no test for it. The theories behind the causation of Alzheimer's disease include: genetic predisposition, aluminium accumulation, and past head injury. The greatest risk factor is by far and away age. Treatment is very unsatisfactory. Only one drug has had any real success and that is Tacrine which is of very limited benefit. It helps maintain the level of chemicals involved in the transmission of signals from one nerve cell to another.

What you can do

The information here tells you how you may help someone with dementia.

- Don't give up hope. The rate of decline is very variable. Join an appropriate support group.
- Get the sufferer to eat as well as possible.
- Cut down on their alcohol if this is excessive (more than two units per day).
- Get their doctor to check their drugs if they are taking some and decide whether they are all really necessary.
- Maintain a daily routine. This helps them to remember what they need to do.
- Label things and rooms if they are forgetful.
- Help keep them physically active. A 30–40 minute walk per day is ideal.
- Help them keep mentally active. This may help them preserve their faculties. Reading, watching TV (and discussing it), keeping up hobbies and socialising are all important.
- Supplements of vitamins may be appropriate. Vitamins B and C if deficient can have a small influence on concentration. There is no harm in giving a modest supplement of these especially if the diet is less than perfect. Expect no miracles.
- Inform the driving licence authorities.
- Make arrangement for the management of the person's financial affairs.

Complementary therapies

Complementary therapy is unable to reverse the process of dementia.

See also: References.

Depression

We all experience mood changes from time to time, which is a perfectly natural phenomenon. Bad news, the loss of a dear one, prolonged dull weather, financial problems and lack of sleep are a few examples of changes that may depress our mood. The majority of us bounce back relatively quickly, but for approximately one in ten people symptoms of depression become chronic, even when the apparent stimulus is long gone.

Mood swings are a lower harmonic of depression, and affect us at different times in our lives. Women experience numerous hormonal events which can leave them feeling drained. Childbirth is a good example. Before a period or during the menopause are other key times when extra nutrient demands are placed upon them. When they are unable to meet the demand, symptoms of depression and mood swings can result. From a survey conducted at the WNAS on 1000 patients with premen-

strual syndrome, we discovered that 96 per cent of them suffered with mood swings in their premenstrual phase, 62 per cent severely. Ninety-four per cent of the women also suffered from premenstrual depression, 83.8 per cent severe to moderate. This, we felt, was a frightening high number, and in view of the possible consequences of depression, not something that should be taken lightly. As premenstrual depression is such a common condition, we will deal with the cyclic aspects of depression, before going on to examine the more chronic symptoms.

What causes premenstrual moodswings and depression?

Theories about the cause of premenstrual mood swings are similar to those that cause premenstrual anxiety as mentioned in the chapter on PMS. When there is an inadequate supply of nutrients and a disturbance in brain chemistry, our mood becomes volatile.

Depression is a common premenstrual symptom, and usually presents with other symptoms such as anxiety and breast tenderness. In 1959 Dr Katharina Dalton published a study in *The British Medical Journal* which showed that the time of admission to hospital for female depressed patients coincided with the menstrual period, the premenstrual phase, and ovulation. Our own research has shown that those most likely to suffer from premenstrual depression are more often overweight and do less exercise than non-sufferers.

The balance of certain nutrients has an important influence on both hormone and brain chemistry. Magnesium, for example, influences how the ovaries respond in the normal menstrual cycles, and many other nutrients are also important in this respect. It is also known that in people with severe depression the chance of finding some degree of B vitamin deficiency is much higher than would be expected in the general population. These nutrients have been used successfully in treating both PMS and depression.

The balance of hormones – or whatever determines their balance – seems to be crucial in controlling mood, and as the years pass by it becomes even more apparent that our diet and lifestyle can influence our hormones and our moods.

What your doctor can do

The average woman who complains to her doctor about fluctuating moods and depression in her premenstrual phase, or at the time of the menopause, will probably not have any physical symptoms. As the majority of family doctors lack information about nutrient levels, they will have a limited number of options on offer.

- First you would be given a physical examination, with routine blood screening to eliminate the possibility of an underlying problem.
- If nothing tangible is found, your doctor is likely to offer either hormone treatment or tranquillisers.
- An enlightened doctor would ask you about your eating and exercise habits, and about your stress levels.
- You may be referred for some counselling.
- Alternatively, you may be simply told to pull yourself together.

What you can do

- Follow the recommendations in Premenstrual Syndrome (see page 394), and the dietary recommendations on page 474.
- Use the Supplement Chart on pages 18–21 to work out which supplements you should be taking, and ensure that you take them regularly, at least until your symptoms have abated. The most effective are likely to be high doses of vitamin B – about 100 mg of B1, B2, B3 and B6 and magnesium.
- The herb St John's Wort, which is otherwise known as hypericum perforatum, has been successfully used to treat depression for over 2,000 years. In Germany, St John's Wort is prescribed by at least half of the doctors dealing with depression, and a study in the UK in 1997 found St John's Wort at a dose of three 300 mg capsule per day to be as effective as many standard antidepressants. (NB: see note on page 162.)
- Get some help to sort out any stressful situations that face you, including your current commitments, if you find them overwhelming.
- Never underestimate the value of exercise – it has been scientifically proven to influence your mood and helps to lift depression. You need to exercise for at least four good sessions each week (see page 32).
- Make some time for yourself, no matter what your schedule, and don't be afraid to indulge yourself in the odd treat now and then, most of us more than deserve them!
- Spend time with friends who like to laugh, and watch some comedy films.
- Hum in the bath, and at other convenient times. Sound therapists have discovered that humming alters our breathing pattern and as a result increases our energy levels and raises our mood.

Complementary therapies

Our recommendations are pretty good at sorting out premenstrual mood swings and depression, but it may take a few cycles before you feel the benefit. In the meantime, it is worth trying some herbal preparations, or a homeopathic remedy or two.

CHRONIC DEPRESSION

Unlike premenstrual depression, this true depressive disorder persists, and the symptoms are not linked to the menstrual cycle. True depression can accompany a physical illness or can be an illness in its own right. So the first thing a doctor has to do is eliminate an underlying physical cause before assuming that you are suffering with pure depression. One to two men per thousand suffer with depressive disorders, three times as many women.

Seasonal Affective Disorder (SAD) is another form of major depression, where sufferers are profoundly affected by the lack of sunlight that occurs in autumn and winter. This triggers biochemical changes in the brain, directed by the brain chemicals melatonin and serotonin, and leads to depression.

Men are slightly less likely than women to experience depression but there are certain problems that are more likely to occur in the male which will contribute to this problem. Alcohol excess is perhaps the most relevant. Consumption of four units (1.5 pints of beer or half a bottle of wine) or more per day is likely to have an adverse effect on many nutrients that influence mood. The B vitamins are particularly vulnerable as are the minerals zinc and magnesium, all of which are involved in the production of mood-altering chemicals in the nervous system. If you drink heavily or regularly, take a supplement.

Additionally, lack of vitamin C, even if mild, can contribute to depression. Requirements are known to be increased in those with large muscle bulk, as well as in smokers. A supplement of 500mg-1000mg is recommended.

An underactive thyroid is less common in men, but other hormonal changes could present with depression. Increased levels of prolactin – from the pituitary gland – can cause a reduced sperm count, loss of libido and depression in the male.

Finally some men just don't feel right unless they exercise regularly. Regular exercise even once or twice a week aids mood, physical fitness and sleeping patterns, as well as protecting against cardiovascular disease.

What are the symptoms?

The main features of a depressive disorder are low mood, lack of enjoyment, loss of interest in usual pastimes, and becoming generally withdrawn. Often people suffering with depression also have disturbed sleep and wake early in the morning, lack energy and find that their appetites for both food and sex are reduced. They seem to see life through dark

grey glasses, and are pessimistic, regard most endeavours as hopeless, and often display suicidal tendencies. Even their physical appearance may be affected with a downturned mouth, frown lines on their forehead and a stooped posture.

Key features of depression

- depressed mood, or mood swings
- lack of energy
- lethargy and despondency
- inability to experience enjoyment
- pessimistic attitude
- suicidal thoughts
- regretful and guilty recollections
- disturbed sleep with early morning waking
- insomnia or somnolence
- reduced appetite for food
- loss of libido
- constipation
- weight loss or weight gain
- amenorrhoea (absent periods) in women

What causes it?

There can be many underlying causes of depression:

- Marital problems, bereavement, redundancy, financial stress and so on. Very often symptoms of depression can arrive as the result of an accumulation of stresses and strains.
- An under-active thyroid gland can produce symptoms of depression, and so too can other serious illness, like cancer, kidney, liver or heart disease, anaemia and diabetes.
- Serious infections
- Alcoholism – prolonged consumption of excessive amounts of alcohol.
- Repeated lack of food
- Chronic pain
- A drug side-effect
- Deficiencies of B vitamins, calcium, magnesium, copper, iron potassium, folic acid or EFAs. Numerous studies have shown that patients with depression commonly have low levels of one or more of these nutrients.
- Excessive consumption of caffeine, as heavy caffeine users have a tendency to be more depressed and have a lower academic performance.
- Food sensitivities

What your doctor can do

- Determine whether you are suffering with pure depression and that there is no underlying physical cause for your change in mood. This would be done by physical examination and routine blood tests, to check for anaemia, infection, thyroid function, and kidney and liver disease. There would also be a urine test to check for diabetes.
- Decide whether you need help from a psychiatrist, or whether you should be treated in the surgery. As a rule of thumb, those who are suicidal, not eating or hallucinating should be given specialist help without delay.
- Advise counselling that would help you deal with immediate problems, and come to terms with past traumas.
- Encourage you to take each day as it comes, and to temporarily relinquish some of your responsibilities.
- Prescribe antidepressants. There is now a bewildering choice. Remember that there is a lot of individual variation in response and several may need to be tried before one is found to be effective. A psychiatrist may use stronger drugs like Lithium, a mood regulator, or ECT, electro-convulsive therapy, which is not common these days because it causes irreversible brain damage.

What you can do

- Eat wholesome food regularly, and in particular avoid sweets and chocolate as these can worsen symptoms, especially when they are eaten in the place of nutritious food.
- Follow the recommendations for The Very Nutritious Diet on page 437. Nutrition can be very important in depression. Many nutrient deficiencies can result in depression, but some are particularly important nutrients for healthy mental function including most of the B vitamins, vitamin C, zinc and magnesium. Good food providing adequate calories and protein nourishes both the body and the brain. The brain has first call on the available supply of many nutrients, therefore, the first effects of nutritional deficiencies are often mental symptoms.
- There are also plenty of foods that should be avoided, such as 'simple', highly refined sugar in foods and drinks, which can affect mental symptoms by causing blood sugar swings.
- Excessive alcohol consumption can cause depression, as it substantially decreases the ability of the body to extract nutrients from the food we eat. Limit yourself to a maximum of two units per day.
- Spend some time in a stress-free environment with a companion who is willing to listen to you.

- Get some help to sort out the immediate stress or trauma you are facing.
- Ensure you get plenty of fresh air and sunlight, when available, each day.
- Exercise six days per week to the point of breathlessness, as this will induce an endorphin release, which helps to lift you out of your depression.
- If possible, arrange to have your nutrient levels measured so that you can determine whether you have any deficiencies.
- Take supplements of strong multi-vitamins, B vitamins, magnesium and anything else that may be indicated following your tests.
- Amino acids are the building blocks of protein, and precursors, or raw materials for neurotransmitters. Neurotransmitters are chemical like substances which are necessary for conducting messages. There are 3 amino acids that are most directly related to mood and depression: phenylalanine, tyrosine and tryptophan. Tryptophan helps to raise levels of a naturally occurring chemical in the brain called serotonin, which has been found to be abnormally low in depressed people.
- Vitamin B3 is a co-factor in the conversion of tryptophan to serotonin so a good dietary intake with the addition of a supplement is necessary in the treatment of depression. Some foods like milk and turkey contain an abundant supply of tryptophan and can act as anti-depressants.
- The herb St John's Wort has been successfully used to treat depression for over 2,000 years (see page 152).
- Spend 15–20 minutes each day relaxing to soothing music, or a relaxation tape, or perhaps try some yoga or meditation. Follow the recommendations on the role of relaxation (see page 29).

Essentially, what you need is good food, nutritional supplements, plenty of exercise, good company, a break from your routine, and time to reflect and reorganise.

Complementary therapies

Seek advice from a qualified homeopath if necessary, who will choose a remedy to suit your individual set of symptoms. Aromatherapy massage might help to ease the blues also.

Justine's story

It was clear from the outset that Justine was an unusual patient. She was intelligent, significantly depressed, but with very clear insight. At the age of 36 she had had ample opportunity after 20 years of depression to gain some understanding of her problems. In particular she had observed that throughout her large family virtually all

the female members were miserable. She had coped with her depression well, only rarely making use of anti-depressants. She had managed to develop a career in administration which she continued with full-time even though she had a young child.

The pattern of her depression made her feel that there was some chemical basis for it and she thought that at least in part, this might have a nutritional component. She was a non-smoker and non-drinker, and ate a reasonably good diet, although occasionally convenience meals had to be used because of her busy lifestyle. Indeed there is research to support her suspicions. Sometimes depression does run in families and subtle changes in brain chemistry are known to occur with certain patterns of depression. The accepted treatment however involves anti-depressants.

In Justine's case nutritional investigations revealed markedly abnormal results. The levels for vitamin B1 and vitamin B6 were extremely abnormal putting her easily into the worst one per cent of results for patients we see. There was a reduced level for magnesium and a borderline level for vitamin C. Low levels of these nutrients are associated with depression, fatigue and increased risk of suicide. The severity could not be explained by her diet and thus it is possible that there was some genetically determined metabolic factor contributing to these abnormalities. Without investigating other members of the family it would be impossible to be certain about this.

She began an improved diet, together with supplements of high strength vitamin D, multi-vitamins and magnesium. Her day-to-day depressive symptoms lessened and in the next month her pre-menstrual mood changes also diminished. Episodes of stress and argument with her husband also reduced. She chose not to take the anti-depressant which had been described by her psychiatrist.

She was careful to limit her alcohol intake to 14 units a week as levels greater than this may indeed increase a demand for vitamin B. She may well prove to be the sort of person who needs to take vitamin supplements long-term in order to maintain good physical and mental health.

POSTNATAL DEPRESSION

This brand of depression occurs after the birth of a baby, and can vary from the 'baby blues', which may arrive in the first seven to ten days after giving birth, to a full blown psychotic disorder, with total rejection of the baby. The baby blues is very common and, in a well-nourished mum, should pass almost as quickly as they arrived. Severe postnatal depression is far less common, and needs immediate attention.

The most common symptoms of the baby blues include depressed mood, crying, insomnia and irritability, and are experienced to some degree by between 66–85 per cent of women, depending on the criteria used to define it. It is thought to occur in women who have a history of premenstrual syndrome. Postnatal depression is less common, affecting some 10 per cent of women, and it has been noted that there is often a previous history of depression in this group of sufferers.

What are the symptoms?

- mood changes that vary from depression to elation
- lack of interest in the baby
- withdrawn and tearful
- irritability
- extreme fatigue
- insomnia
- anxiety
- thoughts of suicide
- thoughts of harming the baby

What causes it?

- It is thought that fluctuating levels of the hormones progesterone and oestrodial, shortly after the birth of a baby may be an underlying cause. However, there are differing opinions amongst the medical fraternity.
- Thyroid insufficiency occurs in approximately 5 per cent of women.
- Low levels of nutrients, particularly vitamin B, calcium, magnesium and EFAs, may be factors.
- A unsatisfactory relationship or lack of support from family members.
- Disrupted lifestyle or status as a result of the birth.
- A difficult labour that did not fulfil a woman's hopes.

What your doctor can do

- Check your thyroid function, including a check for thyroid antibodies.
- Check your iron levels, and in an ideal world your blood levels of calcium, B6 and magnesium, all of which have been shown to be low in some women in clinical studies.
- Arrange for some counselling to help you talk through your emotions.
- If the symptoms persist, prescribe antidepressants.
- In a minority of cases of extreme postnatal depression the help of a psychiatrist and hospital treatment will be necessary.

What you and your family can do

- *Communicate* You should never feel ashamed of feeling low after the birth of a baby. Your family and friends will want to support you, so you must let them know how you feel.
- *Offload any responsibilities you can* In those first few weeks after having a baby Mother Nature prefers you to be supported, in a calm environment, and to take time to get to know your baby, whilst getting your strength back. Not so many years ago, women were expected to 'lie-in' for four weeks after having a baby. Translated this meant that everyone else rallied round to do the household chores and the new mum was left to feed, sleep and get to explore her new relationship with the baby.
- *Eat well* If possible, get your partner, friend or relative to prepare wholesome meals for you. If you are breast-feeding you will have increased nutrient demands which you need to bear in mind. Follow the recommendations for The Very Nutritious Diet on page 437, and refer to the Nutritional Content of Food lists starting on page 483. The nutritional demands that are placed on you during pregnancy and breast-feeding are greater than at any other time in your life – so make sure the cook knows that!
- *Take supplements* Research shows that many nutrients, including EFAs can be in short supply after the birth. Take a good strong multi-vitamin and multi-mineral supplement, and evening primrose oil combined with marine fish oil.
- *Get out regularly* Walk out with the pram in the fresh air every day, even short distances will make a difference.
- *Have time for yourself* Get your partner, friend or mum to look after the baby for a few hours on a regular basis, so that you can have some time for yourself. You may choose to sleep initially, especially if you are having disturbed nights. Take advantage of the time, get your hair done, buy some new clothes, or meet up with a friend for a bit of reassurance.
- *Take regular exercise* Six weeks after the birth you should be able to do a gentle workout. Stretching exercises will help to restore your muscle tone, and will make you feel better about yourself. Gradually, over the months, ease into low-impact aerobics, as this will encourage the release of the brain chemicals, endorphins, which help to raise your mood.
- *Try to socialise* Make every effort to attend social gatherings in your area, particularly those run by The National Childbirth Trust. It will be good for you to meet other new mums, many of whom will be experiencing the same problems as you. You could support each other.

A healthy diet, vitamin and mineral supplements, plenty of rest, adequate sleep and a supportive and loving environment seem to be good treatment for postnatal depression. It is noteworthy that during pregnancy and whilst breast-feeding, the demands for calcium, magnesium and the B vitamins are very high and a loss of most of these can cause changes in mood. It often is that simple.

Complementary therapies

There is no harm in trying a herbal or homeopathic remedy alongside the recommendations made here. A session with the cranial osteopath after the birth will help to realign the body, and massage, especially with relaxing aromatherapy oils, would be soothing. But remember that correcting nutrient levels and environmental stresses and strains has to take first place.

Linda's story

Linda battled with post-natal depression for two years following a very traumatic delivery.

I only had one child – I could never face having another one, as it was such an awful experience for me. My husband particularly wanted children and so I agreed to have a baby, more to fulfil his needs than mine. The pregnancy was relatively uneventful although I don't remember enjoying it much and must admit I tried to disguise my shape for several months. I did all the right things during pregnancy though such as giving up alcohol, eating well, exercising and resting but the effect Caroline's birth had on me was overwhelming.

I found delivering the baby hard work and just after she had been born the cord ruptured whilst I was attempting to deliver the after-birth. I remember blood pumping out everywhere and being given an emergency general anaesthetic to enable the doctor to manually remove the placenta. My husband was literally left 'holding the baby' while all this was happening before his eyes. I was given four units of blood and prayed that it was not contaminated – something that troubled me for years and years afterwards. When I came round I remember seeing tubes everywhere and felt so utterly sorry for myself. I was not interested in the baby at all. When the nurse asked if I wanted to feed the baby I felt like telling her to get lost.

I was in hospital for ten days and home for a week before we moved house. The move had been planned before Caroline was born. Although I did want to settle in the new house, with hindsight, moving so quickly was probably a very bad idea. My husband, sensing I needed help, offered to take extra time off work but being very independent I assured him I could manage. Consequently I was left at home attempting to go through the

motions of looking after Caroline in our new house but spent most of the day crying while she cried. I can remember rocking the pram so hard to try and quieten her down that she almost fell out. I was forever shouting and screaming at her and would leave her crying in her room until she literally cried herself to sleep.

I did not go to see my GP as I was ashamed of my feelings and felt that I should have been able to pull myself together. I know I wasn't in my right mind at the time. All I could feel was the baby encroaching on my space, preventing me from leading my life. I remember one night when my husband was away, she was screaming with earache and I could not get her to take any medicine or calm her down. In the end I closed the door to her room and went off and left her. I felt so bad about it afterwards that I started drinking alcohol. I had a friend who was keen on the bottle and we used to get together about lunchtime each day and get through a couple of bottles of wine, lots of gin and really anything we could lay our hands on. I suppose I was trying to numb my senses.

My husband has since told me that he was convinced he would come home from work one day and I would have gone, leaving Caroline behind. I was awful and felt ill. I had diarrhoea at least six or seven times a day which was totally out of control and my wrist bones became so painful that I couldn't even lift the baby out of the bath. My Health Visitor suggested I take evening primrose oil which did help a bit. I made an appointment to see a psychotherapist privately and had three sessions of talking my problems through. This seemed to help a bit. With hindsight I realised I did not really feel anything for Caroline until she was about two – as she started to become less dependent on me and more communicative.

I eventually settled in to a routine of having horrendous premenstrual syndrome and this is what eventually drew me to the WNAS. With my new knowledge from the WNAS and a lot of hindsight I realise that a combination of being unprepared to the baby, lack of sleep once she was born and inadequate levels of important nutrients affected my brain chemistry, and as a result, badly affected my sanity. I had no training to be a mother and, it seems, no instinct. I feel looking back I could have looked after my cat better than I looked after Caroline. I feel so guilty about the way I treated her.

Thankfully I have really sorted myself out completely now. I don't have any more PMS, I don't drink alcohol and I absolutely adore Caroline. The WNAS was my refuge – I honestly feel it saved my sanity and since going on my programme I have been able to find my emotions and develop a very wholesome relationship with my daughter. There is nothing I wouldn't do for her and I would certainly like to make up for my lack of mothering in the past.'

A note about St John's Wort

St John's Wort is a potent herb, and should be used correctly and cautiously. The herbal preparation should not be taken in conjunction with anti-depressants, HIV drugs, the oral contraceptive pill or anti-coagulant medication. Consult your medical doctor before taking St John's Wort.

Dermatitis (Allergic)

Dermatitis literally means irritation of the skin and the term is sometimes used to mean the same as eczema. However 'dermatitis' is now used to describe an irritating red, sometimes scaly, rash that has followed contact or exposure to a number of possible agents. Usually it is the area of skin that is most exposed to the irritant that develops the rash. Common irritants include: washing-up liquid, acids, alkalis, many cleaning agents and glassfibre as used in insulation.

Sometimes an allergy develops to something that is in contact with the skin. In this situation even very small amounts of the allergen may cause a rash in some, unlike common irritants. The culprit agent may have been used without difficulty for years as sensitivity may take a long time to develop. Common agents causing allergic dermatitis include:

- Cosmetics, perfumes, hair bleaches and dyes, chemicals used in 'perms', lanolin or wool fat.
- Metal, mainly nickel, found in cheaper jewellery, studs in jeans, wrist watch bands.
- Rubber found in many items, from rubber gloves, scuba diving suits and elastic bands to condoms.
- Foods, when handled – garlic and citrus fruit are particularly troublesome.
- Medicines, local anaesthetics, antibiotic creams and even steroid creams.
- Other compounds – wood, plants, rosin from pine trees which is found in paper and glossy magazines, plastics, dyes used in leather, pesticides and other garden chemicals.

What your doctor can do

- Skin patch testing will help to identify the cause of the dermatitis. This is particularly important when employment is affected.
- Avoidance is always important and can not only resolve the problem but may after several years lead to a clearing of the sensitivity.
- Steroid creams are useful for severe acute episodes.

What you can do

- Make sure that your skin is as healthy as possible, as a dry, cracked or broken skin makes it easier for contact allergies to develop.
- Use cotton-lined rubber gloves when doing the dishes, or when your hands are in water.
- Use hypoallergenic soaps and cosmetics and wash your clothes in non-biological washing powder or liquid.
- A healthy diet and supplements of multi-vitamins and zinc might be useful if the skin is particularly poor quality, and you do not eat as well as you might.
- Supplements of evening primrose oil are worth considering if your skin is very dry.

Complementary therapies

These may not be very successful as the cause really needs to be addressed, and this is usually physical. Herbal treatments may be worth considering.

Dermatitis (Seborrhoeic)

This is a red, greasy, scaly dermatitis which develops usually on the face, especially around the sides of the nose and the ears, on the front of the chest or at the back between the shoulder blades. Dandruff, eyebrow and even eyelid scaling can also develop. Mild forms of this are often referred to as 'combination skin', with some parts of the face being greasy and others dry and scaly. In some cases the rash is worsened, possibly caused by the presence of a superficial yeast infection with *Pityrosporum ovale*. Anti-fungal treatments can be very effective.

What your doctor can do

- Ointments based either on mild steroids or salicylic acid can be used on the face and trunk.
- An ointment of lithium and zinc (Efalith) can be quite effective.
- Scalp scaling can respond to tar-based shampoos, and antifungal shampoos (Nizoral).
- Anti-fungal creams are sometimes helpful.

What you can do

In certain deficiency states, very similar skin problems develop. This applies to deficiencies of vitamin B (especially pyridoxine, B6, riboflavin, B2, and biotin) as well as zinc. So try the following:

- Eat The Very Nutritious Diet (see page 437).
- Take a strong vitamin B supplement providing 50 mg of B6 and B2, a supplement of biotin, at least 300 mcg per day, and 30 mg of zinc.
- Sunbathe. This sometimes helps.
- Try using some plant oil extracts, some of which come as shampoos, as these may have anti-scaling and anti-fungal properties. Tea tree oil and juniper berry are two suggestions.
- Possibly try dietary exclusion. Probably only worth considering as a last resort or if there is an element of eczema present as well. True sensitivity to yeast does seem particularly likely if there is facial eczema.

Complementary therapies

Try homeopathy and herbalism. Some plants and plant oil preparations could have anti-fungal activity and be quite effective.

Raylene's story

Raylene looked every year of her 48. Her red puffy face was covered by a fine, dry, scaly rash. This was bad enough, but it was her severe scalp scaling that really troubled her. Scalp irritation had been unrelieved by many types of shampoo, nor even a steroid scalp application. The cause of the rash was unclear. It had possibly been triggered by a reaction to a hairdye applied six months earlier, but this did not explain why it was persisting so severely. She had been under considerable stress over the past year and as a consequence had been smoking 20–25 cigarettes daily, and drinking perhaps up to 20 units per week.

The failure of her scalp and skin conditions to respond to more standard treatment suggested that there may have been an untackled nutritional cause. Investigations revealed evidence of moderate deficiency of the vitamin biotin and there were reduced levels of some of the essential fatty acids derived from vegetable and fish oils.

She was asked to halve her cigarette and alcohol consumption, eat a healthier diet and to take supplements of high strength vitamin B with biotin, together with evening primrose oil and fish oil.

The response was gratifying. Over six weeks her scalp irritation diminished considerably, the rash on her face and scalp scaling improved markedly. Over the next three months the transformation was nearly complete.

On reflection it was felt that her increased alcohol intake had placed a great strain on vitamin B metabolism that had cost her her previously good complexion.

It is interesting that how in the development of a deficiency the body will probably, quite correctly 'sacrifice' the nutrient levels in

the skin before other parts of the body are affected. This has good survival potential for vital organs such as the liver, kidneys and brain, but does mean we become less beautiful. At least this gives us some outward sign that all is not well internally.

Diabetes Mellitus

The term diabetes, used without qualification, is taken to mean diabetes mellitus. In this condition there is a chronic rise in the level of glucose in the blood which routinely spills out into the urine. This gives the condition its name: diabetes meaning 'a flowing through' and mellitus 'sweet'. Thus the urine is passed in excessive amounts because the high level of sugar in the urine pulls water along with it. Thus the typical presenting symptoms are:

- increased passage of urine
- increased thirst
- a craving for sweet foods
- fatigue due to the effects of this upon the body's metabolism.

Other features include changes in visual acuity, recurrent thrush, muscle cramps, tingling in the feet and hands and constipation.

Blood glucose levels are controlled by what we eat, a careful balance of two primary hormones, insulin and glucagon, and the function of the liver and muscles. In medicine there are in fact a wide variety of situations, many of which are rare, where blood glucose control is disturbed. Understandably this happens with liver and muscle disorders and a number of exotic hormonal conditions, as well as in some pregnancies.

The most important hormone in blood glucose control is insulin, which is produced by alpha cells in the pancreas, a gland situated in the abdomen. The role of insulin is to help glucose pass from the bloodstream into cells, especially the nervous system, muscles and the liver, and increases entry of glucose into insulin sensitive cells. Insulin also binds glucose with phosphorous turning it into glucose-6-phosphate – the form in which it is used in the cells and prevents it from leaving. Glucagon has an opposing effect, releasing glucose from the cells when blood sugar levels are low. To all these organs glucose is a source of energy, and uniquely for the nervous system it is the only source of energy that it can use. When glucose is not available it has to call on other sources of fuel, primarily fats and proteins. This can lead to complications in the long term, so it is important to control blood-sugar levels through life-long healthy eating.

Insulin does not affect insulin insensitive cells. Some tissues allow free

access of glucose by diffusion, including the eyes, liver, kidney, brain and intestine wall. These tissues are liable to damage in poorly controlled diabetes. Glucose enters the cells and is converted into fructose, then to an insoluble sugar, sorbitol which crystallises, increasing the risk of cataracts.

Diabetes used to be simply divided into two main types – insulin dependent (IDDM) and non-insulin dependent (NIDDM). In the insulin-dependent variety there is a lack of the hormone which must then be given by injection. In the non-insulin dependent form there is plenty of insulin or related forms of the hormone, but the tissues of the body are relatively insensitive to it. This type does not need insulin but a diet and drugs that improve the body's response to insulin.

There is now a more complicated classification based upon not only the need for insulin but the probable cause(s) of that type of diabetes.

What causes it?

This is one of the great questions of twentieth-century medicine, and it is being answered in a curiously piecemeal way. The pieces of the jigsaw include:

- Genetic factors, which are particularly important for the insulin-dependent diabetic. It is predominantly a disease of Caucasians, but not exclusively from the northern parts of Europe. There are many environmental factors too: if members of a low-risk population, such as the Japanese, emigrate to a high-risk country like the USA, their risk pattern follows that of USA residents.
- Genetic factors also appear for the non-insulin dependent diabetic. This, usually the adult onset form of diabetes, seems to run in the female line of the family, may be linked with other conditions affecting muscles, and also with a tendency to high blood pressure and raised blood fats.
- Immune changes causing the body to produce antibodies that attack the insulin-producing alpha cells in the pancreas. This may be genetically determined and triggered by some viral infections.
- Food allergy! This is a possibility, as some researchers report that the antibodies involved in cow's milk allergy can also react against the insulin producing alpha cells in the pancreas. This seems particularly relevant to children. Cow's milk should be avoided until a baby is at least a year old.
- Being overweight is an extremely important risk factor especially for the elderly with NIDDM.
- Smoking in some studies slightly increases the risk of NIDDM.
- Being small at birth has also been shown to be a risk factor, perhaps reflecting a reduced ability to produce insulin in a form that is

functional. This risk does not appear until later life, and can become marked if the individual is obese, has high blood pressure and elevated blood fats.

- In association with various types of malnutrition in third world countries.
- In association with a number of other hormonal problems affecting the adrenal glands, the ovaries (see Polycystic Ovaries, page 368).
- Rare genetic disorders.
- Triggering incident including viral conditions like mumps.
- Following drug therapy especially thiazide diuretics if deficient in potassium.
- In pregnancy resulting in the birth of a large baby.
- Another theory as to the cause of NIDDM suggests that a high fat and sugar diet reduces the 'friendly' bifidobacteria, allowing *E. coli*, a harmful strain of bacteria to proliferate. *E. coli* produces an insulin-like substance, which it is suggested may block the insulin receptor cells, producing adult onset diabetes, in spite of normal insulin production.

This is a fantastically diverse list. In practice, for the majority of those with, or at risk of developing, diabetes, dietary factors are the most important area that we can do something about on an individual level.

In 1917, John Harvey Kellogg wrote about the role of the soybean in the control of diabetes. At about the same time two researchers with an interest in soybeans, published a paper in the *American Journal of Medical Science*, which outlined how diabetic patients who consumed soybeans regularly, passed less sugar in their urine; a marker for the control of diabetes. There has been more recent interest in the role of soy fibre and the control of diabetes, as this fibre, which helps to control cholesterol levels, also seems to be able to regulate glucose levels, and helps with insulin sensitivity. The high-fibre diet, consisting of oats, fruit, vegetables, and legumes including soya, appears to help the cells of the Type II diabetic to recognise insulin, and thus allow entry into the cell.

In 1987, a study published in the *American Journal of Clinical Nutrition*, compared using 10 grams of soy fibre at one meal, and then none at another sitting of the same meal. They discovered that when soy was included in the diet the blood glucose levels rose and fell at normal rates, compared to the non-soy sittings whose blood glucose rose to higher than normal levels, and stayed there for longer than usual periods. Another study used just 7 grams of soya and compared it to cellulose, the insoluble fibre found in wheat bran and vegetables. For the three hours following the meal, the soya consumers had notably lower levels of glucose in their bloodstream compared to those who had consumed cellulose.

Furthermore, it seems that not only does soy have benefits for blood sugar control and heart health, but kidney health as well. This is very important for people with diabetes, since nearly one-third of them develop renal disease.

Diabetic renal disease (nephropathy) is a major contributor to death in those with diabetes, mainly from end stage renal disease and cardiovascular disease. Nephropathy is damage to the tiny nephrons in the kidney, which act like tiny little filters. As a result of this damage, protein is filtered into the urine instead of being reabsorbed back into the bloodstream. This is a condition called microalbuminuria. The likelihood of nephropathy increases significantly after having diabetes for ten or more years. Early stages of nephropathy are an increase in protein leaking into the urine and an increased workload on the kidneys. Too much dietary protein can cause a faster decline in kidney function. However, it seems that not all proteins are created equal as recent research suggests that soy protein may be relatively protective for kidney health.

Research by the University of Kentucky presented at the 3rd International Symposium on the Role of Soy in Preventing and Treating Chronic Disease (1999) showed that changes in blood flow to the kidney following various protein meals was found to be greatest with beef, followed by poultry and fish. Soy protein does not significantly alter kidney function following a meal which is good news. Other work by Professor Anderson in a group of six patients with Type I diabetes, who have early signs of kidney damage, shows that soy may help conserve kidney health. Patients ate 55 gms of soy protein per day via a soy patty, soy beverage and soy pasta for eight weeks, then resumed their normal animal protein intake. After eating soy protein for eight weeks, these patients showed evidence of a decreased workload on their kidneys compared with that on their normal diet. Two patients who were previously losing protein in their urine also lowered the amount lost after the eight weeks of soy protein. Furthermore the average reduction in total cholesterol and LDL (bad cholesterol) cholesterol were 7 per cent and 13 per cent respectively. This is a highly positive outcome in reducing the risk of further health problems such as heart disease. This small study suggests that soy may be preventative for the early stages of diabetes, as well as the obvious heart health benefits.

Sally's story

Sally is a 24-year-old waitress who has been diabetic since puberty. She has also had a history of repeated viral infections, including meningitis and shingles, and there was a strong suspicion that a virus infection had triggered her diabetes. Once, before attending the clinic, she had another viral infection that was just a bout of flu,

which left her feeling very tired indeed, so that she had to give up work. Her diabetic control had deteriorated and she had made several attempts to improve this by adjusting her dose of insulin.

Her fatigue every day was quite severe, with muscular aches and pains, and the diabetic specialist discovered that the sodium level in her blood was very low. Investigations also revealed low levels of many other nutrients, especially magnesium, zinc, and vitamin B.

She made some changes to her diet, took supplements of all of these nutrients, except for sodium, and also took a multi-vitamin preparation. Her energy level duly improved, as did her diabetic control. Low levels of magnesium are common in diabetes and may influence the balance of other minerals, especially sodium and potassium.

What your doctor can do

- *Make the diagnosis using blood and urine tests* Sometimes this is easy if there are large amounts of sugar in the urine or blood. The presence of ketones in the urine detected by a simple dip test means that insulin will need to be given.
- *Treat with insulin* This is necessary for the majority of young patients where the diabetes is due to a lack of insulin from the pancreas. There are a variety of different types of insulin and varying treatment regimes which may need to be adjusted to suit a person's lifestyle. Injections several times per day are usually required. Minute pumps that provide insulin on a continuous basis rather like the human pancreas are being developed.
- *Treat with drugs* There are two types of drug which are most suited to older patients where there is a supply of insulin but the tissues are relatively insensitive to it. One type, the sulphonylureas, act by increasing the amount of insulin released and is the main type used. The second, biguanides, are usually used in conjunction with the sulphonylureas and they act by altering the metabolism of glucose in the liver and other organs. Both are always used when diet alone has not worked.
- *Advice on diet* This has assumed increased importance over the years. It is clear that the control of blood glucose, the risk of serious and less serious complications, are to a large degree influenced by the diet. The standard recommendations are as follows:
 - Eat an appropriate amount of calories to achieve a reasonable weight. For most NIDDM patients this will mean losing weight. This may well be all that is required to normalise blood glucose levels.

- Eat regularly. Consume three meals a day and where necessary snacks between meals. These are likely to be needed by children, those who are physically active, and pregnant women provided they are not overweight.
- Ensure a regular intake of phytoestrogens in your diet, in the form of soya products: milk, tofu and pulses, cereals and seeds.
- The diet should contain a large quantity of foods that are digested slowly and therefore cause only a small rise in blood sugar. This means excluding or severely limiting the consumption of sugar, cakes, biscuits, white, and to a lesser extent, wholemeal bread. Desirable foods are beans, peas, lentils, pasta, oats and oat products, whole-wheat cereals, sweetcorn and most fruits.
- High-fat foods are to be limited. Intake of saturated fats in particular should be curbed. This means consuming low-fat dairy products including low-fat cheeses, trimming all visible fat from meat before cooking (by grilling or baking), not eating the skin of poultry and fish and not eating fried foods.
- Suitable oils for cooking are those high in polyunsaturates, e.g. sunflower, safflower, corn and soya. Olive oil can be used in small amounts as can walnut oil. Butter should not normally be used and margarines high in polyunsaturates used in their place.
- High-cholesterol foods should also be limited, especially if the blood fats are high. Up to eight eggs per week can be consumed.
- Further dietary advice may well be needed for those with heart disease, kidney disease, in pregnancy or if the diabetes is particularly difficult to control.
- It is vital to monitor your progress. Regular attendance at a clinic based either at your general practitioner or at the local hospital will allow the early identification of problems and their treatment. These checks involve measurement of:
 - weight
 - blood pressure
 - measurement of glycated haemoglobin which gives a good long-term measure of blood glucose control
 - examination of the urine for sugar, protein and blood
 - examination of the eyes for blood vessel changes
 - examination of the heart, occasional checks on blood cholesterol and triglycerides
 - examination of the feet to check circulation and nerve function.

These measures need to be looked at alongside your measures of progress in order to get the full picture.

- *Treat complications* as they occur, but hopefully at an early stage. Changes in the eyes, kidneys, nerves, blood vessels affecting circulation

to the heart, feet and brain are all possible and may respond to treatment with drugs, surgery or better diabetic control.

- *Tackle special situations* such as infection, surgery, pregnancy and coma. These often require the services and expertise of several specialists in a hospital setting.

What you can do

- *Learn all about your diabetes* Join the British Diabetic Association. Be a professional patient.
- *Monitor your diabetes* This means regular, usually daily, tests of blood sugar for all those with IDDM, urine tests of sugar and sometimes protein. The intention is to keep the blood sugar level between 4 and 9 millimols/l, though this may vary from person to person. There should be no glucose in the urine if kidney function is normal.
- *Be strict with your diet* The high intake of beans may cause an increase in abdominal wind and bloating. Be patient, this should settle after two or three months. Ask your partner to be considerate too.
- *Control blood sugar levels* by eating low glycaemic index (GI) foods where sugar release is slower (see Glycaemic Index on page 172). Foods include wholegrains, pulses and fresh fruit and vegetables. Avoid high GI foods like white bread, rice, pasta and some fruits.
- A 2:1 balance of complex carbohydrates to protein may also facilitate a slower release of sugar and stimulate less insulin and more glucagon production.
- Small frequent meals maintain a lower, steady blood sugar level, decreasing the need for insulin.
- Essential fatty acids (EFAs) in the form of oily fish, and unsalted nuts and seeds increase cell membrane fluidity and sensitivity of the receptor sites, thus increasing the effectiveness of insulin. They may also reduce the risk of developing problems with the blood vessels and the back of the eyes. Fish oil might be beneficial too in reducing blood stickiness, but there could be a problem with this.
- Excess saturated fat from full fat dairy products and meat in the diet blocks EFA mechanisms and reduces the response of blood sugar levels to insulin.
- Excess sugar and saturated fat may lower bifidobacteria allowing E.coli to proliferate.
- Eating sufficient fibre in the form of fresh fruit and vegetables and wholegrains produces short chain fatty acids (SCFAs) which are necessary for healthy gut flora, raising bifidobacteria levels lowering E.coli.

Glycaemic Index Chart

Low		Intermediate		High	
Apple	38	Apricots	57	Bagel	74
Buckwheat	54	Wholemeal bread	69	Cornflakes	84
Butter beans	31	Couscous	65	Puffed wheat	80
Lentils	30	Sweetcorn	55	Corn chips	72
Orange	44	Pineapple	66	Potatoes	75
Pasta	55	Sweet potato	54	Watermelon	72
Pear	38	Raisins	64	Pumpernickel	80
Porridge	46	White bread	70	French bread	96
Rice bran	46	Oat bran	55	Rye bread	76
Skimmed milk	32	Digestive biscuit	59	White rice	87
Yogurt	33	Banana	55	Brown rice	76
Soya beans	14	Basmati rice	58	Parsnips	97

Research on the glycaemic index (what we call the GI factor) shows that different carbohydrates have different effects on blood sugar levels. There is a misconception that complex carbohydrates such as potatoes, wholemeal pasta and bread are broken down into sugar slowly, thus stabilising blood sugar. However, French bread has nearly the same effect on blood sugar levels as pure glucose!

Carbohydrate foods that break down quickly during digestion have the highest GI factor. Conversely, carbohydrates which break down slowly, releasing glucose gradually into the bloodstream have a low GI factor.

GI Scores

Low GI	less than 55
Intermediate GI	55 to 70
High GI	more than 70

Pure glucose produces the greatest rise in blood sugar levels. The GI is set at 100 and every other food is ranked on a scale from 0 to 100 according to its actual effect on blood sugar levels.

- *Exercise regularly* This helps keep weight down, reduces blood cholesterol, lowers blood pressure and may improve blood glucose control. The minimum is to walk for 30 minutes four times per week.
- *Don't smoke.*
- *Limit alcohol intake* This should be kept to an average of no more than two units per day, with up to four units on special occasions.
- *Be aware of hypoglycaemia* This is low blood sugar and could be dangerous! Symptoms include light-headedness, confusion, anxiety feelings, palpitations, hunger, shortness of breath and sweating.

Unfortunately some diabetics have little warning of these episodes and loss of consciousness develops quickly. This is very important if they are driving or in charge of machinery.

- *Take some nutritional supplements* This is a very difficult but potentially important area. There are many small reports that patients with diabetes especially if present for many years, if there is a poor response to insulin, in older diabetics or those with complications may lack a variety of essential nutrients. This lack may not be corrected by a standard diabetic diet.

Potentially important nutrients are:

- *Vitamin B1* Thiamine is needed to metabolise glucose. Those first beginning on oral medication, consumers of alcohol and the elderly are at risk. Fatigue, muscle pains in the legs and loss of feeling in the hands and feet are early symptoms.
- *Magnesium* Lack may develop with vitamin B1 deficiency, especially if the diet is poor. Lack of response to insulin and increased risk of damage to the blood vessels at the back of the eye can be features of a lack of this nutrient.
- *Chromium* This is a curious trace element worthy of a particular mention in diabetes. It is involved in influencing the tissues response to insulin which is clearly important in the elderly diabetic with NIDDM. So much so that marked chromium deficiency produces a state virtually indistinguishable from this type of diabetes and is also associated with an increased risk of cardiovascular disease. Potentially correcting a deficiency of this trace mineral could be beneficial to many diabetics. We will have to wait for more research to be performed to be certain about the role of chromium.
- *Glucose Tolerance Factor (GTF)* GTF contains chromium together with niacin, and amino-acids, and is believed to aid insulin entry to cells at the receptor sites. It is thought to be made by either liver or gut bacteria.
- *Zinc* This is easily lost in the urine in diabetics. Poor resistance to infection, poor wound healing and possibly reduced response to insulin may be features. Zinc is required for insulin production.
- *Vitamin B6* Pyridoxine has been used successfully to help control the diabetes that develops in pregnancy. Vitamin B6, in conjunction with zinc, is required for insulin production.
- *Vitamin B3* Niacin prolongs the life of the insulin producing alpha cells in the pancreas, and is a component of Glucose Tolerance Factor.
- *Antioxidants* These include vitamins E, C, A as beta-carotene and selenium, and they are all involved in minimising the damage to tissue that occurs as a part of ageing or with an altered metabolism. They may prove to be important in the progress of vascular disease, heart disease and cataract formation in the diabetic.

NB diabetics may not be very efficient at converting beta-carotene into vitamin A (retinol) in the body so a vitamin A supplement may be considered if needed.

Expert advice and individual assessment would seem the best way forward until there are large and long-term trials to assess the benefits of using these types of supplements. It should be remembered that they are no substitute for good dietary control and, where necessary, insulin and drug treatment.

Do not take vitamin and mineral supplements, except perhaps for low-dose preparations, without the permission of your doctor. At times their use could alter insulin requirements and blood glucose control. Hypoglycaemia, a low blood glucose, could occur as a result.

Complementary therapies

There is no substitute for standard care. Some homeopathic remedies are reputed to affect blood glucose control but you need to see a medically qualified practitioner, especially if you are taking insulin. Acupuncture could be helpful when there are problems with the nerves, especially in the legs.

See also: References.

Diarrhoea

Symptoms of diarrhoea are frequent or loose stools. 'Frequent' means having more than three motions per day, and 'loose' means that the stools are not formed, and vary from a soft putty consistency to watery. Diarrhoea mainly occurs because food has moved too quickly through the gut, and there has not been time for the water in the bowel to be absorbed.

What are the symptoms?

Diarrhoea is usually associated with an urgency to go to the toilet, and is often preceded by pain or waves of muscle contractions, often influenced by our diet or the environment. Most of us will have experienced pre-exam nerves, and had to rush off to the toilet. Some sufferers may not experience any pain before an episode, and in these cases there seems to be relatively little bowel muscle activity. The diarrhoea can therefore be due to over-sensitive bowel muscles or to the contents of the bowel irritating the bowel in some way. The gut transit time is increased in

diarrhoea sufferers from the usual 48–72 hours to a mere 24 hours. Experiencing these symptoms every day may well leave the sufferer feeling washed out and nutritionally deficient.

Who gets it?

There is no age limit for diarrhoea. Young children sometimes have persistent symptoms which are often linked to food allergies. Adults may suffer similarly, or notice that symptoms of diarrhoea follow a bout of gastroenteritis or food poisoning. It is not as common as constipation, but still widely experienced by women, especially around the onset of a period, when there is a brief release of inflammatory chemicals as the uterus sheds its lining. Long-term symptoms should undoubtedly be investigated by your doctor, especially if self-help measures fail.

What causes it?

- *Food intolerance* This is often the underlying reason for diarrhoea, which can occur at any stage in life, particularly following stress or trauma, when the immune system is impaired.
- *Milk* Some people, especially children and infants, may react to the protein in milk and this can cause abdominal pain (colic in an infant) and sometimes diarrhoea. Drinking semi-skimmed or skimmed milk won't usually make a difference, as this only reduces the fat content, not the protein or milk sugar. Other signs of allergy that may be present are eczema, asthma or rhinitis.
- *Lactose* Milk sugar can sometimes cause problems. If there is an inability to digest lactose, then sugar passes into the small bowel and colon, where it acts as a potent laxative. The severely affected sufferer would be troubled with symptoms within an hour of consuming milk or soft cheese, although small amounts of hard cheese or milk itself may be tolerated. This type of food intolerance is quite common in those of Eastern European, Middle Eastern or Asian origin.

People who are truly lactose intolerant may be able to tolerate lactose-free milk, which is available in some supermarkets; hard cheeses, as they contain relatively small amounts of lactose; and be helped by adding Lactaid (available from the chemists and health-food shops) to ordinary milk. A few drops of this preparation helps break down lactose into two component sugars, glucose and galactose, which are easily absorbed without causing diarrhoea.

- *Wheat and other grains* Sensitivity to wheat, oats, barley and rye has been recorded as a cause of diarrhoea, especially in women. It seems that very sensitive individuals do react to wheat which can cause some minor but definite damage to the lining of the gut resulting in

diarrhoea. This situation is similar to, but not so severe as, coeliac disease. This is by no means accepted as conventional medical wisdom, even though a group of ten such patients were described as long ago as 1980 by one leading group of gastroenterologists from Birmingham in the UK.

- *Eating a large meal* When the stomach becomes distended a reflex contraction of the muscles of the colon occurs which is known as the gastro-colic reflex. This explains why many people need to empty their bowels within an hour of having a large meal. It is not the meal we have just eaten coming through, but probably the meal of the day before moving on.
- *Fatty foods, too much and too little* When fat remains undigested in the small bowel it can be broken down into irritating acids by bacteria in the large bowel, which again can result in diarrhoea a few hours after eating a large or rich meal. This is most evident in those with digestive problems, and in the elderly, especially if there is weight loss.

At the other end of the scale, fat in smaller quantities actually slows down the rate at which the stomach empties and food moves along the small bowel. As it takes time to digest fat from a meal, the gut may become sensitive to its presence. Certain foods containing oleic acid, such as olive oil, almonds, hazel nuts, Brazil nuts and avocado pears, are particular offenders. The low-fat theory may explain why toddlers and children who consume low-fat cow's milk products suffer with diarrhoea, and are more prone to acute gastroenteritis.

- *Coffee* This, unfortunately, is an excellent bowel stimulant. Both ordinary varieties and decaffeinated coffee can have the same effect on the gut. It stimulates a wave of contractions through the bowel, and whilst it is a useful tool for constipation sufferers, it should be avoided by those suffering with diarrhoea.
- *Hot drinks* These may also stimulate a wave of contractions through the bowel. If you enjoy hot drinks, leave them to cool a little first.
- *Artificial sweeteners* Sorbitol, an artificial sugar that cannot be digested, can cause diarrhoea. It is used in some 'sugarfree' chewing gums, sweets and mints. As it passes through the gut it attracts water in the same way that mineral laxatives do.
- *Spicy foods* These can have a laxative effect on some people as presumably they irritate the bowel. In others it seems that both red chilli pepper and cayenne pepper actually slow the rate at which food passes through the small bowel, allowing more time for digestion. This one is down to individual observations.
- *Smoking cigarettes* This can increase the contraction of the gut in sensitive individuals. For many a cup of coffee and a cigarette is their way of stimulating their gut into action, and thus is good for constipation.

- *Alcohol* Alcohol is only likely to cause diarrhoea in those who drink excessively, and if you fall into that category, you will have already discovered why you should be reducing your consumption from the advice on page 8.

What your doctor can do

If you have not already consulted your doctor about your diarrhoea, and it has persisted for some time, then you need to make an appointment, especially if you have lost weight, are aged over 50, or if the self-help tips that follow do not help.

- *Examination and investigations* These will look for a cause of the diarrhoea, and assess the likelihood of nutritional deficiencies. Blood tests for anaemia and measurement of vitamin B, iron and zinc are now widely available.
- *X-ray of the bowel* This is done using a barium meal or barium enema. Barium is a heavy mineral liquid which shows up as dense white on x-ray and allows a good impression of the bowel and its lining to be obtained.
- *Endoscopy of the bowel* This involves passing a sophisticated flexible telescope through the upper and lower gut in order to inspect the bowel lining for inflammation. Samples or biopsies from the gut lining can also be taken for further examination.
- *Arrange for a stool examination* This would show up parasite infections, blood in the stool or undigested fats. If the diarrhoea is due to poor digestion, and difficulty digesting fat, excesses of fat may be discovered in your stool, which if untreated might lead to nutritional deficiencies.
- *Prescribe a drug* Loperamide (Motilin) slows the passage of material along the gut, increases the amount of water absorbed by the gut and increases the tone of the anal muscles. Codeine phosphate is an old-fashioned drug derived from opium, which if taken in small doses, is relatively free from side-effects. Sodium cromoglycate (Nalcrom capsules) is an anti-allergy preparation used in spray form in the treatment of asthma. It can also be used in the form of capsules taken by mouth for those with true food allergies. One trial in Australia found that it also benefitted ten out of 20 patients with diarrhoea due to irritable bowel syndrome, in whom food allergy had not originally been suspected. This preparation is worth considering as it has very few side-effects, but it is expensive, although available on the NHS in the UK.
- *Prescribe a vitamin supplement* Certain nutritional deficiencies can occur in association with diarrhoea as the gut transit time is so fast the body does not have a chance to digest or absorb the nutrients. It may

be appropriate for your doctor to prescribe strong vitamin B complex or multi-vitamins, depending on the results of your investigations. Some standard UK NHS vitamin B and multi-vitamin preparations are not strong enough for the correction of severe nutritional deficiencies.

What you can do

- Consider avoiding wheat, oats, barley and rye.
- Consider avoiding milk, yoghurt, cream and cheese. Other foods containing these or lactose (milk sugar) should also be avoided.
- Eat moderate-sized meals and eat every two to three hours. This will prevent overburdening your digestive system.
- Eat slowly and chew your food well. This may give your stomach and digestive system a much better chance to digest food properly.
- Adjust your fat intake. It is a good idea for many to ensure that there is a moderate amount of fat in each main meal.
- Stop or reduce your intake of coffee. Both ordinary and decaffeinated can cause diarrhoea. Consider drinking ordinary tea instead, as this can slow the passage of food through the gut in about 50 per cent of people. Cut down on hot drinks generally if you think that they make symptoms worse.
- Avoid excessive use of the artificial sweetener Sorbitol. Watch out for 'sugarfree' chewing gum and mints that contain Sorbitol.
- Avoid spicy foods, if they upset you. In theory taking large amounts of chilli and other hot spices might slow the gut down and help prevent diarrhoea.
- Reduce or stop smoking. Try to pace yourself between cigarettes so that you gradually smoke fewer each day.
- Reduce or stop drinking alcohol. Try to cut down to no more than three drinks per week initially.
- Change drug therapy. If you suspect that a drug you are taking might be causing your diarrhoea, discuss this with your doctor or specialist. A change of drug therapy may be necessary.
- Take some strong yeast-free vitamin B complex. Those with a high alcohol intake or experience diarrhoea following antibiotic usage or following gastroenteritis are particularly likely to benefit. A dose providing 50–100 mg of most of the B vitamins, including vitamin B3 or nicotinamide, is recommended as a daily dose. This should not be taken without your doctor's approval if you are known to be anaemic, have recently lost weight or have had stomach or bowel surgery.
- Essential fatty acids (EFAs) can assist with healthy stool formation. Take a supplement containing evening primrose oil and marine fish oil for the best results.
- Take a probiotic supplement of acidophillus or lactobacillus bifidus to

repopulate the colon with 'friendly' bacteria which is often disturbed in cases of severe diarrhoea. Probiotic supplements are in fact routinely prescribed to travellers to exotic countries where they are susceptible to food poisoning, parasites and diarrhoea.

- Slippery elm bark as tea or in extract form is soothing to the digestive tract.
- Drink plenty of fluids, preferably water to replenish the body as long term diarrhoea is likely to result in dehydration and mineral loss, especially of the minerals sodium, potassium and magnesium.
- Avoid stress. Take steps to cope with stress, and avoid stressful situations if you can (see page 25).

If these tips are going to help you should notice some improvement within four weeks. If this is not the case, then you should check with your doctor.

Complementary therapies

Doctors have used hypnotherapy to assist with bowel problems with reasonably good results. It is worth having a session of hypnotherapy if you are a severe sufferer, or alternatively master the art of self-hypnosis to see whether this works for you. Acupuncture is very good at slowing down a rapid metabolism by addressing the root cause, and a herbal medicine practitioner will mix you a potion to try. Both of these avenues are well worth exploring.

See also: Irritable bowel syndrome, Coeliac disease, References, The simple exclusion diet or The strict exclusion diet.

Eating Disorders

A Gallup Poll published in January 1996 found that 28 per cent of men think they are 'a little bit overweight' and 6 per cent thought they were 'a lot overweight'. In total 34 per cent were dissatisfied with their weight, and that figure rises to 44 per cent for women.

Some 30 per cent of the Gallup sample were attempting to diet. More than half claimed to try a diet at least once a year; 41 per cent admitted the pounds piled on again pretty quickly. Some 79 per cent of the men said they went on a diet for health reasons; only 14 per cent admitted it was to improve their appearance. But, 61 per cent of women said they dieted to look better, with 37 per cent saying it was on health grounds.

The poll went on to confirm all our fears that it's the skinny bird that gets the worm. Most men prefer the slenderness of the supermodel to a plumper woman: 43 per cent of men prefer the thin silhouette and, more sadly, 48 per cent of women do, too. The poll also asked people to rate

their own appearance, and 17 per cent rated themselves poorly, while only 9 per cent of the interviewees agreed with their rating – an example of poor self-image. Bearing in mind that women were far more critical of their own appearance, it's hardly surprising that large numbers of people suffer with eating disorders.

Women often downgrade themselves and think of themselves as far fatter than their friends. They see themselves out of focus, which perhaps accounts for why the anorexic can't perceive how painfully thin she actually is. The media and the fashion industry have been blamed for placing unrealistic goals upon people when it comes to weight and body shape. A Health Education Authority report in the UK in March 1996 highlighted fears about children as young as eleven, 50 per cent of the girls and one-third of the boys, having major anxieties about their weight and body image. Twice as many girls as boys wanted to lose weight and the researchers said the desire to be slim was influenced by images of the supermodels. Failure to live up to the image resulted in low self-confidence and self esteem.

The National Food Alliance, in February 1996, published a new report on slimming advertising which found 88 per cent of slimming aid and product adverts in women's magazines, slimming and teen magazines and papers breached advertising rules. Most omitted to state they could not aid slimming except as part of a calorie-controlled diet, and many made unsubstantiated 'miracle' claims, failing to state the time period over which weight could be lost. It is actually illegal to promote any slimming aids to the under-eighteens anyway, but this seems to be disregarded if the adverts in the teen magazines are anything to go by.

A report in *Labour Research* in March 1966 also commented that although the diet industry is aimed mainly at women, (50 per cent of whom are dieting at any given time and 90 per cent of whom will at some time in their lives), the board of directors of the companies are almost entirely men. They looked at twelve of the major companies in three main sectors of the industry – food and drink, magazines and slimming clubs. Of the 77 directors only four were women. At eight of the companies there were no women on the board at all. The meal-replacement market alone (products like Slimfast) was estimated to be worth £88 million in 1994. There are 5,000 Weightwatchers clubs in the UK with some 150,000 members – and Weightwatchers is run by Heinz, which also produces diet foods. There are some 1,000 Rosemary Conley Diet and Fitness Clubs and 560 *Slimming Magazine Clubs*. Yet there is plenty of new evidence to suggest that dieting makes you fat – the yo-yo syndrome.

According to the politician Tessa Jowell, the number of children being treated by the National Health Service for eating disorders is 5,000, with some as young as eight dieting because they think they are too fat.

Eating disorders can be broadly divided into two groups, anorexia nervosa and bulimia nervosa. Both are conditions found predominantly in women aged between ten and 40 years, and are seen particularly amongst those of middle-class origins. Both conditions can be regarded as diseases of 'society' as much as they are diseases of the individual.

ANOREXIA NERVOSA

Anorexia nervosa has three main features:

- Very low body weight, usually at least 15 per cent below the expected weight.
- Disordered attitude towards body weight. Despite their thinness, the individual considers they are overweight, or still needing to lose weight, in order to achieve a better shape. This disturbed thinking underpins the methods achieved to lose weight which may include fasting, exercise, self-induced vomiting and laxative abuse.
- Absence of periods in women who would normally be expected to menstruate, and who are not taking the oral contraceptive pill.

Other common co-existing features of anorexia include:

- depression
- mood swings
- obsessive behaviour
- thoughts of suicide
- limited outside interests
- being socially withdrawn
- disturbed relationships with parents
- as well as physical characteristics of malnutrition.

Physical features may include:

- muscle wasting
- abdominal bloating
- scalp hair loss
- a development of fine downy hair over the body – lanugo
- dry skin
- poor circulation in the hands and feet.

There are a number of secondary hormonal changes which are mild and reversible. These include changes in pituitary and thyroid hormone in particular. Mild anaemia, raised blood cholesterol and disturbances in the balance of certain minerals may also be present.

Laxative or diuretic use can lead to loss of potassium and magnesium in particular. Interestingly, delayed emptying of the stomach and delayed

bowel transit times leading to constipation are present. These features may lead to the complaint of fullness after eating only small amounts of food. If untreated severe malnutrition may develop bringing irrevocable damage to organs, and in severe cases girls become so ill they die.

What your doctor can do

Usually people with anorexia nervosa do not present themselves for treatment. Invariably they are forced to do so by concerned parents or friends. All anorexics (and bulimics) require psychological treatment as well as nutritional support. The doctor must:

- Establish a rapport and relationship with the sufferer and family members and friends. This is a vital first step.
- Weigh the sufferer and test her blood for anaemia and mineral and vitamin deficiencies.
- Search for predisposing factors and explore the anorexic's perception of stress factors that may have contributed to depression and disordered eating habits. This may include being overweight in the past and needing to diet, relationships with boyfriend or partner, work or domestic stresses.
- Aim to educate about the dangers of low body weight. Explaining that nutritional deficiencies may influence mood and energy level, that hormonal disturbances may prejudice chances of fertility in the future and predispose to osteoporosis, may all be ways of promoting the patient's understanding and cooperation.
- Work to improve the anorexic's perception of her wellbeing and examine the stress factors that she perceives as playing a role in her condition.
- Consider in- or out-patient treatment, with the need for counselling and psychiatric support.
- Decide whether drug treatment is required. This is rarely the case. Anti-depressants are used, but should never be relied upon alone.
- Specialist feeding, feeding by tube or intravenous methods should only be required in the minority of cases who are severely malnourished.

What you can do

- Be prepared to discuss your feelings honestly with the doctor, psychotherapist and family members.
- Acknowledge that there is a physical and mental health problem.
- Attend your doctor or psychotherapist regularly. This may mean daily, or at least weekly, consultations.
- Make a list of those foods you like most and those you dislike. Discuss

- this with your therapist who obviously will need to advise you which foods will be the most nutritious and appropriate for you to consume.
- Take some strong multi-vitamin and multi-mineral supplements initially. Other specialist supplements may be required when you get the results of your tests but consider the following:
 - Vitamin B1 – A severe deficiency of this causes a clinical picture indistinguishable from anorexia nervosa, with delayed gastric emptying, loss of appetite, weight loss, fatigue and depression. Supplements of 50 mg per day may be required.
 - Zinc – A deficiency is also reported in anorexia nervosa and correction might improve appetite.
 - Calcium – Supplements are probably prudent in all women with prolonged amenorrhoea. Five hundred to 1,000 mg per day may help minimise the future development of osteoporosis.
 - Even moderate dieting appears to lower brain tryptophan and serotonin levels which are important amino acids for stimulating positive mood and improving eating behaviour and feelings about eating. Supplements in the form of 5-HTP, the precursor of tryptophan can be introduced to influence normal brain function.
 - Anorexics can have essential fatty acid (EFA) deficiencies which explains the physical characteristics of dry skin, hair and hormone changes. EFAs are essential for normal hormone function and if they are severely deficient menstrual irregularities and in the extreme case, amenorrhoea can manifest.
 - Other deficiencies – Deficiency in the other B vitamins, in magnesium or the trace elements, chromium and selenium are all possible in malnourished individuals.
 - Reduce your level of exercise if you have been over-exercising obsessively. Aim to restrict your exercise to three or four sessions per week.
 - Recognise the support of close family members and friends and try not to be manipulative. Be honest and open with them or you will lose their friendship and support. Treat them as you would wish to be treated yourself.

Complementary therapies

Though none is of proven value, if you feel that one or more of these appeal to you or have been helpful in the past, then consider them now:

- Aromatherapy and massage may help relieve feelings of tension.
- Acupuncture might help balance the body's chemistry or nervous system.
- Some herbal preparations might act as a tonic.

In all these cases a good relationship with the complementary therapist is vital.