Breakspear Hospital

CFS/ME Treatment Programme

This booklet provides information on the causes of CFS/ME and descriptions of the investigations and nutritional supplements prescribed for a successful treatment programme.

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CFS/ME
Treatment Programme

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CFS/ME

INTRODUCTION

There is no single universal diagnostic test for chronic fatigue syndrome (CFS) and myalgic encephalomyelitis (ME). Conditions causing prolonged fatigue, including CFS/ ME, have been shown in studies to be associated with abnormalities of immunity. The conditions often arise as a result of a viral infection which may or may not be identified at the time. The most common virus identified is the Epstein-Barr virus, which is known to cause glandular fever (infectious mononucleosis). But other infections and non-infectious agents, such as chemicals, may also cause the syndrome. Epstein-Barr virus may not be detected by standard laboratory tests. At Breakspear Hospital, we use specialised tests for detecting this virus and other infectious agents which may be underlying the present condition.

There is no single universal diagnostic test for chronic fatigue syndrome and myalgic encephalomyelitis.

Diagnosis depends on a variety of criteria, including the onset of new fatigue, causing reduction in activity for at least six months where no other cause can be identified. There may be associated mild fever, sore throat, painful lymph glands, muscle pain and weakness, prolonged exhaustion after exercise, headache, joint pains, and sleep disturbance. Blood tests show activation of the immune system and specialised brain scans can show abnormalities.

Investigation of patients attending Breakspear Hospital has revealed that mental and physical functions are frequently affected by allergies to foods and chemicals. Treatment for these allergies can help dramatically. Specialised tests for nutritional status show that there are often vitamin and mineral deficiencies, abnormalities of digestive function and defects in the ability of affected patients to break down toxic chemicals and waste products for metabolism. All aspects of the syndrome must be addressed to ensure that there is appreciable improvement in the symptoms. Single interventions are less likely to be successful.

At Breakspear, an individualised programme of treatment is devised for each patient and takes into account the patient's medical history, the findings from a physical examination and the various investigations. Treatment programmes will vary from patient to patient, as different aspects of the condition may predominate. A programme of treatment will be proposed at the first consultation and an estimate of the costs involved will be provided at this stage.

There is usually an initial period of intensive treatment followed by shorter review attendances and maintenance therapy. This may include antiviral strategies, treatment for food and other sensitivities, improvement of immune function, intravenous vitamins, minerals and other nutrients, and removal of toxic elements such as mercury, lead and volatile chemicals.

Patients who wish to consult a doctor at Breakspear Hospital can make an appointment directly. It is recommended that patients seek a referral from their General Practitioner where possible, as we regularly correspond with local Primary Care Teams.

CFS/ME

ASSOCIATION WITH INFECTIOUS AND NON-INFECTIOUS AGENTS

There are many infectious and non-infections agents found in patients with CFS/ME and these infections may or may not be identified at the point of routine diagnosis. At Breakspear, we investigate the patient's medical history thoroughly and perform vital, specialised laboratory tests to target the cause of a patient's onset.

Below are some of the infectious and non-infectious agents found in CFS/ME with an introduction to the agent, a description of the symptoms, the specific laboratory tests used to identify the agent and a brief description of the standard treatment at Breakspear.

Epstein-Barr Virus

Epstein-Barr virus (EBV) is a member of the Herpes virus family and is common. EBV is a DNA virus responsible for glandular fever. It typically occurs during adolescence or young adulthood and causes infectious mononucleosis.

There are three principal types of Herpesvirus:

1. α-Herpesvirus which are fast-growing viruses like Herpes simplex and varicella zoster
2. Herpes viruses which are latent in secretory glands and the kidneys, e.g. Cytomegalovirus (CMV)
3. Herpes viruses which are latent in lymphoid tissue, e.g. Epstein-Barr virus

Symptoms

Symptoms include fever, sore throat, swollen lymph glands, sometimes a swollen spleen, or liver involvement. Heart problems or involvement of the central nervous system occur only rarely. Symptoms usually resolve in one or two months. EBV remains dormant or latent. Periodically the virus can reactivate and is commonly found in the saliva of infected persons. A late event in a very few carriers is lymphoma and nasopharyngeal carcinoma rarely. Transmission is through intimate mouth contact and not through air or blood.

Specific Laboratory Tests

The following laboratory tests may be used to evaluate CFS/ME:

1. Paul Bunnell test, which is an early antibody test.
2. Chronic fatigue syndrome panel, which includes capsid and diffuse antibodies.
3. Tests for Epstein Barr nuclear antigen (EBNA) and capsid reactivated antibodies.
4. Infection screen for the following antibodies:
   - Toxoplasma IgG latex
   - CMV IgG latex
   - Toxoplasma EIA
   - Aspergillus
   - C.trachomatis/C.psittaci CFT
   - Epstein-Barr IgG and IgM
   - Legionella
   - CMV IgM EIA
   - Enterovirus
   - Coxsackie IgM
   - Borrelia burgdorferi ELISA
5. Tests for the actual virus (DNA or genome) by the Polymerase Chain Reaction (PCR) technique from blood, throat swab, and saliva for the following organisms:
   - Coxsackie
   - EBV
   - CMV
   - Herpes
   - Toxoplasma
   - Brucella

The groups of antibodies involved are IgM in recurrent infection and IgG in established infection. IgM to the viral capsid antigen appears early in infection and disappears within four to six weeks. IgG to the viral capsid antigen appears in the acute phase, peaks at two to four weeks after onset, declines slightly and then persists for life. The antibody to EBNA slowly appears two to four months after onset and persists for life. This is not true of some EBNA enzyme immunoassays, which detect antibody within a few weeks of onset.

These tests reveal four possible profiles that help identify the current state of the virus and therefore the treatment required. These four possible profiles are:

1. *Susceptibility* - No antibodies to the viral capsid antigen.
2. *Primary Infection* - If IgM antibody to the viral capsid antigen is present and antibody to EBV nuclear antigen

or EBNA is absent.

3. *Past Infection* - If antibodies to both the viral capsid antigen and EBNA are present. Diffuse antigen can also be present.
4. *Reactivation* - In the presence of antibodies to EBNA, an elevation of antibodies to early antigen (capsid antigen) suggests reactivation.

Treatment

At Breakspear, we use high-dose Vitamin C, other anti-viral agents and gamma globulin to help patients overcome EBV. Using this method, many of the detrimental organisms can be killed, after which immunity must be maintained and improved.

Parvovirus B19

Parvovirus B19 is a small DNA virus that is spread by infected respiratory droplets after incubation of up to two weeks and most commonly affects young people. Parvoviruses are species specific and B19 is the only known pathogenic human parvovirus. It was discovered in 1975 during routine screening of blood donors.

Symptoms

Patients can develop flu-like symptoms and a rash, which may be recurrent. Those people whose immune systems are already under stress may also develop chronic anaemia.

If a woman is infected in the early stages of pregnancy, she may be at risk of miscarriage or the foetus may be at risk of hydrops foetalis, developing anaemia and heart failure.

Specific Laboratory Tests

Diagnosis is firstly by clinical features of rash and flu and then blood testing for the organism or antibodies to the organism. Parvovirus B19 IgM antibodies indicate recent infection and IgG antibodies latent or previous infection.

Treatment

Treatment for parvovirus is most effective by high dose gamma globulin. At Breakspear, we use this in a prescribed infusion regime.

Lyme Disease

Lyme borreliosis (Lyme disease) is a tick-borne infection caused by the bacterium Borrelia burgdorferi. Ticks are blood-suckers, which feed on a host daily, and can infect man as well as domestic animals.

A patient may not be aware of having had a tick bite and so initial diagnosis may be difficult. There may also be a time lapse between infection and the development of complications such as neurological or arthritic-type problems.

Symptoms

Symptoms include a rash, fever, enlargement of the lymph glands, aches and pains and fatigue. Neurological problems have also been found, including facial palsy with weakness or paralysis of muscles in parts of the face, meningitis, a burning sensation of the skin, numbness, and weakness or pain. Lyme disease can trigger arthritis, which may be prolonged or recurrent.

Specific Laboratory Tests

Tests used to detect Lyme disease are:

- An antibody test that measures the body's reactivity in the fluid compartment of the body of antibodies to the Lyme disease organism.
- Blood test called the modified lymphocyte transformation test (LTT-MELISA) in which the T-cell immune response to recombinant, Borrelia-specific antigens can be detected. This can confirm an active infection in sero-negative, sero–ambiguous or sero–positive patients with or without clinical suspicion of Lyme borreliosis and provide an early marker for successful antibiotic therapy.
- Western Blot technique for evaluating Lyme disease.

Treatment

Breakspear uses an antibiotic therapy, as Lyme disease is responsive to tetracycline, erythromycin, phenoxymethylpenicillin, third-generation cephalosporins and macrolides, and/or herbal remedies.

CFS/ME

IMMUNOLOGICAL CHANGES LINKED WITH CFS/ME

There are some other mechanisms of ill health found in CFS/ME with an immunological change in the production of cytokines. We have found that the basis of prolonged ill health in CFS/ME involves "cytokine shift." In this condition the protein messengers between cells (cytokines) work together to cause allergy and increased reactivity by a mechanism involving antibodies instead of the normal activity against infectious agents, such as viruses. This is a cytokine shift from a "T_h1" to a "T_h2" pattern.

The situation is further complicated as these two patterns interact and counteract each other; allergies are therefore perpetuated and the ability to eradicate viruses is compromised.

Treatment

It is possible to reverse the cytokine shift with a number of treatment programmes that we offer at Breakspear Hospital. Firstly, we stabilise allergies by using a neutralising technique that stops allergic reactions, giving respite to the body (*see section Neutralisation of Food Allergies, Intolerances and Sensitivities*). Secondly, we then use a number of treatment programmes to stimulate the T_h1 arm of the immune system that can deal with viruses.

Amongst the treatments we use are mushroom products (primarily Coriolus-based supplements) and Transfer Factor. Other agents which can stimulate T_h1 include some hormone products and bacterial agents, including Bacille Calmette-Guérin [BCG], normally used in protection against tuberculosis.

Breakspear also now has available a bacterial product, known to help modulate the immune system. This bacterial product is a high potency probiotic preparation that can induce a T_h2 response. Lactobacillus, Escherichia coli, Bifidobacteria and others have a local effect protecting against gut mucosal injury through both T_h1 and T_h2 responses.

Combination therapies are more effective than single agents.

Quick definitions:

Cytokines – mediators of immune activity. Chemicals which carry messages from one cell group to another.

Cytokine shift – the shift where T_h1 cytokines are lessened and T_h2 cytokines are increased in an allergic state.

T_h1 – T-helper type 1, required for cell-mediated immune responses. They are essential for controlling such intracellular pathogens as viruses and certain bacteria.

T_h2 – T-helper type 2. These provide help for B cells and, in so doing, are essential for antibody-mediated immunity. Antibodies are needed to control extracellular pathogens.

Transfer Factor – extracts from the blood leucocyte buffy coats which can transfer immunity, and assist and support normal immune system functioning.

CFS/ME

EVALUATION OF HORMONAL STATUS

A patient's medical history must be examined thoroughly and this may include analysis of hormonal status. This is important because it affects the basal metabolic rate at which we function.

With CFS/ME, the following are often found, which shows that hormonal status plays a key part in these conditions:

- Low DHEA and cortisol. This is because of adrenal atrophy from hypothalamic under-stimulation or chronic excessive sympathetic activity which can cause down-regulation by biological feedback.
- Thyroid function may be impaired.
- Deficiency of aldosterone, causing hypotension.
- Disturbances of several other mechanisms may occur for which we would evaluate protein carriers of electrolytes such as albumin levels.

Symptoms

If the DHEA is low, there may be muscular weakness and hypotrophy, macromastia, abdominal and hip obesity , lack of emotional dominance and weak libido. Indications of Cortisol deficiency are general weakness and recurrent infections.

Thyroid deficiencies may be indicated by any or all of the following: hoarse voice, constipation, loss of hair, particularly the outer third of the eyebrows, weight increase, and rough skin.

Aldosterone impairment may cause low blood pressure, leading to fainting, light-headedness and general weakness.

Quick definitions:

DHEA – dehydroepiandrosterone is a precursor hormone for steroid hormones. When levels are low, there is lack of emotional dominance and weak libido. There is no reason for concern when levels are high.

Cortisol – critical steroid hormone made in the adrenal glands, which are above the kidneys.

Chronic excessive sympathetic drive – fight or flight response in overdrive without an outlet such as anxiety.

Thyroid function – to take iodine, found in many foods, and convert it into thyroid hormones, which are transported throughout the body where they control metabolism (conversion of oxygen and calories to energy).

Aldosterone – the main sodium-retaining hormone which keeps salt and water in the system. Part of the complex mechanism used by the body to regulate blood pressure.

Albumin – a blood protein which links with electrolytes and keeps blood volume up and vessels turgid.

If Albumin levels are low, there is probably a low protein reserve and higher likelihood of liver failure.

Treatment

To overcome irregularities in hormonal status, we occasionally use adrenocortisol hormone (ACTH) to increase pituitary drive to the adrenals. Nutritional support and detoxification may ensure that the thyroid is not polluted. In some cases, thyroid supplements may be required as well. Prescription salts, such as fludrocortisone, are sometimes needed to increase Albumin levels.

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NEUTRALISATION OF FOOD ALLERGIES, INTOLERANCES AND SENSITIVITIES

Food allergies are very common. The immediately recognisable form of food allergies is called IgE mediated hypersensitivity reaction. This results in swift responses such as diarrhoea, vomiting, anaphylaxis, and sometimes rashes, eczema or asthma.

Protection from this type of food allergy is primarily the avoidance of the food. If the individual is sensitive to many foods by this mechanism, sodium cromoglycate, which is a mast cell stabiliser, can be used prophylactically. Treatment for the ingestion of food may include the utilisation of antihistamines, or if anaphylaxis occurs, adrenaline to combat shock and perhaps resuscitation might be required.

The majority of food allergy reactions are, however, not due to IgE mediated reactions but to IgG reactions. IgG antibodies are formed when food has gained access to the tissues in large enough amounts for an antibody response to be marked. Normally food is broken down adequately by digestion in the gastrointestinal tract and then absorbed and then enters the blood stream in small particles, often attached to IgA. IgA antibodies are the protective antibodies in the gut lumen. They also have the function of protecting the gut lining from being attacked by bacteria, stopping bacterial adhesion to gastrointestinal cells.

IgA antibodies can also attach to food particles and transport them into the portal circulation. When transported to the liver they become detached from the food particles, which are further metabolised by the liver and are then disseminated through the systemic circulation as nutrients. However, if large food particles without IgA antibody adhesion enter the systemic circulation, IgG antibodies are formed. The complexes that are produced (IgG antibodies plus antigen) have to be broken down and in this process a cascade of chemical reactions occur which cause the disintegration of the antigen. If complexes latch on to tissue cells in sufficient numbers an inflammatory reaction at that site occurs. Tissue can then be destroyed by cytokine responses and disease at that location can ensue. IgG antibodies also inhibit the formation of IgA antibodies by Peyer's patches in the gastrointestinal tract wall. Hence, food- mediated responses can be perpetuated.

Symptoms

Food allergies, intolerances and sensitivities may be indicated by a wide range of symptoms, including but not limited to mood swings, upset stomach, lack of concentration, lethargy, depression, forgetfulness, ringing, popping or fullness in the ears, watery eyes, sore throat, dark circles under the eyes, difficulty in sleeping, diarrhoea, vomiting, rashes, eczema, asthma, headaches, migraine and many other symptoms.

Quick definitions:

IgE reactions – acute allergic reactions. IgE is measured to detect allergic conditions.

Mast cells – release histamine. If the cell wall is stabilised, then reaction is less likely**.**

IgG reactions – antibody response. IgG is produced in subsequent exposure to an antigen.

IgG antibodies – antibodies that are produced to "remember" a previous antigen.

IgA antibodies – the protective antibodies in the gut lumen. They also have the function of protecting the gut lining from being attacked by bacteria.

Peyer's patches – Peyer's patches - gastrointestinal germinal lining centres, which produce IgA (the policing antibody of the gut) and which consequently play a central role in the induction of mucosal immune responses in the gut. They protect from bacterial infections and link with food, "tagging" it so that when it is absorbed there is no acute reaction.

Treatment

Food intolerances and sensitivities must be addressed to protect the gastrointestinal lining from triggering foods. Food avoidance is not usually possible as a large number of IgG food reactions may occur once there has been increased intestinal permeability and simple avoidance may limit the diet so much that it leads to malnutrition.

Breakspear uses neutralising vaccines to help patients deal with a variety of foods and also uses other supportive management. Breakspear Hospital's vaccines are formulated on homœopathic principles but are isopathic. In addition, we consider the role of yeasts, candida, parasites and digestion in gastro-intestinal health.

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FIBROMYALGIA

Fibromyalgia primarily affects women. Symptoms develop at any age and progress in cycles, perhaps mild with remissions between attacks, but the symptoms may worsen and become continuous.

There may be either cellular or matrix problems in fibromyalgia. Half the components of the body are cellular and the other half intercellular in the connective tissue or matrix. In the matrix are embedded the capillaries and the terminations of autonomic nerves. There are fibres of collagen and fibroblasts in this system, and the whole is distributed through a three dimensional network of tightly coiled glycoprotein fibrils. The function of the matrix and connective tissue is to allow buffering, so that pressure can be exerted on tissues without destruction of cells, and also as a medium in which there is accumulation of fluids and a chemical buffering within the tissues. Often the chemical buffering is between an acid and an alkaline balance. When acids accumulate, there also tends to be accumulation of fluids to dilute the acids to equilibrate and balance the pH. Excessive water accumulation under pressure will cause pain and lumpiness in the tissues. Intercellular dilution of fluid will inhibit many of the energy-releasing processes.

Intracellular swelling can occur also. Excessive phosphate entering the mitochondria will block adenosine triphosphate (ATP) formation. Guaifenesin can help to excrete phosphates. In the intercellular spaces there is no discrimination between what is necessary for health in the tissues and what is a pollutant. Many accumulations of pollutants can occur in the matrix, and can dissolve in cell walls, if fat-soluble.

Sources of some of the acids that can cause imbalances include yeast and bacterial by-products absorbed from gastrointestinal micro-organisms. It is thought that gastrointestinal tract micro-organisms number as many as the total number of cells in the human body itself. Of approximately 500 species of bacteria, 30 – 40 species predominate and most are anaerobic. Yeast and fungal species and Clostridia often follow the use of antibiotics. Amongst the acidic products of yeast species is tartaric acid, which can be toxic (large amounts can produce gastrointestinal symptoms, diarrhoea and vomiting, abdominal pain, thirst, muscular pain and weakness, and can, in very large amounts, cause a nephropathy).

Tartaric acid is an analogue of malic acid which is an intermediate in the Krebs cycle. Tartaric acid inhibits the Krebs cycle enzyme fumarase, which produces malic acid from fumaric acid. Other by-products mimic substances in the Krebs cycle, for example, 3-oxoglutaric acid resembles alpha-ketoglutaric acid. Citramalic acid can be high from yeast products. Arabinose produced in the liver from arabitol, a yeast toxic product, can cross-link proteins and make them unavailable for function. This is carried on the lysine residue site on proteins, and biotin, B6 and lipoic acid which can be carried at these sites, are made unavailable for use. A DHPPA-like compound is produced from

Quick definitions:

Fibromyalgia – condition in which there are knots in the connective tissue in muscles.

Hypoglycaemia – deficiency of glucose in the blood stream.

Collagen – main structure protein found in animal connective tissue.

Fibroblast – cell in connective tissue that produces collagen and other fibres.

Glycoprotein fibrils – protein core carbohydrate fringe.

Mitochondria – intracellular packets for energy production.

ATP – adenosine triphosphate is able to store and transport chemical energy within cells and plays an important role in the synthesis of nucleic acids.

Guaifenesin – drug used for treatment of gout initially.

Nephropathy – a kidney disease.

Krebs cycle – a term used to describe the citric acid cycle which accounts for the production of energy in most higher animals.

DHPPA – dihydroxyphenyl propionic acid is a chemical degradation product from bacteria.

anaerobic bacteria, and can have neurological consequences. An enzyme called 2,3-diphosphoglycerate (2,3-DPG) has been found to be low in some patients and thiamine deficiency can cause this. Hypoxia results from low 2,3-DPG.

Symptoms

Some people have muscle pain as their predominant symptom. Other symptoms may include but are not limited to:

- Hypoglycaemia or carbohydrate intolerance with tiredness, panic, palpitations and light-headedness after eating sugar or starch.
- Pain and stiffness in the muscles, tendons and ligaments.
- Fatigue, irritability, depression, poor memory and lack of concentration.
- Some patients have irritable bowel syndrome/allergic colitis, irritable bladder/allergic cystitis, and sometimes recurrent vaginitis, headaches, burning hands and feet.

Treatment

The treatments offered at Breakspear include nutritional support, pain management including Lignocaine infusions, neutralisation of food and other sensitivities *(see section Neutralisation of Food Allergies, Intolerances and Sensitivities).*

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BOOSTING IMMUNE SYSTEM WITH ANTIOXIDANTS

All the evidence suggests that the healthy body is continually exposed to potential damage by *free radicals*, which, as a result of their reactivity, eagerly combine with other chemicals in the body. Free radicals have been implicated in cancer causation, liver damage by toxins like carbon tetrachloride, lung damage by nitrogen dioxides, ozone and paraquat ultraviolet light, radiation damage and inflammatory processes.

Free radicals are formed when pollutants enter the body and the greater the exposure to the solvent or smoke, for example, the more free radicals will be produced. The most common free radicals are *superoxide* (O_2^-), peroxide (HO_2^-) and *hydroxyl* (OH^-) and a similarly reactive atom, though not strictly a free radical, is called *singlet oxygen* (O^-). These free radicals are produced in the course of normal function of the body processes and within the body there exist systems that mop them up to prevent damage (quenching). However, these protective systems are sometimes overwhelmed and may be inadequate to check free radical amplifying cascade reactions.

Symptoms

There are not many definable symptoms though some patients may feel unwell, malaise and may experience accelerated ageing.

Treatment

It is possible to help the body to prevent free radical damage either by prevention of free radical formation (avoidance of pollutants, toxins and drugs where possible) or by maximising ability to quench radicals nutritionally, once they are formed.

There are two main nutritional approaches to preventing free radical damage. The first approach is to provide the micronutrients necessary to the body's own protection mechanisms. These nutrients include: zinc and manganese for *superoxide dismutase*, a protective enzyme discovered in 1969 by McCord and Fridovich; selenium for *glutathione peroxidase*, an enzyme which can destroy hydrogen peroxide and organic peroxides; and zinc is also an essential component of several DNA repair enzymes. The second approach is to take supplements of substances which have an intrinsic antioxidant activity. The main dietary antioxidants are vitamins, in particular vitamins C and E (which have long been known to act as free radical scavengers, able to inhibit peroxidation damage of fats), vitamin A and beta carotene, cysteine and glutathione. Other supplements also have powerful antioxidant activity (e.g. coenzyme Q10, OPC pine bark extract). It has also been shown that vitamin C can enhance the effects of vitamin E, having the capacity to regenerate it. It is thought that the protective effect may help in the prevention of many diseases and so a diet rich in the antioxidants, supplemented where necessary, may have a role in the prevention of disease.

Treatment with antioxidants is mandatory for immune disorders, which occur in CFS/ME and fibromyalgia, as well as many other illnesses. Breakspear Hospital uses intravenous and oral supplements in antioxidant treatment programmes.

Quick definitions:

Free radicals – reactive oxygen-containing compounds, formed when pollutants enter the body.

Quench – system body uses to "mop up" free radicals and prevent them from causing damage.

Antioxidant – a substance that quenches free radicals.

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DETOXIFICATION

In environmental medicine, it is very well known that taking into consideration workplace encounters is imperative.

Between 1965 and 1978, over 4 million distinct chemical compounds were reported in the scientific literature. Of approximately 6,000 reported per week, about 55% are now in use and in commercial production. The toxicology of the majority of these compounds has not been completely understood.

Many thousands of these compounds have been released into the environment and the interactions of these are not known, and the effects on flora and fauna are only now being established. In environmental and occupational health, the chief principle involved is preventing exposure. Should this fail, it is necessary to try to alleviate adverse effects by limiting the use of chemical compounds known to be harmful or potentially harmful and also by reducing contamination and release, so as not to endanger the environment. Equally these similar compounds should not be used in such a fashion as to cause contamination of the human body. Where such contamination has occurred, the compounds should be safely removed from the body.

Symptoms

Indications of the need for detoxification are:

- Multiple chemical sensitivity
- Presence of lipophilic xenobiotics in blood or fat biopsies
- History of exposure to lipophilic xenobiotics

Quick definitions:

Lipophilic xenobiotics – foreign chemicals which dissolve in fat.

Iratherm® hyperthermia treatment – water filtered infrared-A bed used to raise body core temperature.

Chelation therapy – intravenous infusion used to normalise the distribution of most metallic elements in the body.

- History of heavy metal intoxication
- Presence of excess heavy metal residues in tissues

Treatment

Aims and objectives of biodetoxification are the reduction of the lipophilic xenobiotic and heavy metal body burden by:

- Fat mobilisation
- Enhancement of the body's natural detoxification pathways (respiratory, renal, gastrointestinal and cutaneous)

The Breakspear detoxification programme is designed to mobilise fat, increase sweat and sebum secretion, present gastrointestinal re-absorption of xenobiotics excreted in the bile and to maximise the detoxifying systems by provision of optimal amounts of nutrients. The programme uses either the Iratherm® whole-body hyperthermia treatment or sauna treatments. Chelation therapy is used for removal of heavy metals.

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DENTAL MATERIALS AND THE IMMUNE SYSTEM

The amalgam used in dental fillings contains more than 50% mercury with other amounts of silver, tin, copper and zinc.

In the past it had been thought that the mercury was locked into the filling and could not escape. Recently, however, it has been proved that mercury is constantly leaked from the fillings, the amount increasing up to fifteen-fold when especially hot, salty or acidic foods are chewed.

Mercury is one of the most toxic substances known to mankind. It can affect any of the regulatory systems of the body. Primarily it targets the central nervous system, thyroid and pituitary glands, the kidneys, circulatory, digestive and respiratory systems.

Symptoms

Recent research has shown that mercury from fillings can reduce the effectiveness of the body's immune system resulting in increased susceptibility to bacterial and viral infections. In addition, it has been associated with arthritis, migraine, epilepsy, food, chemical and inhalant allergies, Candida and other yeast overgrowths and neurological disturbances such as multiple sclerosis, which it can mimic or exacerbate.

Treatment

At Breakspear, we use oral chelation programmes and work with dentists for removal of toxic fillings.

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NUTRITIONAL ASSESSMENT

In order to ensure that a patient is properly nourished and digestive system is functioning optimally, we look at the patient's intake, digestion, absorption, utilisation and excretion of products. This involves examining the patient's dietary history, from foods that are never or rarely eaten to ones consumed nearly daily. The quantity and quality of the foods is also taken into consideration and an assessment of alactasia, which is the absence of the enzyme needed to degrade milk sugar. This particular assessment entails taking lactose and doing a breath test for products. Stool and/or urine tests may also be performed to determine immunity status, analyse the absorption of digestive enzymes, and evaluate how the enzymes breakdown commonly consumed foods such as wheat, milk and yeast products. Urine tests may also be conducted to evaluate degradation of carbohydrate, protein and fat. Blood tests may be given to assess minerals, antioxidants, vitamins and enzymes.

Symptoms

The symptoms of poor nutrition, lagging digestion and insufficient gut flora are widely varied.

Treatment

A thorough assessment of nutritional state is undertaken and all the implications and deficiencies are rectified. Supplements often include essential fatty acids, magnesium and other supplements either by oral or intravenous infusions. Evaluating and addressing a patient's nutritional status will help build immunity.

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POSTURAL HYPOTENSION

The autonomic nervous system is often disturbed by CFS/ME. People develop postural hypotension which can be due to abnormal hormonal states and the hypothalamic pituitary adrenal axis (HPA).

Quick definitions:

Postural hypotension – low blood pressure when resuming an upright position.

Symptoms

A patient's blood pressure may drop when he/she sits or stands up. Because the blood drains to the legs, feet or abdomen, not enough blood is getting to the brain and this can cause the person to faint. Carotid bodies, which are in the main blood vessels in the neck, control blood flow and sense pressure saturation of blood in regards to oxygen and help to adjust breathing and hence blood pressure.

Treatment

We may recommend Fludrocortisone for postural hypotension and an exercise programme to improve muscle tone and circulation.

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BRIEF SUMMARY OF CFS/ME CONDITIONS, INVESTIGATIONS AND TREATMENTS

Condition	Investigation	Treatment
Toxic overload	Blood and urine tests for pollutants	IV vitamins Oral nutrients Glutathione Iratherm® Whole-body hyperthermia* Sauna
Epstein-Barr virus infection Glandular fever	Blood tests	IV vitamin C Antivirals Iratherm® Whole-body hyperthermia* Gamma globulin[3, 4]
Lyme disease	Antibody MELISA Western Blot	Antibiotics[10, 11] Herbal
T_h1 to T_h2 shift	Lymphocyte subsets	Transfer factor* Coriolus[12] BCG* DHEA*
Parovirus	Blood test	High-dose Gamma globulin[3,4,13]
Food allergy	Blood tests Skin tests Elimination and challenge Stool test	Neutralisation* Diets[14] Supplements
Thyroid problems	Blood tests Scan	Iodine Tyrosine Glutathione T3/Natural thyroid
Nutritional deficiencies	Lymphocyte proliferation tests Cellular mineral tests	IV/oral treatment[6-8, 14-21]
Oxidative stress	Urine tests Blood tests	Antioxidants[14]
Fibromyalgia	Urine tests Blood tests	IV Lignocaine*
Dental problems	24-hour urine test for metals	Chelation*

** Information available from Breakspear Hospital.*

CFS/ME

CONCLUSION

Chronic fatigue syndrome (CFS) and myalgic encephalomyelitis (ME) are debilitating and distressing conditions, which affect people of all ages.

CFS is defined by Fukuda *et al* by the presence of the following:

- Clinically evaluated, unexplained persistent or relapsing chronic fatigue that is of new or definite onset, is not the result of ongoing exertion, is not substantially alleviated by rest and results in substantial reduction in previous levels of occupational, educational, social or personal activities.
- The concurrent occurrence of four or more of a group of symptoms and signs, all of which must have persisted or recurred during six or more consecutive months of illness and must not have predated the fatigue. [1]

It has been shown in studies that these conditions are associated with abnormalities of immunity.

Breakspear Hospital uses a multidisciplinary approach to help those with CFS/ME. We use specialised independent laboratory tests for detecting the commonly affiliated viruses and other infectious agents, and we use an individualised programme of treatment for each patient to address different aspects of a patient's illness, taking into account the patient's medical history, the findings from a physical examination, and the results of the various investigations. A programme of treatment will be proposed at the first consultation and an estimate of the costs involved will be provided at this stage.

The Centre for Reviews and Dissemination, based at the University of York, produced a series of bulletins 'on the effectiveness of health service interventions for decision makers' and summarises the effectiveness of treatments for the management of CFS/ME. [2] This publication gives guidance to health care providers. It describes treatments which the Centre for Reviews and Dissemination has deemed effective; amongst them are those used at Breakspear Hospital. Full copies of the articles which the Centre uses to validate the effectiveness of the treatments are available from Breakspear and also from the Centre for Reviews and Dissemination.

Breakspear patients' many success stories are testimony to the effectiveness of the treatment we provide for CFS/ME sufferers.

Breakspear Hospital has the facilities to provide services for children, young people, adults, disabled and the elderly. We offer support for coping and adjusting to the illness and appropriate care packages.

Breakspear is a private hospital in operation since 1982. All new patients, or their guardians, can make an appointment to see a doctor directly. It is recommended that patients seek a referral from their General Practitioner where possible as we regularly correspond with local Primary Care Teams.

An analysis, conducted by independent statistical audit, of over 1,000 symptom scoring charts completed by Breakspear patients, demonstrated a highly significant difference in overall score between the first symptom scoring chart and the final completed questionnaires. This implies a reducing of the symptom effects over time amongst our patients.

Breakspear patients' many success stories are testimony to the effectiveness of the treatment we provide for CFS/ME sufferers.

CFS/ME

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