Breakspear Medical Bulletin

Breakspear Hospital, Issue 23 **Winter 2010**

Notes on environmental obesogens

Dr Jean Monro

"Environmental obesogens" is the term given to the chemicals that may be contributing to the obesity epidemic.

Early-life exposure to traces of chemicals in the environment has shown that hormone-mimicking pollutants can affect the body in various ways.

These pollutants can act on genes of a developing foetus (when the mother is exposed) and/or on a newborn, turning precursor cells into fat cells. These chemical pollutants may also alter the body's metabolic rate so that the body conserves more calories than if it had not been exposed.

It is known that "thrifty" genes can occur naturally in some races, causing a predisposition to being overweight, but interfering chemicals, called obesogens, can have this effect in any individual.

In the developing body, pre-fibroblasts can either develop into fibroblasts, which are in the connective tissue, or can be converted into fat cells, called adipocytes. Exposure to obesogens disrupts the natural balance and causes more fat cells to be made from pre-fibroblasts, which results in the body having more fat storage capacity.

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Breakspear Pharmacy has moved…across the road

As you may recall, some time ago Breakspear Medical Group acquired use of the former tyre centre across the road from Breakspear Hospital, to allow expansion of the premises.

On 21 December 2009, the Pharmacy was moved over to the newly refurbished building. The storeroom at the new building is substantially larger than the Pharmacy's previous space, which will allow more nutritional products to be kept in stock.

Having more items in stock will result in the Pharmacy online shop (and regular) orders to be processed more quickly.

Office space has been refurbished for other administrative staff who will shortly be working there, too.

Visit **www.breakspearmedical.com/shop** to register, place Pharmacy orders and pay securely online!

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On the market: hyperthermia treatment with the IRATHERM®1000

As part of your New Year's resolutions, are you looking for ways to detoxify and boost your metabolism?

For years, many patients of Breakspear Hospital have been using the infrared A sauna to help with detoxification and increasing metabolism.

Infrared sauna is well known for its use in detoxification. Sweating and the mobilisation of toxins in the fat and the circulation bring about detoxification.

The major factor which underlies the effects of hyperthermia treatment is the positive effect on blood flow. Poor blood flow is a huge underlying pathophysiological process present in many chronic medical conditions, including allergy, depression and fatigue.

Using whole body hyperthermia allows infrared frequencies to penetrate the body all over, whilst the patient is lying down, which is the most effective way to increase blood flow. Increasing blood flow brings about many of the benefits. However, the actual effect of heat is the increase in the rate of many metabolic activities, which also has benefits.

During the IRATHERM®1000 session, the individual lies on a net, like a hammock, which is suspended over the source of the heat, and during the therapy temperature, oxygen saturation and pulse are monitored, and the individual is observed by clinical staff.

At present, Breakspear Hospital is the only facility in the United Kingdom to offer this method of treatment.

New thoughts on strep throat and obsessive compulsive disorder (OCD)

Science Daily reported that a new study by researchers at Columbia University Mailman School of Public Health's Center for Infection and Immunity indicates that paediatric obsessive compulsive disorder (OCD) may develop from an inappropriate immune response to the bacteria causing common throat infections.

OCD is characterised by repetitive behaviours which are aimed at reducing anxiety or by combinations of obsessive thoughts and compulsive behaviours. Symptoms include excessive repetitive hand washing, extensive hoarding, and opening and shutting a door a specific number of times before leaving a room.

More than 25% of adults and 3% of children show some features of this disorder.

The study used mice which were immunised with an inactivated form of the bacteria GABHS. The researchers claim that their findings illustrate that the antibodies are sufficient to trigger this behavioural syndrome.

The study's results may have implications for treating Tourette syndrome, tic disorder, autism, and mood, attention, learning and eating disorders.

Breakspear Hospital's doctors see many children with obsessive or compulsive traits, especially those who are on the autistic spectrum. Our experience is that these children often have enlarged tonsils, where the strep bacteria are harboured. We would routinely check these children for strep antibodies in the blood. Treatment considerations include penicillin antibiotics and referral to an ear, nose & throat surgeon for a tonsillectomy. This procedure is often a definitive treatment for recurrent strep, reducing the effect on the brain.

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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, Breakspear Hospital 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 Hospital. We urge readers to discuss the articles in this bulletin with their health-care practitioners.

Ask Dr Terence Daymond

Sometimes the fingers on both my hands become cold and white, and at times it feels as if they've fallen asleep with pins and needles and other times they swell and become quite painful. These attacks last for a few minutes and other times over an hour. What can I do?

During the recent cold weather we have all suffered from cold hands and everybody should wrap up to keep warm. The body's automatic shutting down of the peripheral circulation is natural to maintain core body temperature.

Remember: in the cold, it is essential to keep warm!

Some people, however, suffer more than others and the blood vessels in the hands, feet and other peripheral areas, such as nose and ears, may go into spasm, causing blanching (whitening) of the fingers. This leads to deoxygenation of the blood, so that the fingers then turn bluish-purple in colour, and as they warm up, the blood becomes hydrogenated and the skin becomes pink-red. These are typical symptoms of Raynaud's phenomenon or Raynaud's disease (commonly just referred to as Raynaud's).

Associated with the colour changes are very severe sensory changes, with tingling, numbness, pain, and loss of function. It is very difficult to use hands that are cold and numb and this makes it impossible to feel things properly.

The colour changes, first described by Maurice Raynaud in 1862, carry his name. There are primary and secondary causes of Raynaud's.

Primary Raynaud's occurs spontaneously on exposure to cold and indeed temperature change. For example, it might occur whilst a person is walking down the freezer aisle in the supermarket. Chilblains may also occur. These are localised swellings with redness and irritation due to inflammation, causing burning and itching of the skin.

Primary Raynaud's is common in teenagers, and may be hereditary. Some young people tend to grow out of the condition in their 20s. Secondary Raynaud's is associated with connective tissue disorders, particularly progressive systemic sclerosis (scleroderma), and other connective tissue disorders, such as lupus erythematosus, polymyositis and rheumatoid arthritis. People with progressive systemic sclerosis suffer particularly because of the increased fibrosis of the skin and vascular changes that occur with this condition.

Smoking exacerbates Raynaud's and causes vascular spasm and therefore should be avoided.

To properly diagnose Raynaud's, blood tests for arthritis and connective tissue disease are important. A positive antinuclear factor in the context of Raynaud's in anyone, and particularly in young people, is significant.

Thermography before and after a cold challenge is non-invasive and can also be very helpful in making a diagnosis. Electronic images from a thermal imaging camera use infrared radiation.

The management of primary Raynaud's is avoiding cold, avoiding smoking, wearing suitable clothing and keeping warm. Hand warmers and electrically-heated gloves are very helpful. Medication such as vasodilators (nifedipine) can help, but can cause headaches, as they cause all of the blood vessels to dilate. Topical application of glyceryl trinitrate cream can also be of help by producing vasodilation.

Secondary Raynaud's requires extensive treatment of the condition by a hospital consultant. Medication, particularly intravenous iloprost, can improve vasodilation, which can be very beneficial.

A condition with similar symptoms is hand/arm vibration syndrome, sometimes called "white finger", which is an industrial disease that can lead to the sufferer being entitled to financial compensation. It is caused by exposure of the individual to vibration, particularly from the use of electric, pneumatic or hydraulic drills. Increased vibration gives rise to damage of the nerves, and leads to blanching of the fingers, tingling and numbness on exposure to cold.

Vibration white finger, if caught early, can improve with time, but can never be cured. Prevention is better than cure, and nowadays warnings are given about the length of time one should use electrical drills, and about the importance of wearing special dampening gloves at all times.

Dr Peter Julu, Specialist Autonomic Neurophysiologist, is able to measure the autonomic effects on circulation. There are thousands of valves in pre-capillaries which can be opened or shut under autonomic control, and would be varied in states of 'fight or flight' or the converse, 'rest and digest'.

New thoughts on pesticides and Parkinson's disease

For years there has been strong evidence linking pesticides and increasing risk of Parkinson's disease.

The disorder, which normally develops later in life and can affect movement and talking, is also influenced by genetic factors.

A collaborative recent study conducted in California, USA, concluded that there is a significantly increased risk of developing Parkinson's disease among people with certain genes when they are exposed to some pesticides.

An article in Epidemiology 10 November 2009 reported that the study concluded, "Human, animal and cell models support a role for pesticides in the etiology of Parkinson disease. Susceptibility to pesticides may be modified by genetic variants of xenobiotic enzymes, such as paraoxonase, that play a role in metabolizing some organophosphates."

xenobiotics: Substances foreign to the body, including drugs and some food additives.

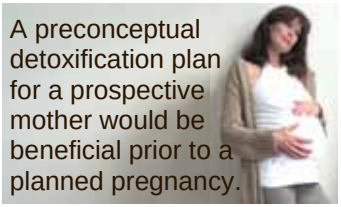
enzymes: Proteins that increase the rate of chemical reactions.

paraoxonases: A group of enzymes involved in the hydrolysis of organophosphates.

Notes on environmental obesogens

(Continued from page 1)

In 2006, scientists at the Harvard School of Public Health reported that the prevalence of obesity in infants under 6 months had risen 73% since 1980. Since the babies were given only formula or breast milk and did not get a lot of exercise, the explanation has to be related to a different factor in the environment.



A preconceptual detoxification plan for a prospective mother would be beneficial prior to a planned pregnancy.

In general, the standard view is that the calories consumed have to equal the calories used. Therefore if more calories are consumed than are burned, weight is gained. However, exposure to environmental obesogens during development and early life may be contributing to the obesity epidemic which is occurring now in babies.

The various obesogens, which can cause a predisposition to obesity, are:

- bisphenol A: a component in hard polycarbonate plastic, including that in baby bottles
- tributyltin: a pesticide used as a biocide especially in marine anti-fouling paints
- phthalates: chemicals that are present in some plastic food wraps, plastic bottles and vinyl plastics
- perfluoroalkyl compounds: substances used in stain repellents and non-stick cooking surfaces
- genistein: an oestrogen-like compound from soya
- various pesticides, such as PCBs (polychlorinated biphenyls), used primarily in the manufacture of electrical components, and DDE, the breakdown product of the pesticide DDT

It is possible to consider ways of detoxifying a person of these components. A preconceptual detoxification plan for a prospective mother would be beneficial prior to a planned pregnancy.

Another study has recently been published showing the time of day when mice eat can affect weight gain. Mice fed a high-fat diet during their normal sleeping hours gained more than twice as much weight as mice eating the same type and amount of food during their normal waking hours. It has been suggested that genes that govern the daily cycle of sleeping and waking also regulate at least 10% of the other genes in cells, including metabolic genes. The disruption in the circadian rhythm (the 24-hour biochemical, physiological or behavioural cycle) allows an alteration of metabolic rate, with fewer calories being used if the sleeping cycle is disrupted.

At this time, it is advisable to limit chemical exposure, particularly to known obesogens, during pregnancy and with newborns. With the circadian rhythm study in mind, it is also important to maintain a regular sleeping and waking cycle in order to allow the young growing body to develop a regulated metabolism.

Notes on XMRV, the retrovirus recently linked to chronic fatigue

The retrovirus XMRV (xenotropic murine leukaemia virus-related virus) has been receiving a lot of attention from the press recently.

A team at the Whittemore Peterson Institute in Reno, USA have detected this infectious retrovirus in the blood cells of American patients with chronic fatigue syndrome (CFS).

The researchers took 101 samples from CFS patients and found that 68 (67%) contained the virus. The detection was undertaken by a technique known as polymerase chain reaction. They then checked 213 samples from healthy individuals and found 8 (3.7%) contained this retrovirus. Antibodies to the virus were found in 19 of 30 blood samples from CFS patients, but none was found in 16 healthy control specimens.

The study was published after 6 months of rigorous review and 3 independent laboratory confirmations.

Having antibodies to a virus means that the patient has had the virus infection in the past or is currently fighting it.

While this news was very exciting for CFS patients (and doctors), as it gives scientific evidence of a cause for their condition and could lead to a cure, a study conducted in the UK by Dr Otto W Erlwein of Imperial College and his colleagues reported that they were unable to find XMRV in 186 CFS patients in Britain. (Their study did not test any samples taken from healthy subjects.)

There are a variety of reasons surfacing as to why the two studies had such different results. One suggestion is that the different testing methods used make the results non-comparable. There were marked differences in the way that the blood sample volumes and processing occurred, the number and type of tests done to assure accurate results (including white blood cell culture in the US study), and different primer sequences and amplification protocol used to find the virus.

Another suggestion is that there may be a population difference between North America and Europe regarding the prevalence of XMRV infection, as well as different patient criteria for the studies.

An official statement from the researchers of the American study states, "...patient samples used in the UK study may have been confused with fatigued psychiatric patients, since the UK has relegated 'CFS' patients to psychiatric care and not traditional medical practices."

The standard drugs used to treat diseases caused by retroviruses are:

- zidovudine (AZT)
- abacavir
- didanosine
- emtricitabine
- lamivudine
- stavudine
- tenofovir

AZT is known to partially control the viral effects, but long-term treatment is required.

What is a retrovirus?

A retrovirus is where a virus has crossed from monkeys to man.

These viruses carry their genetic information in RNA rather than DNA and they insert themselves into their hosts' genetic material and stay for life.

There are only a few retroviruses known to affect man, including the human immunodeficiency virus (HIV) and the simian virus (SV40).

At Breakspear Hospital, we have experience treating CFS using various methods of dealing with pathogens, including prescribing antibiotics and antivirals, as well as improving host immunity using a variety of nutritional supplements.

New thoughts on chemicals affecting children's hormones

As reported in the Daily Telegraph 15 November 2009, a State of Denmark environmental protection agency report concluded that 2-year-old children are at risk from an array of endocrine-disrupting chemicals in their everyday lives. Endocrine-disrupting chemicals are substances that act like hormones and disrupt the endocrine system's normal regulating function.

The harmful chemicals include dioxins, PVC, flame retardants, phthalates and PCBs. These chemicals are contained in waterproof clothing, rubber boots, bed linen, food and food containers, nappies, paints and sunscreen lotions.

According to the Telegraph article, research at Rotterdam's Erasmus University found that boys whose mothers were exposed to PCBs and dioxins were more likely to play with dolls and tea sets and dress up in female clothes.

The report's results build on earlier studies showing that British children have higher levels of endocrine-disrupting chemicals in their blood than their parents or grandparents.

Historically 105 boys are born for 100 girls but this ratio has recently begun to change. Recent studies have shown that on average sperm counts are falling and today more girls are being born than boys. A Canadian Indian community, hemmed in by one of the biggest chemical factories in the world, has a birth rate of twice as many girls as boys.

The Danish report concluded that current EU anti-pollution measures and regulations are falling short of preventing this damage from happening and the Danish government is planning to lobby to have the EU regulations changed.

Notes on the media-promoted super foods

Everyone knows that food is the body's energy source. Without a good supply of food, the body is unable to function as well as it should.

Acai berry juice is receiving extensive media coverage all over the world because of its antioxidant qualities. Supporters say that it dramatically improves energy levels and stamina as well as boosting metabolism, which may help in weight loss.

Apples have long made the super food lists because they are packed full of antioxidants and fibre, and low on the glycaemic index (GI), meaning that they are digested slowly and therefore are gradually absorbed into the bloodstream as glucose, causing a desirable gradual rise in blood sugar levels.

Beetroot may be soon topping athletes' super food lists as new research shows that the nitrate in beetroot juice leads to a reduction in oxygen uptake, slowing the rate at which a person becomes exhausted. According to a recent article in The Times, "Those drinking the juice can exercise for 16% longer."

Research published last year found that beetroot juice reduced blood pressure. The researchers found that in healthy volunteers blood pressure was reduced within an hour of drinking the juice.

Garlic has long been acclaimed for a variety of benefits to the body. While folklore has given garlic a reputation for preventing common colds and flu, a 1999 study found that eating half a raw clove per day may help prevent cancer. It can also be effective as a natural mosquito repellent.

Pomegranates have received a lot of coverage in the press in the last few years, as 2005 research found that they reduced harmful cholesterol in mice. In ancient times they were revered as a source of regeneration; in ancient Chinese medicine, they were considered a way to treat infertility in women.

While research continues on the benefits of various super foods, everyone's diet should be carefully balanced to achieve optimal health. Good health requires a well-balanced diet that includes plenty of fresh fruits, vegetables and adequate protein, and is low in sugar and artificial additives, although one may still require customised nutritional supplementation to supply an individual's specific requirements.

CNN interviews Dr Peter Julu on aerotoxic syndrome

In November 2009, Breakspear Hospital's Dr Peter Julu was interviewed on CNN International regarding aerotoxic syndrome. Dr Julu explained that the pilots whom he has seen are very senior pilots; they are all captains and have been flying for over 10 years; and they are all suffering from repeated toxic exposure.

Dr Julu diagnosed John Hoyte, a former pilot and founder of the Aerotoxic Association (www.aerotoxic.org), with acute traumatic brain injury and explained that repeated toxic exposure may be the problem.

For 30 years, John Hoyte dreamed of a career as a commercial pilot. After years of flying light aircraft, he then became a commercial airline pilot because he felt that flying for a commercial airline was safer and would be a better career for him and better for his new family. After changing to airline flying, he began suffering Alzheimer-like symptoms, which left him unable to fly. He then completed some blood tests which showed the presence of tricresyl phosphate (TCP), a potent neurotoxin. Jet engine oils typically contain 3% TCP.

While John Hoyte is fit to fly today after 4 years of not flying, he does not wish to fly pressurised aircraft again.

According to the Aerotoxic Association, most airliners fly at high altitude, where the air is too thin to breathe, and therefore an artificial air source is required. In most airliners this is supplied from the compressor part of the engines and is known as "bleed air". It is cooled to the required temperature and fed into the cabin.

Bleed air comes from a part of the engine which requires lubrication by a specialised synthetic oil. The oil and the bleed air are kept separate by oil seals. Seals may leak and allow oil into the air supply. This may be due to wear over time, faulty maintenance or poor design. Wet seals are used, and therefore there is always a small seepage of oil even under the best conditions.

When oil leaks into the hot bleed air, it is known as a fume event. Depending on the severity, it will be noticed in the cabin as a smell (which has been described as oily, sweaty socks, or wet dog) and a haze or smoke. Low-level background levels may be undetectable. There are no air filters between the engine and the passenger cabin.

The new Boeing 787 Dreamliner, which is a lightweight plane designed to cut fuel costs by 20%, pumps fresh cabin air from a separate source (away from the engines).

CNN's interview with Dr Peter Julu was broadcast on 12 November 2009.

EASA aircraft air quality assessment

Aerotoxic syndrome is the name given to the illness caused by the long-term effects of breathing contaminated cabin air in an aircraft.

The European Aviation Safety Agency (EASA) is currently assessing whether or not it needs to issue regulations on oil-contaminated ventilation air by analysing surveys completed by cabin crew and pilots as well as scrutinising any relevant aircraft mechanical records, airline incident reports and medical records. The completed surveys were to be submitted by 8 January 2010. More information on the assessment is posted at **www.gcaqe.org**

Breakspear Hospital's Dr Peter Julu was interviewed by a Dutch television crew from Zembla, a current affairs documentary programme, in late January 2010 about the Hospital's research into and treatment of aerotoxic syndrome.

Testing your knowledge on vitamins and nutrition

In our last online survey, instead of our usual opinion questions, we tested your knowledge on vitamins and minerals.

Which vitamin can be formed in your body from sunlight?

Answer: vitamin D

Vitamin D has received a lot of good publicity recently. Studies show that it is linked to boosting immunity, blood pressure regulation and regulating calcium and phosphate absorption and metabolism.

The best way to get adequate amounts of vitamin D is to get some sunshine. During the winter months, this is almost certainly a national problem.

Vitamin D is made in our skin as well as coming from our diet. 80% of the body's vitamin D comes from the action of UVB on the cholesterol in our skin to make vitamin D.

From the diet, it comes from only a few foods including fortified soya milk, egg yolks and some fish . Other foods with vitamin D include pink salmon, sardines, cow's milk and soya milk. (Unfortified cow's milk does not contain vitamin D.)

Vitamin supplements are also a good way of ensuring sufficient vitamin D supply.

A good source of vitamin C is…?

Answer: fruit

Vitamin C is contained in fruits and vegetables. Good sources include oranges, kiwis, peppers, broccoli, brussels sprouts and sweet potatoes.

Vitamin C supplements come in a variety of forms including chewable tablets and water-soluble powder.

For years vitamin C has been recommended to help fight colds and build immunity. Recent studies show that is also linked to lower risk of type 2 diabetes.

Your thoughts on vitamins and minerals

The results of our last survey are:

100% correctly answered vitamin D to the question "which vitamin can be formed in your body from sunlight?"

89% knew that fruit was a good source of vitamin C

78% are aware that folate is important for pregnant women, to help prevent spina bifida in the developing baby

22% thought (incorrectly) that pantothenic acid was not a vitamin

67% thought that seafood was a good source of iodine, while one reader suggested that milk, particularly goat's milk, was a better source than any of the listed answers

A Mrs X is pregnant. A routine ultrasonic examination reveals the developing baby may have spina bifida (a problem with the spinal cord). If the baby indeed has this problem, what was Mrs X lacking in her diet?

- **biotin**
- **folate**
- **selenium**
- **chromium**
- **iron**

Answer: folate

While there is no known cure for the congenital condition of spina bifida (although surgical intervention can sometimes be undertaken), nor any known way to prevent it entirely, folate has been shown to be helpful in preventing spina bifida in the developing baby.

Folate is a name given to a family or group of compounds that display a common molecular structure. Other names used are folic acid and folacin. Folic acid, the more stable form, rarely occurs in foods or the human body, but is the form most commonly used in vitamin supplements and fortified foods. Naturally occurring folates exist in many chemical forms.

Good sources of folate are whole grains, dried beans, leaf vegetables and fruits.

Folic acid capsules are available in a variety of strengths, ranging from 400 mcg to 100 mg.

Which of the following is NOT a vitamin?

- **biotin**
- **pantothenic acid**
- **selenium**
- **vitamin E**
- **vitamin K**

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Good food sources of vitamin D and iodine

Food	Serving	Vitamin D
Pink salmon, canned	85 g	13.3 mcg
Sardines, canned	85 g	5.8 mcg
Mackerel, canned	85 g	5.3 mcg
Cow's milk, fortified with vitamin D	227 ml	2.5 mcg
Soya milk, fortified with vitamin D	227 ml	2.5 mcg
Orange juice, fortified with vitamin D	227 ml	2.5 mcg

Food	Serving	Iodine
Salt (iodised)	1 g	77 mcg
Cod	85 g	99 mcg
Shrimp	85 g	35 mcg
Fish sticks	2 fish sticks	35 mcg
Milk (cow's)	227 ml	56 mcg
Kelp (seaweed)	7 g	2500 mcg

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Answer: selenium

Represented by the chemical symbol Se, selenium is a chemical element. It is required in trace amounts for cellular function in most, if not all, animals. Selenium is required for the production of a number of different enzymes, one of which is glutathione peroxidase. This is an antioxidant enzyme that helps to protect the body from toxic by-products formed (or produced) during oxygen metabolism.

Biotin is also known as vitamin H or B7. Pantothenic acid, also called vitamin B5, is a water-soluble essential nutrient.

Vitamin E is a fat-soluble antioxidant and vitamin K is a vitamin that is mostly required for blood coagulation.

Which of the following have a high amount of protein?

- **oranges**
- **bananas**
- **pecans**
- **tomatoes**
- **none of these is high in protein**

Answer: none of these is high in protein

Oranges, bananas, pecans and tomatoes all contain protein, although none of them is high in protein. For example, if you look at the Nutrition Facts on the back of a package of pecans, 109g of chopped pecans contain 10g of protein. Meanwhile 100g of chickpeas provide 19.5g of protein.

A good source of iodine is…

- **drinking water**
- **beef**
- **seafood**
- **chicken**
- **whole grains**

Answer: seafood

Iodised salt is perhaps the most common source of iodine in the Western diet. Concentrated food sources of iodine include seafood, seaweed, milk, potatoes with skin and baked beans.

Iodine has important metabolic effects, working through the thyroid, and is also present in other tissues and organs in the body.

Iodine deficiency is the most common cause of preventable mental impairment worldwide.

Visit *www.breakspearmedical. com/survey* to give us your thoughts on energy saving light bulbs.

Did you know…?

At least 9 out of 10 British 16-year-olds have their own handset, as do more than 2 out of 5 primary schoolchildren.

- Telegraph 21 September 2008

Controlling cell phone use in young people is a necessity

Dr George L Carlo of the Science and Public Policy Institute, Washington, DC, recently released a statement that warns, "Controlling cell phone use in young people is not a choice. It is an urgent necessity."

Dr Carlo has stated that the evidence provided by controlled experiments of mobile phone related behavioural anomalies, learning difficulties, and stunted social development are all alarming. He also has been quoted as saying, "... we know that cell phone infrastructure is playing a role in the current autism epidemic."

Dr Carlo also calls attention to Professor Lennart Hardell of the University Hospital in Orebro, Sweden, who told a conference in 2008 that the risk of a cancer in the cells which support the central nervous system is dramatically increased in people who start using mobiles before the age of 20.

Professor Hardell believes children under 12 should be banned from using mobiles except in emergencies.

In 2001, Dr Carlo published his earlier warnings about mobile phones in a book, co-authored by Martin Schram, entitled Invisible Hazards in the Wireless Age. The book explains the concerns about children being more susceptible to radiation damage than adults because of their active brain development, exposed DNA and deeper penetration of electro-magnetic radiation in their smaller heads.

Antioxidants and children with coeliac disease

A study at the Vinca Institute of Nuclear Sciences, University of Belgrade, Serbia, concluded that oxidative stress is an important factor in the development of coeliac disease.

Coeliac disease is caused by a reaction to gluten, which is found in wheat, barley, rye and other grains. It can cause symptoms such as chronic diarrhoea, fatigue, and headaches. In children, it often causes a failure to thrive.

The researchers examined data collected from 39 children with coeliac disease and 19 healthy controls. They found that the antioxidant capacity of coeliac patients is significantly reduced, mostly by a depletion of glutathione, which is an important antioxidant.

The study concluded that natural antioxidants and appropriate dietary supplements could be important complements to the classic therapy of coeliac disease, which is a completely gluten-free diet.

Canada changed its standard flu vaccine policy due to swine flu

In November 2009, it was reported by Canada Free Press that some Canadian provinces had suspended standard seasonal flu vaccinations for anyone under 65 in response to a recent study that suggests that people who are vaccinated against seasonal flu are actually more likely to catch swine flu.

While some other provinces are still formulating a response to the research, "some provinces are still recommending co-administration of both vaccines in as little as 60 days."

In December 2009, it was reported that 800,000 swine flu vaccines for young children were recalled in Canada because tests indicated the vaccine doses had lost some strength, government health officials said. The pre-filled syringes were made by Sanofi Pasteur.

Available at our Pharmacy

Shop online for your nutritional products:

www.breakspearmedical.com/shop

The Breakspear Pharmacy Online is now live! That means UK patients and practitioners who have accounts with us can register and order from our website.

Ordering online gives you the freedom to place and securely pay for your orders any time of any day or night!

Introductory offer: free postage and handling for all orders placed and paid for online.*

* Free postage and handling applies only to mainland UK orders placed and paid for online and does not apply to orders placed in person, by fax or over the phone. Offer expires 30 June 2010.

Study links co-enzyme Q10 deficiency and CFS/ME

Chronic fatigue syndrome and myalgic encephalomyelitis (CFS/ME) is a debilitating disorder that is generally defined by persistent fatigue, which is not relieved by rest, that continues over a period of 6 months or more.

This condition is characterised by disorders in inflammatory and oxidative and nitrosative stress (IO&NS) pathways. IO&NS pathways are the complex series of biochemical reactions which lead to harmful free radical and nitric oxide effects on the body at the cellular level.

IO&NS pathways may be caused by a number of trigger factors such as psychological stress, strenuous exercise, viral infections and leaky gut.

The results of a recent study at the Maes Clinics, Antwerp were published in Neuroendocrinology Letters in 2009. This explained the function of co-enzyme Q10 (CoQ10) and its essential role in treating CFS/ME by addressing the IO&NS.

CoQ10's primary function is to generate energy for the body. CoQ10 acts as an antioxidant and has been used as a dietary supplement to help with a variety of other conditions such as high blood pressure, heart failure and migraines.

CoQ10 acts as an antioxidant and has been used as a dietary supplement to help with a variety of other conditions such as high blood pressure, heart failure and migraines.

The study investigated 58 patients with CFS/ME and 22 normal controls and it found that plasma CoQ10 was significantly lower in CFS/ME patients than in the normal controls. Up to 44.8% of the patients with CFS/ME had values beneath the lowest plasma CoQ10 value detected in the normal controls.

It was also found that patients with very low CoQ10 suffered significantly more from concentration and memory disturbances.

The study concluded that CoQ10 plays a role in the pathophysiology of CFS/ME and that the symptoms, such as fatigue, autonomic and neurocognitive symptoms, may be caused by CoQ10 depletion.

How to support Breakspear Hospital Trust ...without it costing you a penny!

Once again, Breakspear Medical Group is offering to pay £2 to Breakspear Hospital Trust for each person who signs up to receive the Breakspear Medical Bulletin by email instead of by post.

All you have to do to ensure £2 is donated to the Trust is email Ljenkins@breakspearmedical.com with the subject heading "Support Breakspear Hospital Trust and save the environment" and we'll take you off the Bulletin mailing list and put you on our email list.

(Isn't that easy?)

Last year, over £134 was raised for the Trust by people signing up for emailed Bulletins.

Tell your story to help others

Sharing your experience may help other people find the help that they need.

Frequently Breakspear Hospital receives emails and blogsite comments from people who have found our website and want to hear about current and former patients who have similar conditions and received successful treatment.

If you suffer, or have suffered, from Lyme disease, chronic fatigue syndrome or came to Breakspear Hospital with a variety of symptoms that had not been diagnosed elsewhere, we would like to hear about your experience on the road to recovery.

If you are interested in writing about your experience, please contact the editor, Carolyn Northcote Monro, by email: cmonro@breakspearmedical.com and she will help you with some basic tips on getting started by providing a form. (Or pick up a form at Reception.) We are requesting stories up to 1500 words and will publish your story anonymously, if you wish. (Your contact details will not be shared with anyone.)

In early 2009, Sarah Mills submitted an open letter to Breakspear Hospital Trust, which was published in the Breakspear Medical Bulletin, describing how she received treatment for her myalgic encephalomyelitis (ME). She went on to study at university, which she does not feel that she would have been able to do without the treatment at Breakspear Hospital.


How Breakspear Hospital Trust helped me

Bulletin board

About the staff Christmas parties

On December 16 2009, the staff at Breakspear Hospital enjoyed a Christmas lunch at the Hospital and many people participated in a Secret Santa present exchange.

Due to the December snow storms, the (after work) Christmas dinner and dance was postponed due to poor driving conditions and further forecast snow. The event, at Whipsnade Zoo, was held on 22 January 2010 and thoroughly enjoyed by all who attended.

Noah sailed in 2 January 2010

While most of the Breakspear Hospital staff were starting to think about returning to work after the holidays, Dr Daniel Goyal and his wife, Fatma, welcomed their son, Noah Goyal-Mansab, into the world on 2 January 2010 in Oxford. Noah weighed 6 pounds 2 ounces.

Give us your thoughts on energy saving light bulbs by visiting *www.breakspearmedical. com/survey*