Breakspear Medical Bulletin

Issue 28 **Summer 2011**

Notes on the NO/ONOO cycle

The nitric oxide/peroxynitrite (NO/ONOO, pronounced “no, oh no!”) cycle theory of Dr Martin L Pall, Professor of Biochemistry and Basic Medical Sciences at Washington State University, USA, is the concept that a “stressor-initiated” biochemical mechanism may be responsible for chronic fatigue syndrome (CFS), fibromyalgia, multiple chemical sensitivities (MCS) and other conditions.

Dr Pall’s conclusions are that conditions, such as CFS and MCS, are initiated by 12 or 13 short-term stressors.

Dr Pall’s conclusions are that conditions such as CFS and MCS, are initiated by 12 or 13 short-term stressors. These short-term stressors include bacterial and viral infections, organic solvents and related compounds, mercury, carbon monoxide and 3 classes of pesticides.

Each short-term stressor increases levels of the chemical compound nitric oxide, which, acting through its product peroxynitrite (a potent oxidant), starts the detrimental NO/ONOO biochemical cycle.

Dr Pall believes that all NO/

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Important changes around Breakspear

Recently various changes have been taking place around Breakspear, which have disrupted regular business in order to improve services and the facility.

Antigen laboratory

On 9 and 10 May 2011, as previously announced, the Antigen Vaccine Laboratory was closed for 2 days for refurbishment. The new equipment, which meets all current regulations, was moved into the laboratory over the weekend and then sterilisation and a series of tests and the required certification were completed. Normal services resumed as quickly as possible.

Staff training

Also on 9 May 2011, the entire clinic was closed to regular business while staff members received targeted training in areas such as customer care, child protection and infection control.

Car park repairs

At the same time, while the car park was empty, the tarmac received some repairs to provide a smoother surface in areas that

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On the market: TruFiber™

The most common reason for taking TruFiber™ is to improve regularity, with more uniform stool consistency and intestinal comfort. The manufacturer claims, "It helps with both constipation and diarrhoea. Improvements in nutrient absorption also result in enhanced energy and a greater feeling of wellness."

TruFiber™ is a water-soluble dietary fibre produced by a controlled partial enzymatic hydrolysis of guar beans. According to the manufacturer's literature, it stimulates production of probiotics, controls the symptoms of irritable bowel syndrome (IBS) and research shows that it improves glycaemic response and mineral absorption.

TruFiber™ contains 2 sources of soluble, prebiotic fibre. These sources are: Sunfiber® and Inulin.

Sunfiber® is derived from partially hydrolysed guar gum (PHGG). The seeds of the guar plant are partially hydrolysed to improve solubility and reduce viscosity.

Inulin is isolated from the roots of the chicory plant. It has a lower molecular weight (shorter carbohydrate chains) than PHGG and provides a synergised prebiotic effect.

These 2 ingredients provide an immediate source of soluble fibre for probiotic bacteria. Importantly, these fibres are not utilised by the gas-producing bacteria, which means that bloating and excess gas are reduced.

This product contains no wheat, gluten, soy, corn, rye, milk, casein, peanuts, yeast or animal products.

(This product is available to patients on the recommendation of their Breakspear doctor.)

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Breakspear Medical Bulletin is a private publication that we aim to produce quarterly. It is for the promotion of environmental medicine awareness and Breakspear Medical Group Ltd. This newsletter is not intended as advice on specific cases but as a forum of information researched and stored at Breakspear Medical Group. We urge readers to discuss the articles in this bulletin with their health-care practitioners. Unauthorised reproduction of this newsletter, or quotation except for comment or review, is illegal and punishable by law.

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Notes on the NO/ONOO cycle

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ONOO conditions may be treated by down-regulating (lowering) the cycle, which he believes is the actual cause of the illness. Dr Pall recommends a well-chosen regime of antioxidants and other agents to help the body to overcome a variety of NO/ONOO cycle–related conditions.

Agents which can lower NO/ONOO cycle biochemistry are:

- carnitine/acetyl-L-carnitine
- coenzyme Q10
- hyperbaric oxygen
- hydroxocobalamin
- omega-3 fatty acids
- high-dose vitamin C
- high-dose folate

The NO/ONOO cycle involves at least 22 different mechanisms and other variables which Dr Pall describes on his website www.thetenthparadigm.org and in his new book, *The NO/ONOO—vicious cycle mechanism as the cause of chronic fatigue/myalgic encephalomyelitis*. He also explains how the cycle affects the body's ability to make energy in the form of adenosine triphosphate (ATP), due to the peroxynitrite affecting proteins and other components of the cells' power-producing mitrochondria.

Ask Dr Christabelle Yeoh

Sometimes, after I eat, I feel very tired and need to lie down. If I don't, I feel as if I am going to faint but I don't, necessarily. Why might this be?

Many people, not just chronic fatigue patients, complain of feeling tired after a meal, especially a heavy meal. To a degree, this is a normal response especially after a carbohydrate/sugar-rich meal. There are changes in the circulatory system and nervous system after we eat which lead to these responses and, depending on the food ingested and the degree of the response, this is a normal physiological occurrence.

When one's blood pressure falls after eating, it may be a condition called postprandial hypotension (PPH).

The intestines need a large amount of blood for digestion. When the blood goes to the intestines after a meal, the heart rate increases and blood vessels in other parts of the body have to squeeze to maintain blood pressure. However, if the heart rate is unable to increase adequately, and the blood vessels do not constrict enough to raise or maintain blood pressure, blood pressure will fall, leading to hypotension.

Dr Peter Julu's non-invasive Autonomic Profiling Tests show that a large number of Breakspear's patients with fatigue states have sympathetic nervous system dysfunction.

When one's blood pressure falls after eating, it may be a condition called postprandial hypotension (PPH). PPH is defined as when there is a systolic blood pressure drop of 20mmHg in a sitting/supine position within 2 hours after eating a meal.

Splanchnic dilatation (the expansion of abdominal organs as part of a dysfunctional digestive process) after a meal is the most important contributing factor for PPH. Splanchnic dilatation is due to a problem in the autonomic nervous system (ANS), which is the 'automatic' part of the nervous system that controls and regulates body functions and systems.

Normally, sympathetic activity after a meal should increase 2 or 3 times to prevent PPH. An inadequate after-meal involuntary increase in cardiac output can be due to an impairment of the mechanism for maintaining blood pressure and inadequate compensation of the sympathetic nervous system (SNS, the part of the ANS which mobilises the body's resources when under stress).

The rate of nutrient delivery from the stomach into the small intestine is an important determinant of the low blood pressure response to the carbohydrate. The magnitude of the fall in blood pressure and rise in heart rate is greater when the speed at which food and drink leave the stomach is undesirably more rapid.

It has been shown that the fall in blood pressure is reduced when gastric emptying and small intestinal carbohydrate absorption are slowed by dietary or pharmacological means. For example, guar gum is a bean-derived food which is known to slow digestive processes and acarbose is an anti-diabetic drug which has the same side-effect.

Conversely, gastric distension (bloating) can also cause the after-meal drop in blood pressure. Walking or gentle exercise after a meal may help to reduce PPH but the capacity to do so is different in individuals with dysautonomia.

As people get older, many suffer this problem with more acute clinical consequences. It occurs in approximately 40% of nursing home residents and represents a major cause of morbidity. It occurs commonly in people with diabetes, hypertension, Parkinson's disease and renal failure. These patients can present with chest

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For recommendations on how to reduce postprandial hypotension (PPH), see page 4.

Ask Dr Christabelle Yeoh

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pain, nausea, headaches, transient ischaemic attacks and syncope (fainting with loss of consciousness). Less severe cases may feel sleepy or faint after eating, experience altered vision and/or concentration and temperature dysregulation.

People with PPH are advised about the risk of falling or fainting 15 minutes to 2 hours after eating. It is recommended that PPH sufferers:

- avoid alcohol
- adjust meal sizes to small and frequent meals with high protein and low starch/ sugar content
- reduce the starchy carbohydrate load
- consider abdominal binders
- address food reactions and sensitivities, using low-dose immunotherapy
- drink plenty of fluids
- ask their doctor about recommended daily salt intake, as levels may be raised

Caffeine does help to reduce the postprandial drop in blood pressure but may not suit a person with sleep disturbance and tachycardia (a disorder of the heart rate). Antidiuretic and nitrate drugs can make PPH worse.

Along with PPH and food allergies/sensitivities, there are a number of conditions that may cause drowsiness and faintness after meals. For example, undiagnosed coeliac disease sufferers may experience these symptoms after eating gluten-containing foods.

If you experience drowsiness and fainting after meals, speak to your Breakspear doctor about possible autonomic evaluations or other tests available to diagnose your condition.

Important changes around Breakspear

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were previously damaged after many years of use.

Telephone system

Also in May, a new voice messaging system was installed at Breakspear. The upgrade was selected to help deal with the significant increase in call volume since the system was first introduced to Breakspear over 6 years ago. At this point, callers may not notice a difference in the recorded greeting and options menu or general telephone set-up; however, in the near future, using a call-volume monitoring system, an improved options menu may be introduced and other adjustments may be made.

Lower level use re-assignment

Earlier this Spring, renovations were completed on Dr Peter Julu's Neurological Sciences offices on the lower floor, which now offers disabled access.

The nearby former medical records room has been refurbished and is now a phlebotomy room, which provides patients with additional privacy while samples are taken. In addition, the post room was moved and new general storage space created.

ASD suite

Re-working of consulting space was completed on the first floor to provide an autistic spectrum disorder (ASD) suite, to help accommodate increasing numbers of young ASD patients. As the new ASD suite is upstairs, it is completely separate from non-ASD patients. The suite has been divided into sensory integration areas; one section has lighting that makes the room more relaxing for those patients who are over-stimulated and another area is filled with vibrant colours and tangible items for stimulation. There are also offices for both the doctor and nutritionist, which are next to one another, making joint consultations more convenient.

Julia Kerr

The guesthouse

In response to guests' suggestions, 2 rooms at Montrose, the guesthouse for Breakspear Medical Group, have been re-furnished with metal furniture, which replaced the solid wood furniture. Guests who are sensitive to wood may be interested in staying in the re-furnished rooms 1 and 7, where there are now hospital beds, metal clothes rails and steel bedside tables.

Important reminder to patients:

Breakspear Medical Group's repeat prescription policy

To ensure that we provide optimum care for our patients, Breakspear's medical team will be reviewing each patient's care and treatment plan on a more structured timescale.

As part of this more standardised care scheme, in order to renew prescriptions and/or order nutritional products, patients are required to have had a consultation with a Breakspear doctor within the last 12 months.

Patients wishing to book in for re-testing or to re-order their low-dose immunotherapy vaccines are now required to have had a consultation within the last 12 months.

Prescriptions, pharmacy or low-dose immunotherapy vaccine orders will not be processed unless a consultation within the appropriate timeframe is on record. If an order cannot be processed due to the time limit being exceeded, the patient will be notified as soon as possible. Note: prescription orders may take up to 2 working days to process.

This new approach will provide continuity of care and help ensure our organisation continues to meet the high standards set out by our governing body, the Care Quality Commission.

Dr Goyal visits Fundación Alborada

Nestled in the heartland of Spain, Fundación Alborada is a non-profit institution with the purpose of providing treatment for people with toxic injury.

In May 2011, Dr Daniel Goyal flew to Spain to visit the Fundación Alborada. The clinic invites international experts from around the world to visit the facilities and further educate staff about environmental illness treatments.

In 2009, Dr Margarete Segner, who has worked at Breakspear for many years, spent several months at the Fundación Alborada at the Environmental Centre with Breakspear's now-retired nurse, Elsa Page. Dr Segner and the Spanish medical staff formulated the clinic's treatment guidelines for multiple chemical sensitivities and chronic fatigue.

Over the years, other globally recognised environmental medicine experts, such as Dr Bill Rea, from the American Environmental Health Foundation in Dallas, Texas, Professor Genovesi, from Rome University, Italy, Dr Martin Pall, Professor Emeritus of Biochemistry and Basic Medical Sciences, Washington State University, USA, and Breakspear's Dr Jean Monro have visited.

The Fundación Alborada is led by Dr Pilar Muñoz-Calero, who is an environmental illness sufferer and works tirelessly to provide Spanish people with an avenue of choice for treatment.

The cases Dr Goyal saw at the clinic were complex and often quite severe. However, they were being helped by the enthusiasm and knowledge of the staff.

Dr Goyal commented, "To say that environmental illness is an epidemic seems a little understated. As you may be aware, autism statistics were 1 in 10,000 only 10 years ago, while today the numbers are 1 in 90. Food, chemicals and inhalant sensitivities are growing significantly and the level of immunotoxicity we are seeing in the clinic is regarded as being highly significant."

"We are pleased to have contributed to this organisation and look forward to contributing more in the future" concluded Dr Goyal.

The Fifth International Congress of Environmental Medicine, hosted by Fundación Alborada and the Healthy Living Foundation, is being held at the College of Physicians of Madrid, Spain, on the 24-26 June 2011. Both Dr Goyal and Dr Jean Monro will be presenting at this event.

Recommended recipe

Gluten-free walnut cookies

A metric "cup" is a standard measuring unit of 250 ml.

Ingredients

2 cups walnuts
1/4 cup honey
1 tbsp. cinnamon
2 egg whites
Pinch of salt (optional)

Equipment

Blender and mixer or food processor
Baking sheet
Measuring spoon
Oven

Method

1. Preheat oven to 180°C. Grease baking sheet.
2. In a blender or food processor, grind nuts and cinnamon until quite fine and with no large pieces of nuts remaining.
3. If re-using the food processor, clean it thoroughly before continuing.
4. In the mixer or food processor, whisk the egg whites until light and fluffy. Gradually add the honey, while keeping the consistency of the egg whites fluffy. If desired, add a pinch of salt.
5. Gently fold in approximately 1/3 of the ground nuts and cinnamon to the egg whites and mix until well blended. Fold in remaining nuts and cinnamon.
6. Put tablespoons of the mix onto the baking sheet, spacing well apart, and bake at 180°C for 12 -15 minutes.

Makes approximately 12 cookies.

Angelette Müller

This biscuit is an ideal alternative to highly refined gluten-free options. It has been used on the specific carbohydrate diet, a diet that limits the intake of complex carbohydrates and is used in irritable bowel diseases, autism and coeliac disease.

Walnuts are rich in omega-3 fatty acids, which are natural anti-inflammatory agents. Extracts from walnuts have been shown to reduce the activation of the microglia cells (immune cells of the brain); this is thought to be help to protect the brain. Honey is another main ingredient, Manuka honey is recommended for its anti-bacterial effect including effective action against Helicobacter pylori.

References:

Willis LM, et al. Walnut extract inhibits LPS-induced activation of BV-2 microglia via internalization of TLR4: possible involvement of phospholipase D2. Inflammation. 2010;33:325-33.

Lin SM, et al. The controlled in vitro susceptibility of gastrointestinal pathogens to the antibacterial effect of manuka honey. European Journal of Clinical Microbiology & Infectious Diseases. 2011;30:569-74.

Recipe appeal to readers

Share your favourite recipes

Do you have some favourite recipes that you'd like to share with other people who have common food allergies/sensitivities?

We are hoping to share favourite recipes that meet some or all of the following criteria:

Free from:

- added sugar
- grains (oats, wheat, corn, etc)
- dairy/lactose/casein

Easy to prepare

Recipes should include a brief description, a full list of ingredients and the method. Email your recipes to the editor: **cmonro@ breakspearmedical.com** or send a copy in the post to the clinic, Attn: C Northcote Monro.

Defining gluten-free

"Gluten-free" seems to be the catch-phrase of the day used to promote food manufacturers' new premium price niche. Sadly, there is no universal definition of gluten-free, which could be a health-risk to many gluten-sensitive patients.

Gluten is a type of protein contained in grains, which is the 'sticky' part that is responsible for the elasticity of dough. However, most gluten-sensitive patients react to other proteins in grains, as well as to gluten. Grains such as wild rice, corn, buckwheat and quinoa, which do not contain gluten, can still cause an adverse reaction in some people, such as abdominal pain, fatigue, headaches, "brain fog" or tingling extremities.

In the United States, the Food and Drug Administration (FDA) has been working on officially defining what it means to be "gluten-free" for over 7 years, which has left food manufacturers liberated to define gluten-free as they wish.

Canada, Brazil, Australia and an international body, the Codex Alimentarius Commission, have all set labelling standards for gluten-free. In most cases, it is defined as no more than 20 parts per million, which equates to 0.0198 of a gram of gluten per 997.9 grams of food. This means that there is still potentially gluten present in foods legitimately labelled as gluten-free.

Improperly segregated equipment and/or inappropriate cleaning methods leave a chance for contamination, as well as the potential of test batches meeting borderline gluten-free criteria, while other batches may exceed limits.

New thoughts on health benefits of vitamin D

Vitamin D can be obtained from dietary sources or the action of sunlight on the skin.

It has been long known that vitamin D is an adjunct to calcium for strong bones and teeth but recent research shows that it is essential for healthy muscles and the immune system, as well as helping to prevent allergies and juvenile diabetes.

According to an article in the Telegraph 12 April 2011, a study conducted at Ealing Hospital found that many children with a severe lack of vitamin D experienced a delay in walking.

The article went on to state, "Giving all pregnant women vitamin D supplements could cut the number of multiple sclerosis sufferers by up to 80%."

Vitamin D has also been recommended to protect against premature birth and pre-eclampsia.

However, caution must be raised as some nutritional supplements pair vitamin D with vitamin A, which is not recommended for pregnant women. Too much vitamin A may cause toxicity, which can be particularly harmful in early pregnancy. Women trying to get pregnant or in early pregnancy should ask their doctor about appropriate nutritional supplements.

There are studies which conclude that supplements in early childhood may ward off the development of type 1 diabetes later in life. It has been found that there is a striking difference in the incidence of type 1 diabetes according to latitude and levels of sunlight exposure, which affects the body's production of vitamin D. According the ScienceDaily.com, a child in Finland is 400 times more likely to develop the disease than a child in Venezuela.

There is further evidence that another autoimmune disorder, rheumatoid arthritis, may be helped with vitamin D. One American study found that in their all-woman group, those who consumed more than 200 IU of vitamin D each day were 33% less likely to develop rheumatoid arthritis than those who consumed less than that amount.

According to patient.co.uk, "Vitamin D deficiency is a very common problem—more than half of the UK population has insufficient levels of vitamin D."

See page 10 for more on the benefits of vitamin D.

Notes on the importance of good dentistry for good health

Dr Tom Nyerges

Problems in a patient's mouth can be the primary cause of various health problems and, in some cases, dental problems can be exacerbating existing health problems. This is particularly apparent in people over 30 years of age.

The 3 common conditions in one's mouth that can dramatically affect health are:

1. Chronic mercury exposure from dental amalgam fillings
2. The presence of multiple, different metals
3. Chronic infections

Dental amalgam (the material of "silver fillings") is a mixture of mercury, silver, tin, copper and zinc. Amalgam fillings have been used in mainstream dentistry for decades and are still used by many NHS-funded dentists.

Mercury is a toxic heavy metal which conducts electricity, as copper and silver do. Inside the human body, mercury is highly cumulative and retentive in body tissues, particularly the central nervous system and major organs.

It has been found that mercury is released more readily and in much greater quantity from poor quality, low-grade amalgams.

Some people may be more sensitive to this toxic material, which means that tolerable levels can vary dramatically between individuals. Mercury has been found to negatively affect a healthy balance of gut flora and a healthy digestive system, which are absolutely fundamental to good health and immunity.

Removing amalgam fillings will remove the source of heavy metals. Detoxification and/or chelation programmes, such as the ones offered at Breakspear, may be beneficial to remove accumulated mercury from the body.

In addition to concern about the presence of mercury, the second common mouth condition which can adversely affect health is the presence in the mouth of multiple metals, which are in close proximity to each other. These various metals can create a continuous electromagnetic circuit, which by being in the mouth, is in very close proximity to the brain.

I think there are more than enough electromagnetic fields around us, without also having one or more operating continuously 24 hours a day in our mouths. Therefore, I would normally recommend removing the various metals and replacing with an alternative material.

The third undesirable condition in the oral cavity is chronic infection in the mouth and/or jaw bones. Toxins from the infected area enter the bloodstream and then spread all around the body.

Studies have recognised the role of periodontal (gum) disease and the resultant tissue inflammation in relation to heart disease .

Root canal treatments have the potential to create or exacerbate systemic health problems. Root canal treatments are a common dental procedure and, due to the technical difficulty of the procedure, can result in chronic infections inside the jaw bones. These infections are extremely common and widespread, primarily because many people do not have any obvious symptoms and therefore do not seek treatment.

However, chronic infections associated with root canal treated teeth may need surgical intervention to resolve them, as there is a constant reservoir of bacteria inside the "dead" tooth, which requires a thorough cleaning of the extraction socket and surrounding bone.

Infections need to be addressed and may be treated with antibiotics. It may also be beneficial to boost immunity through diet and nutritional supplements.

In my opinion, it is best to ensure that one is free from all of these conditions which could be detrimental to one's health and to take appropriate steps to avoid developing them in the future.

The oral cavity is a very important, often neglected and massively abused area of the body in relation to health. A holistic approach to dentistry is complementary and beneficial to many other health treatments.

Dr Tom Nyerges is a practising holistic dentist in Luton. For more information about his practice, visit: www.lutondentalpractice.co.uk or telephone 01582 726 853 if you would like to ask any questions or discuss anything.

Reports of US government phase-out of dental amalgams

In Spring 2011, many environmental magazines and websites reported on the US government Environmental Protection Agency (EPA) calling for the phasing out of amalgam fillings.

Numerous articles claim that the EPA has announced that it supports the goal of an eventual phase-out of mercury amalgam fillings. It is expected that this will affect many global policies, including ones in the EU.

Aside from amalgam fillings being the main source of human body burden, the potential damage to our global environment from the disposal of these fillings, primarily through water, is also worrying.

Some of the dentistry equipment used for removing material from the mouth is not equipped with filter systems to separate dental amalgams. Without separating amalgam, mercury is flushed into the sewer system. From there, it may become part of the water treatment process sludge, which may be incinerated, emptied into landfills, possibly applied to agricultural land as fertiliser, or it may remain in the water, which is discharged into surface waters.

It is hoped that the American phasing out of the use of amalgams will reduce global mercury use and demand and will also improve the environment by requiring action, such as new mining and storage techniques along with new dental practices.

New thoughts on mobile phone use affecting brain glucose metabolism

A new American study published on Medscape.com concluded that the use of a mobile phone for as little as 50 minutes at a time appears to affect brain glucose metabolism in the region closest to the mobile's antenna.

The investigators used positron emission tomography (PET), which is an imaging technique that produces 3-dimensional images of body processes, during mobile phone use in the 'on' and then 'off' position. They found that the whole-brain metabolism was not significantly affected with the mobile phone on or off. However, when the mobile phone was on, metabolism was significantly increased in the orbitofrontal cortex (OFC) and temporal pole areas of the brain, which are the areas closest to where the antenna meets the head.

The lead study author, Dr Nora D Volkow, said the difference between the off and on modes was about a 7% increase in glucose metabolism, within the range of physiologic activation during speaking. (In this study they did not have the subjects talking during imaging, which might have activated other brain areas and confounded the mobile phone's effects.)

In an editorial accompanying the publication of this study, other scientists commented that this is the first investigation in humans of glucose metabolism in the brain after mobile phone use and it raises concern about possible acute and long-term health effects of radiofrequency emissions from wireless phones.

Dr Volkow was quoted during a teleconference, "We do not know what the clinical significance of this finding is, both with respect to potential therapeutic effect of this type of technology but also potential negative consequences from cell phone exposure." However, she recommends using hands-free devices or speaker-phone mode to avoid direct contact of the phone with the head. She warned that particular caution should be taken with children and adolescents as their neural tissue is still developing.

Did you know…?

Vitamin D lowers blood pressure

In an article on www.mercola.com, a natural health website, Dr Joseph Mercola wrote that "Research has recently found that vitamin D has a protective effect against arterial stiffness and impaired blood vessel relaxation."

Researchers at the Emory/Georgia Tech Predictive Health Institute have presented findings that people with a vitamin D deficiency had vascular dysfunction comparable to those with diabetes or hypertension.

Senior citizens, in general, have been found to be the most deficient.

Most of the body's vitamin D is produced after exposure to the sun; however, there are some foods rich in, or fortified with, vitamin D and nutritional supplements are available.

Migraines, CFS in the genes

According to Migraine Action October 2010, Dr Richard Boles, Children's Hospital, Los Angeles, USA, has findings that suggest that some of the genetic components of various functional or autonomic conditions, such as migraine, chronic fatigue syndrome (CFS), depression, tinnitus and cyclic vomiting syndrome (CVS), may be linked to mitochondrial dysfunction and mitochondrial DNA.

Mitochondria are tiny structures in cells that produce the majority of the body's energy. If they fail to produce enough energy, the body is unable to function properly, and is more susceptible to diseases.

Dr Boles believes that conditions caused by mitochondrial DNA should be treated by decreasing energy demand and increasing energy supply. This is achieved by eating regularly and avoiding excessive exercise. Fasting has also been found to help, as well as high doses of nutritional supplements such as coenzyme Q10, L-carnitine and riboflavin, which help in energy production.

NICE publishes guidance for GPs on food allergy in children

In response to the growing problem, the National Institute for Health and Clinical Excellence (NICE) published guidelines in February 2011 for general practitioners on taking a careful history and arranging for appropriate testing for children who have signs of possible food allergies to ensure prompt diagnoses and effective management.

The guidelines recommend GPs consider food allergies not only in children with anaphylaxis and other allergic reactions such as redness and swelling around the mouth, but also in children with skin conditions such as eczema or acute urticaria, gastrointestinal problems, and respiratory symptoms.

Fat burning increased by fasting

For years, dieters have been discouraged from fasting in order to lose weight. Now, according to NaturalNews, recent research has proved that periodic fasting can be a good health-promoting practice.

Dr Benjamin Horne of the Intermountain Medical Center's Heart Institute, Murray, Utah, USA, conducted research on over 200 individuals and found that fasting reduces the risk of disease. This is because, during fasting, the body utilises fat as a source of fuel instead of glucose, and this results in a decrease in fat cells within the body, which in turn reduces the risk for high cholesterol, insulin resistance and diabetes.

BA grounds jumbo jets due to bed bugs

The Daily Mail 26 February 2011 reported that British Airways grounded 2 jumbo jets after a 28-year-old passenger, Zane Selkirk, complained of being badly bitten by bed bugs during 2 separate long-haul flights. The airline has fumigated one of the aircraft on which it confirmed there had been an infestation and apologised to the passenger for her ordeal.

Available at our Pharmacy

www.breakspearmedical.com/shop

Visit Breakspear Pharmacy's online shop anytime of the day or night to order and pay securely for:

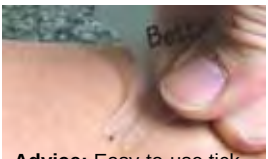
- nutritional supplements
- alternative foods
- toiletries
- household cleaners

UK patients and practitioners who have active accounts can register and order any time of the day or night. See page 2 for definition of active account in the article, *Important: reminder to patients of repeat prescription policy.*

Controversy surrounding Lyme disease reported in newspaper

The Daily Telegraph featured an article, "Deadly Lyme disease on increase as more of us spend time outdoors" on 16 May 2011, which states that cases of Lyme disease have tripled in the past 10 years.

Lyme disease is an infectious, primarily tick-borne disease caused by bacteria belonging to the genus Borrelia. There are several different species of Borrelia. For example, Borrelia burgdorferi is the most common form in the United States while Borrelia afzelii and Borrelia garinii are more common in Europe.



Advice: Easy-to-use tick removal kits should be carried whenever exposure to ticks is possible.

Initial symptoms, which develop over the days following the bite, include fever, headache, fatigue, depression and a characteristic circular skin rash, called erythema migrans. At this time, there are countless medical opinions on which types of antibiotics are most effective in treating the condition in the early and later stages.

Left untreated, the bacteria can attack the central nervous system. Symptoms such as intense pain, fatigue, loss of hearing, stiffness in joints, panic attacks and inability to function normally can develop. The symptoms are so complex and so easily confused with other conditions that the condition is frequently misdiagnosed.

As well as controversy over the recommended courses of antibiotics for treatment, there is much debate over the accuracy of available blood tests to diagnose this condition.

The Daily Telegraph article features Lyme disease sufferer Stella Huyshe-Shires, who waited 3 years for confirmation that she had Lyme disease. After a positive blood test, she was put on low-dose antibiotics for 2 weeks, which is standard treatment for Lyme, which did not improve her symptoms.

After another positive blood test, she went to hospital for 2 weeks of intravenous antibiotics and still did not improve.

She joined the Lyme Disease Action charity in 2007 and began lobbying MPs to change the policies governing the use of antibiotics, so that they could be used over longer periods of time. She cites medical papers that have reported that Lyme can survive a short course of antibiotics.

The Daily Telegraph article states, "The charity also takes issue with the [Department of Health's] claim that blood tests are 99% sensitive to Lyme (some people with Lyme do not produce enough of the right sort of antibodies to achieve a positive blood test) and its assertion that 'there is no biological evidence of symptomatic chronic Lyme disease among those who have received the recommended treatment'."

Huyshe-Shires concludes, "Doctors are hampered both by the Department of Health and by lack of evidence about what course of treatment is most effective. We do not know enough about the microbiology of this infection. It is not enough to say that because you have had 'adequate treatment', you can't have Lyme any more."

New at Breakspear: condensed lung function, sleep studies and baseline autonomic nervous system testing

Senior Clinical Physiologist Elias Keter will be performing lung function, basic sleep apnoea studies and baseline autonomic nervous system testing in set time slots, 2 days per week, in the lower level Neurological Sciences suite. Test results will be available to the Breakspear doctors on the same day and there will be no need to consult with Dr Peter Julu, Head of Neurological Sciences Department in relation to these condensed evaluative services.

Lung function assessment tests (£50*) are performed using spirometry. This is a quick method of measuring the maximum volume of air we can move in and out of our lungs. The body requires effective ventilation of O_2 into the blood that is in the pulmonary vascular bed and CO_2 out of venous blood. Therefore, spirometry helps in graphically displaying obstructive or restrictive anomalies of the lungs, which aids in effective treatment.

Chronic sleep deprivation may cause health problems such as weight gain, high blood pressure, decrease in immune function and depression. There is now a 2-hour basic sleep study offered (£200*), which may provide answers about the poor quality of sleep patients experience, or tiredness on waking up in the morning. We measure cortical electrical changes which assist in identifying sleep stages. Other vital signs are also measured in sleep by equipment such as a modified lead 1-EEG and limb movements monitor, which is significant in restless sleep syndrome.

The autonomic nervous system (ANS) is part of the peripheral nervous system which controls bodily functions that are largely involuntary, although some, such as breathing, work in tandem with the conscious mind. Elias Keter will be performing baseline autonomic index tests (£200*) as well as continuing full autonomic profiles and Quantitative Inotropic Fatigability Tests (QIFT) with Dr Julu.

The ANS profiles provide valuable information to doctors, such as the patient's thermoregulatory function, heart rate and blood pressure response to isometric exercise and cardiovascular reflexes. ANS tests help in the study of the pattern of autonomic dysfunction in various diseases and establish the degree of autonomic handicap in a patient, which helps in decisions about clinical management and the monitoring of progress during treatment.

Information about pricing and Neurological Science appointment times is available at Reception.

** Breakspear Medical Group reserves the right to alter prices without notice.*

Bulletin board

Welcoming new staff and some staff changes in various departments

In mid March 2011, Managing Director Alister Monro announced 2 promotions within 2 departments at Breakspear.

Jason Giddins was promoted to Senior Pathology Manager.

Tracey Godfrey was promoted to become Pharmacy Manager. Pharmacy trainee Erin Healy is one of the new faces in Pharmacy. She has replaced Maureen Rumsey, who has moved to Patient Liaison.

Pharmacy technician Phillippa Seller's last day of work before maternity leave was 14 April 2011. A new pharmacy trainee, Joe Wingfield, started in early April.

The new role of Quality Assistant has been filled by recruit Julie Pritchard who will be assisting Quality Manager Joni Caswell.

In addition, Julia Kerr and Jo Walshe have been employed to assist in collection and compilation of data for clinical audits.