

# Breakspear Medical Bulletin

Breakspear Hospital, Issue 21

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## Notes on children and allergies in the UK

An estimated 30% of the UK's population suffers from one or more allergies at some time in their lives.

Dr Christabelle Yeoh

The UK population has the highest prevalence of allergies in Europe and this ranks amongst the highest in the world. As many as half of those affected are children and each year these numbers are increasing.

Over the last 20 years, asthma has become the commonest chronic childhood disease in the Western world. In the UK, 1 in 11 children is currently prescribed an inhaler and steroids as treatment for asthma. Exposure to indoor environmental allergens (substances in air, food and water that cause allergic reactions) plays a large role in



the development of this potentially fatal, recurring inflammation of the lungs.

1 in 70 children also has severe peanut allergy. 5-7% of infants have significant acute food allergy. There has been a 117% increase in peanut allergies observed from 2001 to 2005, such that an estimated 25,700 people in England are affected.

Childhood eczema is usually an allergic disorder. A recent study in Denmark showed that the risk of eczema in children under 3 years of age was significantly increased by a parental history of atopy (allergy). Of infants born

*(Continued on page 4)*

## Introducing Dr Daniel Goyal

Dr Daniel Goyal MBChB, DTM&H joined our Clinical Team in Spring 2009.

Dr Goyal studied at the Aberdeen Medical School and brings a useful array of skills and experiences. He has come to understand and appreciate the importance of nutritional and environmental medicine since his work as a Specialist Registrar in Occupational Medicine.

Dr Goyal has been involved with

international health issues for several years and this lead him to take a tropical medicine and hygiene diploma course that focussed on both field medicine and international public health.

Dr Goyal works with a number of charities, including one which concentrates on the development of health interventions for target populations.

His academic interest is in the physical causes of mental illness.

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## On the market: positive health programmes: screening

Most current health screen tests are designed to identify specific illnesses. For example, a chest x-ray and an electrocardiogram are performed to show heart disease in process.

At Breakspear Hospital, we believe that health screening should be predictive and not necessarily just a static test which is structured. To this end, we have put together a group of tests for well men and well women which encompass not only identification of historical and current pathologies, but focus quite intensely on predictive investigations.

Our positive health programmes include advice about diet and lifestyle to restore health and wellbeing.

A consultation and examination will precede any investigations. The environmental physician will identify an individual's risks based on family history, toxic exposure and systematic enquiry, together with the results of our standard health investigations. The physician will then provide more specific advice and information on suggested interventions to the individual patient. Thereafter, specific programmes can be applied for particular purposes.

Genetic and environmental components, nature

and nurture, and lifestyle all play a part in everyone's health and illness.

The lifestyle element of wellbeing, which is a key factor in health and illness, includes diet. In today's fast-paced, Western lifestyle, our diet is often not conducive to good health. In our

desire to make life easier, many people are choosing fast, ready-made meals, which may lead to obesity, diabetes, heart disease and hypertension.

Western life has emphasis on thought and mental activity, which is linked to high mental stress. More and more people are sitting at desks and working with computers instead of performing physical labour, which our ancestors did. When sedentary habits are taken to the extreme,

depression, exhaustion or burn-out can take their toll on biochemical balance.

In our everyday lives, we absorb numerous chemicals intentionally or unintentionally. From cigarettes or car fumes to pesticides, some 70,000 unnatural chemicals have been introduced into our environment in the last 50 years. Each of these calls on our body's resources to be detoxified and cleared. Despite the human body's outstanding capacity for growth and repair, toxins can accumulate and poison.

Increasingly we can no longer rely on "a good diet" to provide all the resources needed to deal with these toxic encounters, which can provoke disease. To avoid becoming ill, we need to reduce the burden on our bodies by avoiding the toxins and utilise "supernutrition".

While we cannot change genes, by using a predictive positive health screening, we can predict areas of predisposition to disease, advise on how to modify lifestyle habits that may reduce the load of chemicals and other toxins, and outline a nutritional plan, which may include supplements, to ensure that any nutritional deficiencies are addressed.

*More information about Breakspear Hospital's new Positive Health Programmes: Screening is available upon request.*



Genetic and environmental components, nature and nurture, and lifestyle all play a part in everyone's health and illness.

### Breakspear Medical Bulletin

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## Ask Dr Christabelle Yeoh

**I am concerned about the potential epidemic of flu. Is there anything I can do to avoid getting it?**

Many patients have been asking how they can protect themselves from swine flu. With the amount of press coverage this flu epidemic has been getting, it is understandable that people are concerned.

One should always be aware of the risks of flu and know how to protect oneself from the severe effects of it.

It cannot be too highly stressed how important basic lifestyle is in affecting our immune function. A healthy way of life includes a fresh, wholefood diet, which is low in sugar, sufficient and good quality sleep, and effective strategies for stress management.

Meeting basic micronutrient requirements is important and can be ensured with a high quality diet supplemented with vitamins and minerals. However, when there are signs of impending illness, or over a high-risk period such as travelling, various supplements may be recommended by your doctor to increase your immune-boosting nutrients. Remember that it is the body's natural immune system which fights viruses; nutritional supplements are simply helping the efficiency of the immune system.

Some supplements which may be recommended in times of viral infections include: medicinal mushrooms, echinacea, inositol, zinc, vitamin A and vitamin C.

Medicinal mushrooms, such as Maitake, Coriolus and Reishi, contain beta glucans, which have been widely researched and shown to activate phagocytosis (which helps remove pathogens and cell debris) and enhance natural killer (NK) cell activity.

Echinacea is a well known supplement which also helps fight off illnesses. Among the active constituents in echinacea are arabinogalactans, which activate macrophages (white blood cells within tissues that help initiate defence mechanisms) and stimulate NK cells.

Inositol is a compound found in high-bran cereals. It is needed for effective cellular signalling between the cells of the innate

immune system, which also improves NK function.

Zinc is found highly concentrated in the white cells, which fight infections. Studies have shown that zinc has an inhibitory effect on viral cell replication and enhances the mucosal cells' ability to fight infections.

**Flu is very contagious and can affect all sorts of people. However, the biggest concern is when it spreads widely and affects the more vulnerable people.**

Vitamin A has been shown in numerous clinical trials to reduce severe morbidity and mortality from infectious diseases among children who have acute measles. High doses of vitamin A should not be taken continuously, as

there is a risk of vitamin A toxicity.

Large doses of vitamin C are recommended with any onset of viral illness. Depending on gut tolerance (too much will cause diarrhoea), taking up to 10g a day will limit the infection and reverse it quickly. For best results, the dose should be spread throughout the day.

Other helpful supplements include folic acid, olive leaf extract, garlic, vitamin D and colostrum.

Flu is very contagious and can affect all sorts of people. However, the biggest concern is when it spreads widely and affects the more vulnerable people.

For most people, flu is a mild, albeit inconvenient, self-limiting disease. However, in vulnerable groups, the condition can potentially be serious. These groups include: babies, young children, the elderly and those with varying immune dysfunction. The young are more susceptible because they have not yet developed natural immunity to flu. The elderly have a higher risk of complications such as pneumonia and underlying illnesses, which weaken them. The other high risk group includes those with varying immune dysfunction, which makes them more vulnerable. Patients with chronic fatigue are therefore more susceptible and catching the flu often causes relapse of function.

Concern should apply to every flu season and not just swine flu. A healthy diet, including nutritional supplements, plenty of sleep and reduced stress will help everyone fight off infection.



## Notes on children and allergies in the UK

(Continued from page 1)

to mothers with asthma, 43.5% developed eczema.

Despite the known links between eczema and allergy, a recent study from Great Ormond Street showed that results from standard allergy testing (skin prick) did not correlate well with the clinical history of allergies. More than two-thirds of the children in the study with eczema and allergy had high IgE blood levels. High levels of IgE confirm that the child is indeed allergic; however the standard allergy test was not sensitive enough to indicate that allergies were present.

At Breakspear Hospital, allergy testing using the Modified Miller method of testing is used. This method uses varying low dilutions of the allergen, given by mouth or by injection just under the skin. This is a much more sensitive way of finding out the degree to which an individual may react to a food or inhalant allergen. Once it is known what dose (dilution) of allergen is tolerated by the individual, this can be used as treatment in order to encourage immune tolerance of the allergen. This form of low-dose immunotherapy is a safe and effective allergy treatment which addresses the underlying cause and can be administered at home.

The composition of intestinal microflora (gut bacteria) is different in individuals with atopic eczema from those without it. There are several studies showing significant reduction in eczema in infants with the use of *Lactobacillus rhamnosus* GG probiotic supplements. (These dietary supplements help to provide a defence against harmful bacteria in the gut.) Allergic children have been shown to have different faecal microflora, with fewer *Lactobacilli* and *Bifidobacteria* and more *Clostridia*, particularly in bottle-fed infants. A recent study from Finland showed that probiotic supplements given to the

Studies show that persistent inattention, hyperactivity and impulsivity are all strongly associated with allergic conditions.



### Common symptoms of allergy/sensitivity in children

- Attention deficit
- Asthma
- Bed wetting
- Diarrhoea or constipation
- Difficult behaviour
- Eczema
- Hives or itchiness
- Poor concentration
- Recurrent ear infections
- Runny nose
- Skin rash
- Sleepiness/poor sleep

mothers during pregnancy and babies born by Caesarean section significantly reduced IgE-associated allergic diseases such as eczema, food allergy, allergic rhinitis and asthma.

Part of the significant rise in allergic disorders in children is thought to be due to the way childhood vaccinations are carried out (see *New thoughts on delaying early immunisations to reduce risk of childhood asthma* on page 7). Many observational studies point to the increased vaccine schedule being associated with increasing asthma and allergic responses. This has been disputed and there are indeed strong arguments for being immunised. However, the time schedule in which the vaccine is given

appears to be a crucial factor.

Studies show that persistent inattention, hyperactivity and impulsivity are all strongly associated with allergic conditions. This is not surprising, given the known effects of food colourings/preservatives on children's behaviour and the known effects of foods in allergic conditions. Food intolerance can produce a wide spectrum of reactions, ranging from acute hives to sleeplessness.

Overall, this may represent one

or more food sensitivities or allergies causing significant poor health in a child with hyperactivity or attention deficiency.

A recent review of nutritional and dietary influences on attention deficit hyperactivity disorder (ADHD) showed most treatment benefit by addressing the diet and from the use of omega 3 fatty acid supplements. Many children may not be diagnosed as having ADHD if the symptoms are mild, but it being a spectrum condition, any child with poor sleep, poor concentration and difficult behaviour may be having problems with food sensitivities. An example of a common allergen in infancy is cow's milk protein; some children tolerate goat's milk or hydrolysed milk formulas better.

A study from Southampton looking at 1,873 children also showed that ingestion of artificial

## New thoughts on severe headaches, weather and air pollution



A recent American study suggests that a hot day increases migraine sufferers' risk of an attack the following day. This study was reported in a variety of international newspapers and magazines in Spring 2009.

The study concluded that higher ambient temperature and, to a lesser degree, lower barometric pressure led to a transient increase in risk of headaches requiring Accident and Emergency evaluation. The study did not find clear association of air pollutants with risk;



however, the researchers claimed they could not exclude the effects of air pollution of the magnitude previously observed on stroke and other cardiovascular events.

Migraine and other headache syndromes represent an enormous source of morbidity, particularly among young and middle-aged adults.

The research involved a case-crossover study of 7,054 patients at an academic hospital in Boston, Massachusetts.

food colourings and preservatives significantly increased hyperactive behaviour in 3 year olds. Therefore the diet should be assessed in detail and certain restrictions made in order to treat the underlying cause, rather than using drugs such as Ritalin, which is a commonly prescribed amphetamine for this condition when it gets severe. At Breakspear Hospital, we find the use of low-dose immunotherapy (given sublingually in children) is also very effective for treating disruptive behaviour which is due to food intolerances, particularly where a restrictive diet is not easily managed either in school or at home.

In those children who are predisposed to allergic conditions, altered immune responses occur not only to foods and airborne allergens but can also occur with chemicals. This includes environmental toxins such as pesticides but also commonly used chemicals, such as chlorine, and medication such as paracetamol.

A study of 847 school children in Belgium showed that children who swam regularly had increased risk of asthma. This risk was increased by 4-8 times, depending on the number of hours spent swimming in chlorinated pools. The researchers also found that those who had swum in a chlorinated pool before the age of seven were more likely to be allergic to cats or dust mites than those who had not done so at such a young age. However, children who swam in pools sanitised by copper and silver

showed no increased risk of asthma, suggesting the chemical chlorine was responsible for the effect.

An interesting study, published in the Lancet last year, looking at 205,487 children across the world, found that the use of paracetamol for fever in the first year of life was associated with a direct correlation with asthma symptoms. Use of paracetamol for many and varied reasons, both in the first year of life and in children aged 6-7 years, was also associated with an increased risk of allergic rhinitis (hayfever), conjunctivitis (pink eye) and eczema. Compared to no use of paracetamol in the first year of life, medium use (taken once over 12 months) and high use (taken once a month over 12 months), the risks were increased by one and a half times to over three times.

The results of this study are very important because many believe giving children paracetamol is harmless. It is very well tolerated and widely used, but it is known that paracetamol uses up glutathione for its clearance. Therefore if a child is genetically predisposed, has low glutathione status, or poor nutritional status, using paracetamol unnecessarily may increase the risk of allergies and neuro-behavioural problems.

At Breakspear Hospital, we recommend good nutrition and avoidance of chemicals where possible for children and adults with allergy/sensitivities.

*For tips to help sensitive people and their families to improve their health by making effective changes to their living space, ask Reception for our booklet "Breakspear Hospital's guide to improving your home environment".*

*For more help managing allergy/sensitivity, book a consultation with one of our doctors who may recommend low-dose immunotherapy.*

*Our Nutritional Consultant, Ron Leon, is available to devise tailor-made nutritional programmes; contact Reception to book an appointment.*

## Notes on taking control of tuberculosis

In June 2009, the Laboratory News ran a story "Taking Control of Tuberculosis". Some of the facts published in the article are as follows:

- Tuberculosis (TB) is second only to HIV as the world's deadliest infectious disease, claiming a life every 20 seconds.
- While the worldwide TB rates are stabilising, the UK has seen a 2% increase.
- Much of the antibiotic resistance observed among TB strains is multi-drug resistance (MDR), showing resistance toward at least two first-line treatment drugs.
- There is a strong connection between HIV and TB; a third of all HIV/AIDS sufferers worldwide are co-infected with TB.
- Optimal TB management requires 1) rapid detection 2) treatment and 3) prevention.

**Tuberculosis (TB):** a common and often deadly infectious disease caused by mycobacteria, which usually attacks the lungs, causing a chronic cough, fever, sweat and weight loss. The bacillus Calmette-Guérin (BCG) vaccine provides immunisation\*.

Currently the methods used to diagnosis TB patients involve a process of cultivating a sample in a laboratory, which means that, due to the slow growth rate of the TB organism, the results are not available for weeks or, in some cases, months. This leads to a delay in applying the correct, most effective treatment, a greater risk of misdiagnosis, treatment and expense while waiting for the test results, and also increased risk of unknowingly exposing others to the disease.

The good news is that there is now a new faster way of diagnosing TB using the Cepheid GeneXpert System, a leading molecular testing platform. This new testing method uses a special assay, which is essentially a biotech laboratory in a small plastic cartridge. The test automatically and accurately tells doctors whether a patient's lung or throat sample contains drug-resistant or drug-susceptible Mycobacterium tuberculosis in less than 2 hours.

A new test is now available in Europe and because the test procedures are so simple, it is possible to run it on demand for patients who are suspected of having a TB infection. By having faster, accurate results, proper treatment can begin the same day and immediate action can be taken to prevent the spread of the disease from the patient to family members and others.

This new test was developed jointly by Cepheid, the Foundation for Innovative New Diagnostics (FIND), the University of Medicine and Dentistry of New Jersey (UMDNJ) and the US-national National Institute of Allergy and Infectious Diseases (NIAID).

\* Breakspear Hospital's Immunisation Department 01442 867 280 offers BCG vaccinations for babies, children and adults, to protect against TB, for £50 (Breakspear Medical Group reserves the right to alter prices without notice). A skin test to determine past or present TB infection, called the Mantoux test, is also available.

## Your thoughts on the effects of aircraft on health

The following figures are the results of our latest on-line survey:

- 44% live within 10 miles of an airport.
- Of those who do live close to an airport, 43% feel that the aircraft noise interrupts their sleep or concentration.
- 63% travel 1 to 3 times per year. On average, the majority of these flights were over 7 hours long.



- Of the 86% who experienced one or more airline sickness symptoms, 56% complained of headaches, 44% of drowsiness, 44% of respiratory problems and 25% of nausea/light headedness.
- 62% were aware that they had been on a commercial flight while it was sprayed with pesticides, including the passenger cabin. Of those who were subjected to pesticides, only 20% recall being informed which pesticide was being used.

# New thoughts on delaying early immunisations to reduce risk of childhood asthma



**Asthma is a recurring inflammation of the lungs in which the airways are reversibly narrowed, causing difficulty in breathing. If untreated during an attack, asthma can be fatal.**

For some time there has been controversy over whether or not early childhood immunisations are promoters of asthma development.

It has been suspected that these early immunisations may be shifting the balance between Th1 (a protective T-cell immune response) and Th2 (an "allergic" T-cell immune response) immunity or perhaps are stimulating a Th2-type immune response, which creates an allergic immune environment.

A Canadian study was conducted to investigate whether differing the time schedules for childhood immunisations would explain the discrepant finding of an association with asthma.

The retrospective study examined health care records of children born in Canada from birth until the age of 7 and adjusted the odds ratio for asthma at 7 years according to the timing of the DPT immunisation.

Of the 11,531 children in the study who received at least 4 doses of DPT, it was found that the risk of asthma was reduced by half in children whose first dose of DPT was delayed by more than 2 months.

Of the 5,000 babies who had the vaccination at the scheduled age, 13.8% developed asthma. However, only 5.9% of babies who were 4 months or older at their first immunisation went on to develop asthma.

It was found that children with more siblings were less likely to develop asthma; children with no siblings had an asthma rate of 15.4%, children with 2 siblings had an asthma rate of 10.4% and children with 4 siblings had an asthma rate of 8.0%.

The study concluded that the mechanism for this phenomenon requires further research.



## According to [www.asthma.org.uk](http://www.asthma.org.uk):

- The UK has the highest prevalence of severe wheeze in children aged 13–14 years worldwide.
- One in 11 children has asthma and it is the most common long-term medical condition.
- On average there are 2 children with asthma in every classroom in the UK.

### Abbreviations for routine childhood immunisation programme 2009:

**DTaP:** diphtheria, tetanus, acellular pertussis

**IPV:** inactivated poliovirus vaccine

**Hib:** Haemophilus influenzae type b conjugate vaccine

**MenC:** meningitis C

**PCV:** pneumococcal conjugate vaccine

**MMR:** combined measles, mumps and rubella vaccine\*

**HPV:** human papilloma virus (recommended for girls aged 12 and older)

**T:** tetanus

**BCG:** tuberculosis

**Hep B:** hepatitis B

**Varicella:** chickenpox

\* Breakspear Hospital offers these vaccines only separately. See Bulletin Board on page 12 for a separate mumps vaccine shortage update.

## New thoughts on milk helping to fight heart disease

A new study has found that a pint of milk a day greatly reduces the risk of developing heart disease and suffering a stroke as well as reducing the incidence of diabetes and colon cancer.

The researchers found that people who drank about a pint of milk a day had a greatly reduced chance (around 15 to 20%) of contracting cardiovascular disease.

The study at the University of Reading and University of Cardiff analysed more than 324 studies from around the world, which covered health and milk consumption in thousands of people.

According to Professor Ian Givens, a nutritionist

at the University of Reading and co-author of the study, consumption of red meat and milk has reduced in the UK over the last 50 years. In the UK there is an increasing risk of chronic disease as a result of obesity and an ever-ageing population, so it is important that risks and benefits with different foods are understood.



The researchers found that people who drank about a pint of milk a day had a greatly reduced chance (around 15 to 20%) of contracting cardiovascular disease.

The results of the meta-analysis in this study provide evidence of an overall survival advantage from the consumption of milk.

For many years, milk has been receiving bad press. However, the results of this study may reverse the commonly held view that milk is unhealthy.

## Just to let you know what's cooking in the Breakspear kitchen...

Breakspear Hospital is pleased to announce that beginning in August 2009, a new, predominantly organic lunch menu has been introduced which offers side dishes and desserts for as little as £2 each. We still offer our 3-course meal deal for £12.50, which includes a salad, main course and dessert.

## Linking REM sleep deprivation and immunity

Sleep deprivation is a major health problem in modern society. For some time it has been known that deprivation of rapid eye movement (REM) sleep is particularly damaging to cognition and to spatial memory.

A recent study compiled data which linked REM sleep deprivation and inflammation.

REM sleep involves rapid eye movement, low muscle tone and irregular breathing and heart rates. This type of sleep usually occurs during 4 or 5 periods during a normal night of sleep and these are quite short periods at the beginning and longer toward the end. It is often the stage of sleep where vivid dreams occur.



Adults typically spend 20-25% of total sleep time in REM sleep while newborn babies spend more than 80% of total sleep time in REM.

The recent study, published in the Journal of Interferon & Cytokine Research, linking REM sleep deprivation and inflammation, studied rats which were subjected to 72 hours of REM sleep deprivation. Various measures of inflammatory markers were taken after the deprivation period and 7 days later and on a control group of rats (ones that had not been sleep-deprived). The results indicate that inflammatory markers were significantly elevated in sleep-deprived rats as compared to control rats.

After 7 days of recovery, some markers remained higher in sleep-deprived rats.



# Mobile phones and behavioural problems in children



There is no denying that mobile phones are used extensively by people of all ages all over the UK.

Numerous reviews, including one from the World Health Organisation (WHO), have stressed the need for studies in children and the cognitive effects of mobile phones and radiofrequency fields (RF).

- 92% of the respondents to Breakspear Medical Bulletin's mobile phone survey use mobiles.
- According to an article in the Guardian 13 July 2009, "99% of teenagers have a mobile phone".

Concerns have been raised in regard to exposure to mobile phones during pregnancy and also after birth.

A study published in *Epidemiology* July 2008 concluded that exposure to mobile phones prenatally and, to a lesser degree, postnatally, were associated with behaviour difficulties such as conduct, emotional and/or hyperactivity problems as well as problems with peers around the age of school entry. These associations may be non-causal, although associations remained after adjustment, and may be due to unmeasured confounding.

The study looked at questionnaires completed by mothers of 13,159 children in a Danish National Birth Cohort study about their use of mobile phones during pregnancy and also their general mobile phone use until the child was 7 years old. Greater odds ratios for behavioural problems were observed for children who had possible prenatal or postnatal exposure to mobile phone use.

The researchers found the results of the study unexpected. The data were adjusted for factors such as a mother's psychiatric problems and socio-economic factors. The other suggested explanations included lack of attention given to a child by mothers who are frequent users of mobile phones. The researchers concluded that there were no known biological mechanisms to explain the associations.

The researchers also concluded that a foetus is not likely to receive extreme exposure to radiofrequency fields through a mother's cell phone use. However, they added that research has shown that children using cell phones are exposed to more radiofrequency energy than adults, because their ears and brains are smaller.

Another study, conducted in Sweden, concluded that young people who often use their mobile phone to text or call friends were more likely to have trouble

sleeping than those who use their mobile moderately.

As a consequence of frequent texting, teenagers feel more tired during the day and drink more caffeine to help them



stay awake. They experience difficulties falling asleep and suffer from more disruptive sleep patterns when they do sleep. Apparently the teens feel pressure to be in contact with their peers and this stress leads them to start smoking or drinking, the team behind the research warned.

Dr Gaby Badre, who led the Swedish study, said that getting a good night's sleep was extremely important for young people and they should be made more aware that excessive mobile phone use can bring with it serious health risks as well as attention problems and trouble sleeping.

*(See article, Linking REM sleep deprivation and immunity on page 8 for evidence linking poor sleeping patterns to lowered immunity.)*

Mobile phones are part of our modern lifestyle and usage is probably going to continue to increase. However, more research should be conducted into potential health effects and how any risks can be reduced.

## Did you know...?

### Self-diagnosed multiple chemical sensitivity study

According to a recent Danish study reported on the National Centre for Biotechnology Information website May 2009, "Despite the lack of formal diagnostic labelling the patient with multiple chemical sensitivity (MCS) is well known by general practitioners (GPs)".



"The majority of the GPs believe that MCS primarily has a multi-factorial explanation" concluded the study, which involved questionnaires completed by 691 GPs.

The study found that within the previous year, 62.4% of the GPs had been consulted by at least one self-reported MCS patient. Of the questioned GPs, 73.5% referred these patients to other medical specialties.

### Study finds carcinogens in personal care products



In June 2009 an Environmental Protection Agency (EPA) follow-up study was released that assessed levels of the petrochemical carcinogen 1,4-dioxane (often just called dioxane) in leading conventional as well as "natural" and "organic" brands of personal care and household cleaning products.

Dioxane is a clear, colourless compound that is known as an eye and respiratory tract irritant and is suspected of causing damage to the central nervous system, liver and kidneys, as well as having been listed since the 1980s as a chemical known to cause cancer.

The study results indicate significant reduction in the dangerous levels of dioxane for 23 products from 16 major brands that had formerly been found to contain potentially dangerous levels in a similar study held in March 2008.

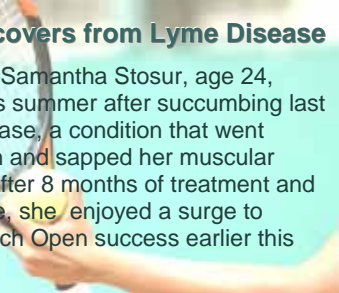
The study found some leading brands with products testing at the highest levels for the carcinogen dioxane were Palmolive and Head & Shoulders, which had the highest levels of the carcinogen at an alarming 204 parts per million. This is 10 times higher than any other product's current results in the study.

The EPA considers 0.03mg/kg/day safe to consume orally.

Along with it being detected in children's products, there is concern about the low-level inhalation by workers in the production factories, concentration in waste sites and drinking water.

### Top tennis player recovers from Lyme Disease

Australian tennis player, Samantha Stosur, age 24, played at Wimbledon this summer after succumbing last September to Lyme disease, a condition that went undiagnosed for a month and sapped her muscular body of all its strength. After 8 months of treatment and a recovery fitness regime, she enjoyed a surge to No.18 following her French Open success earlier this year.



### IDSA reviewing 2006 Lyme disease treatment guidelines

In May 2008, the Infectious Diseases Society of America (IDSA) agreed to have an independent panel review their 2006 Lyme disease treatment guidelines to determine whether they need to be revised or not. The agreement was part of a settlement reached when Attorney General of Connecticut, Richard Blumenthal, called for an antitrust investigation into the writing process of these IDSA treatment guidelines.

Although review of guidelines is a normal part of IDSA procedure, this is the first time it has been legally ordered to invite an independent panel of doctors and scientists to conduct the review.

The Association of American Physicians and Surgeons (AAPS), which represents physicians and surgeons in small practices, called for the IDSA Lyme Guidelines to be revised "to recognize that the physician must retain full flexibility in the diagnosis and treatment of Lyme disease". The AAPS objects to "any curtailment of individualized treatment of patients by competent physicians, and no Guidelines should be adopted that infringe on such treatment".

The public input period was extended to 24 April 2009 and the Review Panel held an open public hearing 30 July 2009 in Washington, DC.

## New at our Pharmacy

As many of you know, Breakspear Pharmacy staff have been providing nutritional supplements to Breakspear Hospital's patients and practitioners for many years by taking orders in person, by phone, fax or letter.



### We are now just about to launch our new On-line Services Pharmacy shop!

Later this year, you will be able to visit [www.breakspearmedical.com/shop](http://www.breakspearmedical.com/shop), register as a patient/practitioner<sup>1</sup> and view our available nutritional supplements, which are specially priced for Breakspear patients and practitioners!

### Pharmacy ordering soon to be made easier

The new On-Line Services were designed to be uncomplicated and make processing your order easier because it gives you the freedom to place and pay for your orders any time of any day or night.

Simply go to [www.breakspearmedical.com/shop](http://www.breakspearmedical.com/shop), select the Pharmacy shop category, search for your desired products and add the items you want to your cart and then proceed through the checkout. You will be able to pay for your purchases by debit card, Visa or MasterCard using our secure on-line banking services

To pre-register and receive notification of the go-live date, drop a line to [cmonro@breakspearmedical.com](mailto:cmonro@breakspearmedical.com) with your full name, billing/delivery address, email address and contact telephone number.

All prices are displayed on-line exclusive of VAT, where applicable.

VAT and postage and handling will be added at the checkout.

Stock items will be dispatched within 48 hours of the order being processed.

Breakspear Hospital reserves the right to alter prices without notice.

1. To register as a patient or practitioner for our On-line Services, you must provide personal information which will be stored securely and cross-referenced with Breakspear Accounts records before your registration is complete. We strive to process all patient and practitioner registration applications within 3 business days.

## New thoughts on autism link to parents' autoimmune disease

A new study, published in the July 2009 online edition of *Pediatrics*, concluded that children of mothers who have autoimmune diseases such as type 1 diabetes, rheumatoid arthritis and coeliac disease have up to a three times greater risk of autism.

There have been previous studies linking autism and a maternal history of type 1 diabetes and rheumatoid arthritis. However, this study's researchers say that theirs is the first to find a link between autism and coeliac disease. Coeliac disease is described as an intolerance of gluten, a protein which is found in wheat, rye, oats, barley and other grains.

William W Eaton, chairman of the Department of Mental Health at the Bloomberg School of Public Health at Johns Hopkins University, stated that children who are born underweight or premature are at higher risk of autism, and both of these obstetric problems are associated with coeliac disease.

The study team examined data on 3,325



Danish children with autism who were born between 1993 and 2004.

The conclusions that were made showed that there was an increased risk that autoimmune diseases contribute to autism but that it is not a huge risk. Mr Eaton stated, "The increased risk for type 1 diabetes is a little less than 2 times, for rheumatoid arthritis it's about 1.5 times and for coeliac disease it's more than 3 times."

Dr Hjortis O Atladottir, from the Institute of Public Health at the University of Aarhus in Denmark and the study's lead researcher, said that the findings are important because they support the theory that autism is somehow associated with disturbances in the immune system, although the mechanism of the interaction is not yet known.

At Breakspear Hospital, we understand that food intolerances (not just to gluten) play a huge role in behaviour of autistic children and adults. If a mother has coeliac disease, this results in a higher possibility of allergies, and thus the risk of autism may be higher.

## Bulletin board

### New arrival visits Breakspear Hospital



On 1 July 2009, Phillippa Sellar (Accounts) gave birth to

her second child, Theo, a brother for Max. Neil and Phillippa brought Max and Theo to say hello to everyone at the Hospital. They are all doing well.

### Update on international mumps vaccine shortage



MUMPSVAX, the single mumps vaccine, has been unavailable for some time. Late last year, Breakspear Hospital's medicines distributors in America assured us that supplies would be made available shortly and we continued to offer individual measles and rubella immunisations, holding a waiting list for children requiring mumps immunisation.

We have just learned that MUMPSVAX will not be available for at least 2 years. We believe that it is extremely important for children to have protection through immunisation and fear that parents may choose not to immunise their children at all if they do not have the opportunity to obtain the single vaccines. Therefore Breakspear Hospital will continue to offer the single immunisations for measles and rubella and also mumps when it becomes available.

We have written to those who are on our waiting list to inform them of the delay.

### Tell us your thoughts on... immunisations

Visit our website:  
[www.breakspearmedical.com/survey](http://www.breakspearmedical.com/survey) to tell us your thoughts on immunisations.

