



PUSHPAGIRI

We care God cures

PHARMA ECHO

The News Bulletin of
Pushpagiri College of Pharmacy

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**Rev. Dr. Thomas
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Metropolitan Archbishop of
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Vision : "We care..... God cures....."

Mission : To work towards a knowledge society with a life in abundance, through science and technology, improving health care of our immediate community, state, country and the world at large.



CEO

The Pushpagiri College of Pharmacy heartily welcomes the new Chairman and Chief executive officer of Pushpagiri group of Institutions, **Rev. Dr. Shaji Vazhayil** to the institution.



From the Director's Desk

I am extremely pleased to know that Pushpagiri College of Pharmacy is releasing the second edition of 'Pharmaecho 2013', displaying the proud moments and milestones accomplished in the voyage frequented by almighty.

All blessings to the devoted hands behind this effort and initiative.

**Rev Fr. John Thomas
Kandathinkal**



**From the Director of
Academics and Research**

I am very delighted to know that the second edition of Pushpagiri Pharma echo is being released, adding another feather of glory to the golden crown of achievements of Pushpagiri College of Pharmacy. All blessings to the dedicated hands behind this venture.

**Rev Dr. Mathew
Mazhavancheril**



From the Principal's Desk

It is a matter of immense pleasure that the second edition of Pharma Echo is being published. This bulletin is a solid proof for the commitment of the college in catering a system that nurtures social, moral, physical and emotional development of the students. I congratulate all dedicated hands behind this venture.

Prof. Dr. Mathew George



**From the Editorial
Advisory Board**

It is a matter of pride, that we are releasing the second edition of Pharma Echo. This bulletin reveals the successful strategic planning and pragmatic approach for the last six months which has given good returns. I thank all who have taken meticulous effort towards this endeavor.

Prof. Dr. Lincy Joseph

From the Editor's Desk

The 'Pushpagiri Pharmaecho 2013' is a montage of creations and successful accomplishments of the Pushpagiri College of Pharmacy in numerous endeavors. On this stupendous moment, we have immense pleasure in thanking all devoted hands who made this venture come true. This bulletin is an exquisite collection, reflecting the innovations, activities and development of our college. Conjuring almighty's blessings, we put forth Pharma Echo for your kind reading. Have it with an amiable spirit.

Mrs Mincy Mathew, Dept of Pharmaceutical Chemistry

CARPEDIUM 2013

The college day celebrations 'Carpedium 2013' for the year 2012-2013 was held on 23rd of April. Prof. D Chakraborty, Vice president of the Pharmacy Council –New Delhi honored the occasion with his presence. Rev Fr. Mathew Punakulam, Chairman and CE of Pushpagiri group of Institutions, Rev Fr. John Thomas Kandathinkal, Director of the Pushpagiri Medicity Campus, Prof Dr. Mathew George, Principal of Pushpagiri College of Pharmacy; Rev Fr. Mathew Mazhavancheril, Director of Academics and Research felicitated the function. Prof.D. Chakraborty released the college magazine 'ADURO 2013' and the first issue of the biannual newsletter, 'Pushpagiri Pharmaecho' was released by Rev Fr. Mathew Punakulam. The programme hosted various dances, fashion show, music and dramas by the students. The prizes for the horizon competitions were distributed during this event. Prof. D Chakraborty gave mementos to all teachers for their respectable service.



The best outgoing student :
The best outgoing student, **Reeja Susan Kurien** during Carpedium 2013 by Prof. D.Chakraborty –Vice President ,Pharmacy Council of India-New Delhi.

ADIOS 2013

The 2008-2013 batch of PCP bid farewell to the college in a function held on 24th of April and the entire pass out students were awarded mementos. A short film directed by Anandu P S, of final year B Pharm cherished the event.



Outgoing Batch of B.Pharm-2013



SPORTS MEET 2013



The college held its sports fest on 18th of April. The day witnessed fabulous talents of students in various competitions. The rigor and spirit of competition between the various batches of college raced till the end. Medals for the winners were awarded by Dr. Bobby George, Assistant Vice President, Reliance Life Sciences, Mumbai.



INAUGURATION OF SECOND PHARM D BATCH



The second batch of Pharm D was inaugurated on 5th of August by Shri. B Rajan, President of the Kerala State Pharmacy Council. Dr. N Udupa, Director and Principal of the Manipal College of Pharmaceutical Sciences was the Chief Guest of the event. Rev Fr. Shaji Vazhayil, Chairman and CEO of Pushpagiri Group of Institutions, presided over the function. Rev Dr. Mathew Mazhavancheril, Academic and Research Director of Pushpagiri Group of Institutions, Rev Fr. John Thomas Kandathinkal, Director of the Pushpagiri Medicity Campus Institutions, and Principal - Prof Dr. Mathew George felicitated the event. 30 students were enrolled in the new batch. The inauguration was followed by an orientation class for the new students. The Academic Calendar for the year 2013 -14 was released by Rev. Dr. Mathew Mazhavancheril during the function.

NEW COURSES STARTED

Pushpagiri College of Pharmacy has started a new course PharmD (PB)- a three year programme after B.Pharm recognized by PCI and KUHS.





UNIVERSITY RANK BAGGED BY PUSHPAGIRI COLLEGE OF PHARMACY

Final Year University results of the 2008-2013 batch was published with a success percentage of 91%. Ms. Raina Gracy John topped the college results and won the third rank in the university.

ACADEMIC EXCELLENCE OF STUDENTS BY QUALIFYING IN GPAT 2013

The pass out students of the college attended the Graduate Pharmacy Aptitude Test (GPAT) 2013 and the students who got qualified are Raina Gracy John, Bushra M, Linda Mathew, Ashley Merin George, Jipin Thomas Jacob, Shyaleen Rose Sebastain, Sneha Mathew, Renu Anna Joseph, Bency Elsa Varghese, Elizabeth Mary Mathew, Elizabeth George, Geethu Jose, Reeja Susan Kurien, Praisya Ann Jacob and Suzanne Mariam Thomas.

PLACEMENT CELL ACTIVITIES

The Novena Medicaments Private Limited, Chennai was invited by the college for recruitments to the company by campus interview. S.Chandrasekharan, the Marketing Executive Officer of the firm conducted the interview for the last year students and took an innovative class for the final year batch and promised jobs in the company in the following years.



GROOMING AND DEVELOPMENT PROGRAMMES FOR STUDENTS

As an academic part of the college day celebrations, an orientation programme was held on 22nd of April by Dr. Bobby George, Assistant Vice President, Reliance Life Sciences, Mumbai. The students were motivated and convinced that the pharmaceutical industry is a mine of careers for pharmacy students. Sessions on changing regulatory landscape in India, marketing authorization procedure in Europe, regulatory filling of a biologic and biosimilar product in India were held and an integrative session on career options in pharmaceutical industry was conducted.

Preparation of the students for better results.

A class held on 27th February 2013 mainly focused on developing a good character and how to avoid stress during studies. The class was orated by Mrs. Elizabeth, faculty member from M.G.University. She mainly focused on the character of a student and how he/she can improve the character. 'Character leads to Destiny' was the proverb which she explained on the basis of many theories and examples. She also explained the factors leading to a stressful life and how to avoid these stresses and acquire a

better future. Confidence is another psychological factor she stressed on. Self confidence and self esteem are the main qualities of a responsible student or an individual. She also discussed about the present life issues and conditions of the society which will create good and bad effects in an individual. It was a thoughtful and interesting class.

CONGRATULATIONS TO THE NEW CHAIRMAN OF PUSHPAGIRI COLLEGE OF PHARMACY



Christy C. Varghese



SEMINARS / WORKSHOPS / CONFERENCES ATTENDED

- Seminar on Genetically Modified Crops and Food Security Issues and Prospects, Organized By University College of Pharmacy, Kottayam, On 16th February, 2013

Attended By : Prof Dr, Mathew George, Prof Dr. Lincy Joseph, Mrs. Bincy K Chacko, Mrs. Mincy Mathew from teaching fraternity, Jancy Kuruvila, Christeena M Thomas, and Vineeth Philip from PG course of our college.

- Seminar on 'Pharmacy Practice Advanced Learning Module 5', organized by IACP (Indian Association of Colleges of Pharmacy) at St. James College of Pharmaceutical Sciences, Chalakudy, conducted on July 1,2,3

Attended by faculty Mrs. Emily James.

- Workshop On New Dimensions In Ayurveda And Siddha Research, Organized By School Of Biosciences, Macfast, Thiruvalla On 25th April, 2013

Attended by : Prof. Dr. Mathew George, Prof. Dr. Lincy Joseph, Mrs. Anitha Mary Mathew, Mr. Sujith K, Mrs. Bincy K Chacko, and Ms. Meera Paul .

- Seminar On Research Methodology In Health Sciences Organized By KMSCL Institute For Drug Studies.(KIDS) on 17th June 2013 At Government Medical College Auditorium, Thiruvananthapuram.

Attended By: Prof Dr Mathew George, Prof Dr. Lincy Mathew, Dilip Krishna, Josemon Thomas, and Lakshmi Menon.

- Seminar on 'Advancement in Molecular Diagnosis' Conducted By Pushpagiri Research Centre for Virology at Pushpagiri Institute of Medical Sciences and Research Centre, Thiruvalla on May 4th, 2013

Attended By : Prof Dr. Mathew George, Prof Dr. Lincy Joseph, Mrs. Leena P N, Mrs. Deepthi Mathew, and M.Pharm students.

On behalf of National Science Day celebrations-2013 ,Ms.Jeenu Joseph attended a seminar at MACFAST on february 27th and topic was "Relevance of GM crops in Food Security".

A REPORT ON THE SEMINAR "NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY"

Pushpagiri College of Pharmacy organized a seminar on "NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY" on June 15, 2013, at Medicity campus, Thiruvalla.

The seminar was taken by **Dr. Prathapan Sreedharan**, Scientist and Reader at CUSAT (Cochin University of Science and Technology).



The objective of the seminar was to furnish the details of NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY and its applications in pharmacy. A warm welcome speech was delivered by Prof Dr. Mathew George, Principal of Pushpagiri College of Pharmacy. Mr. Vineeth Philip, 1st year M.Pharm Pharmacy Practice student read the profile. HOD of Pharmaceutical Chemistry, Prof. Dr. Lincy Joseph, teaching faculties of Department of Pharmaceutical Chemistry, Pharmaceutical Analysis, and other Departments, M.Pharm and final year B.Pharm students attended the seminar. The seminar ended by 4 PM. Vote of thanks was delivered by Mrs. Emily James, Department of Pharmacology on behalf of Pushpagiri College of Pharmacy and Ms. Jancy Kuruvila of 1st year M.Pharm Pharmacy Practice on behalf of M.Pharm students.

Vineeth Philip, I Year M. Pharm

RESEARCH ACTIVITIES

- Mathew George, Lincy Joseph, Pharmacognostical and Phytochemical Characterization of Pimento Leaves, Global Journal of Pharmacology, 7(1) 75-80, 2013
- Lincy Joseph, Mathew George, Pharmacological Significance Of Spondias Pinnata Leaf Extract For Certain Pharmacological Activities, Journal Of Pharmacy Education Results, Volume IV, NO. 1 PP1-9, 2013
- Leena P N, Pharmacognostic, Phytochemical Studies on the Root of Some Selected Medicinal Plants, International Journal of Research in Pharmacy and Chemistry 2013, 3(2),444-447



PROJECTS COMPLETED

1	A Comparative Study Of Three Different Brands Of Glimepiride Tablets	Pharmacology	Prof Dr Mathew George	Geethu Jose, Jubin C Koshy, K P Ravishankar, Praisya Ann Jacob
2	Pharmacognostical Phytochemical, Characterization And Screening Of Spondias Pinnata Leaf Extract For Certain Pharmacological Activities	Pharmaceutical Chemistry	Prof. Dr. Lincy Joseph	Aswathy P Nair, Elizabeth Mary Mathew, Sneha Elsa Thomas, Sneha Mathew
3	In Vitro Antidiabetic Anti Inflammatory And Antioxidant Activity Of The Aqueous Extract Of Magnifera Indica Linn Leaves	Pharmacology	Sunitha Thomas	Fathima J, Jilu Susan Varghese, Linda Mathew, Rumana Akbar
4	Synthesis And Antibacterial Activity Of Some New 2 Pyrazolines From Chalcones	Pharmaceutical Chemistry	Mr. Vinod B	Leena V V, Shalumol Varghese, Litto Sebastain, Shyalin Rose Sebastain
5	Screening Of Ethyl Acetate Extract Of Ananas Cosmos Merr Root For Some Invitro Activities	Pharmaceutical Chemistry	Mrs. Christy K Jose	Augus Roks Arackal Hepzy Solomon, Helen Mary Tom
6	A Survey On The Pattern Of Substance Abuse And Institutionalized Therapy In Southern Kerala	Pharmacology	Mrs. Anitha Mary Mathews	Amil Varghese, Beril Sweety Mathew Deepa Elza Mathew
7	Synthesis, Invitro Anti-inflammatory And Preliminary Antibacterial Study Of Some Novel 2,4 Disubstituted 1,5 Benzodiazepine Derivative	Pharmaceutical Chemistry	Mrs. Mincy Mathew	Jerin M Jose, Neethu Mariam Roy, Sharon Mary Daniel, Winnie Rose Jacob
8	Formulation And Evaluation Of Glibenclamide Microspheres By Ionic Gelation Method	Pharmaceutics	Mr. Dilip Krishna	Ann Mary Sam, Shelby Susan Thomas, Bency Elsa Varghese, Tintu Rose John
9	Studies On Preliminary Phytochemical, Antioxidant And Anti Inflammatory Activities Of Pleurotus Florida By Invitro Method	Pharmacognosy	Mrs. Leena P N	Bushra M, Jipin Thomas Jacob, Rinu Varghese, Suzanne Mariam Thomas
10	Okra Mucilage, A Cheap And Effective Alternative For The Formulation Of A Pharmaceutical Suspension	Pharmaceutics	Mrs. Deepthi Mathew	Chinchu Joshy, Elizabeth George, Raina Gracy John, Reeja Susan Kurian
11	Study On Glucose Adsorption Capacity Of Various Ayurvedic Formulations And Medicinal Plants And Their Effect On Glucose Uptake By Yeast Cell- Invitro Study	Pharmacology	Mr. K Sujith	Renu Anna Joseph , Saana Sain, Christa J George, Vipin Varghese
12	Development of UV-Spectrophotometric methods for the estimation of S-omeprazole in tablet dosage form.	Pharmaceutical Analysis	Rani Sebastein	Ashley Merin George, Ceenu Chacko, Tintu Tom



INTRAVENOUS IMMUNOGLOBULINS

Intravenous immunoglobulin (IVIG) is a blood product administered intravenously. It contains the pooled, polyvalent, IgG (immunoglobulin (antibody) G) extracted from the plasma of over one thousand blood donors. It is used in treating immune deficiencies such as X-linked agammaglobulinemia, hypogammaglobulinemia (primary immune deficiencies), and acquired compromised immunity conditions (secondary immune deficiencies) featuring low antibody levels, autoimmune diseases, e.g. immune thrombocytopenia, and inflammatory diseases, e.g. Kawasaki disease, dermatomyositis and acute infections such as paediatric HIV infection, Guillain-Barre syndrome etc

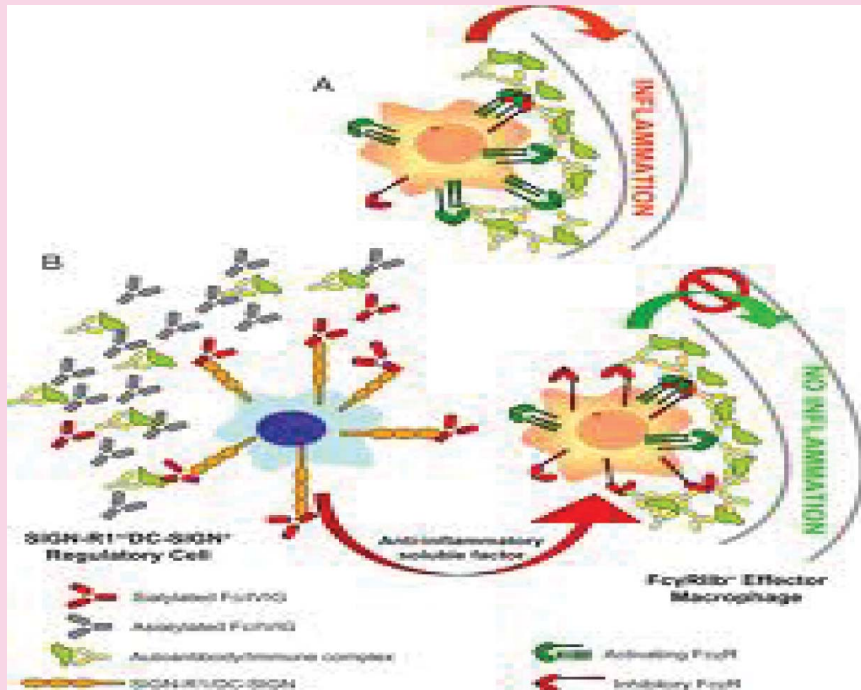
In patients with both immune abnormalities and an infection causing asthma, the triggering infection could be eliminated with IVIG therapy. But IVIG is not recommended for recurrent asthma infections unless the patient presents an impaired response to vaccine immunizations or natural infections.

IVIG is also considered a modulator of the immune system and was shown to be beneficial in treating numerous autoimmune diseases such as relapsing, myasthenia gravis, pemphigus, polymyositis (PM), dermatomyositis (DM), Wegener's granulomatosis (WG), Churg-Strauss syndrome, chronic inflammatory demyelinating polyneuropathy (CIDP) and more.

Mechanism of action

The mechanism by which IVIG suppresses harmful inflammation is believed to involve the inhibitory Fc receptor. IVIG may work via a multi-step model where the injected IVIG first forms a type of immune complex in the patient. Once these immune complexes are formed, they interact with activating Fc receptors on dendritic cells which then mediate anti-inflammatory effects helping to reduce the severity of the autoimmune disease or inflammatory state.

Additionally, the donor antibody may bind directly with the abnormal host antibody, stimulating its removal. Alternatively, the massive quantity of antibody may stimulate the host's complement system, leading to enhanced removal of all antibodies, including the harmful ones. IVIG also blocks the antibody receptors on immune cells (macrophages), leading to decreased damage by these cells, or regulation of macrophage phagocytosis. IVIG may also regulate the immune response by reacting with a number of membrane receptors on T cells, B cells, and monocytes that are pertinent to autoreactivity and induction of tolerance to self.



A recent report stated that IVIG application to activated T cells leads to their decreased ability to engage microglia. As a result of IVIG treatment of T cells, the findings showed reduced levels of tumor necrosis factor-alpha and interleukin-10 in T cell-microglia co-culture. The results add to the understanding of how IVIG may affect inflammation of the central nervous system in autoimmune inflammatory diseases.

IVIG dose

For primary immune dysfunction 100 to 400 mg/kg of body weight every 3 to 4 weeks is implemented. However that is just a starting dose. The dose needs to be adjusted on the needs of the patient. The effect of IVIG is said to last between two weeks and three months. For neurological and autoimmune diseases 2 grams per kilogram of body weight is implemented for three to six months over a five day course once a month. Then maintenance therapy of 100 to 400 mg/kg of body weight every 3 to 4 weeks follows.

FDA-approved indications of IVIG

- Allogeneic bone marrow transplant
- Chronic lymphocytic leukemia
- Common variable immunodeficiency (CVID) a group of approximately 150 primary immunodeficiencies (PIDs), which have a common set of features (including hypogammaglobulinemia) but which have different underlying causes



- Idiopathic thrombocytopenic purpura
- Pediatric HIV
- Primary immunodeficiencies
- Kawasaki disease
- Chronic inflammatory demyelinating polyneuropathy (CIDP)
- Kidney transplant with a high antibody recipient or with an ABO incompatible donor

Complications and side effects

Although routine use of IVIG is common practice, sometimes for long term treatments, and is considered safe, complications of IVIG therapy are known and include:

- headache
- dermatitis - usually peeling of the skin of the palms and soles.
- infection (such as HIV or viral hepatitis) by contaminated blood product; there is also an as yet unknown risk of contracting variant CJD (vCJD) however the process whereby the product is extracted shows that the contaminants are usually not present in the product.
- pulmonary edema from fluid overload, due to the high colloid oncotic pressure of IVIG
- allergic/anaphylactic reactions; for example, anaphylactic shock, especially in IgA deficient patients, who by definition

can still produce IgG antibodies (IgA deficient patients are more likely to produce IgG against the IVIG administration than normal patients).

- damage such as hepatitis caused directly by antibodies contained in the pooled IVIG.
- acute kidney injury
- venous thrombosis
- aseptic meningitis

It is to be noted that IVIG is an infusion of IgG antibodies only. Therefore, peripheral tissues that are defended mainly by IgA antibodies, such as the eyes, lungs, gut and urinary tract are not fully protected by the IVIG treatment. X-linked agammaglobulinemia patients are immune to the most dangerous adverse effect, anaphylactic shock, as they do not have the antibodies to react against the treatment. Anaphylactic shock has a higher chance to occur in IgA deficient patients which do have other antibody types. In case of recurring side effects, it is recommended to slow the pace of the IVIG administration and to reduce the dosage. It is also advisable to change IVIG brand, as some people react against a specific brand. If the patient is diabetic, he should take into consideration the medium in which the antibodies are solubilized in the IVIG treatment, as some brand solubilize antibodies with high concentrated sugars (such as sucrose and maltose). IVIG can be given to pregnant women and is used in treatment of unexplained recurring miscarriages.

SKIPPING BREAKFAST UPS RISK OF CORONARY HEART DISEASE IN MIDDLE-AGED MEN

How does your morning look?

Are you:

- Sluggish in the morning?
- Slow to get going?
- Low in energy and concentration levels mid-morning?
- Moody and irritable with colleagues and friends for no reason?

Did you answer yes to one or more of the above?

Then perhaps you are one of the many people that skip the most important meal of the day – **Breakfast**. A large, prospective study supports the common wisdom that skipping breakfast is not a healthy way to start the day. Compared with men who ate breakfast, those who skipped breakfast had a 27% increased risk of MI or death from CHD. Experts claim that breakfast is the most important meal of the day and plays a key role in helping tackle obesity.



Eating breakfast has long term health benefits; it can reduce obesity, high blood pressure, heart disease and diabetes.



Breakfast like a King

Eating a healthy breakfast every day gives your brain and body a boost. Here are some reasons why making time in the morning for breakfast really make a difference.

Breakfast gives you energy

Breakfast tops up your energy stores for the day and helps to regulate blood sugar. Experts recommend that around 25 per cent of your daily food intake should come from breakfast.

Breakfast gives your brain a boost

Studies have shown that eating breakfast helps improve your memory, concentration and aspects of mental performance so breakfast can be called as **Brain food**.

Breakfast can make you happier

Eating something in the morning can help improve your mood and make you feel less stressed. Going for long periods without eating can result in low blood sugar which can affect mood.

Breakfast is good for your waistline

Research shows that people who eat breakfast are less likely to be overweight and more likely to be in their ideal weight range than people who skip breakfast.

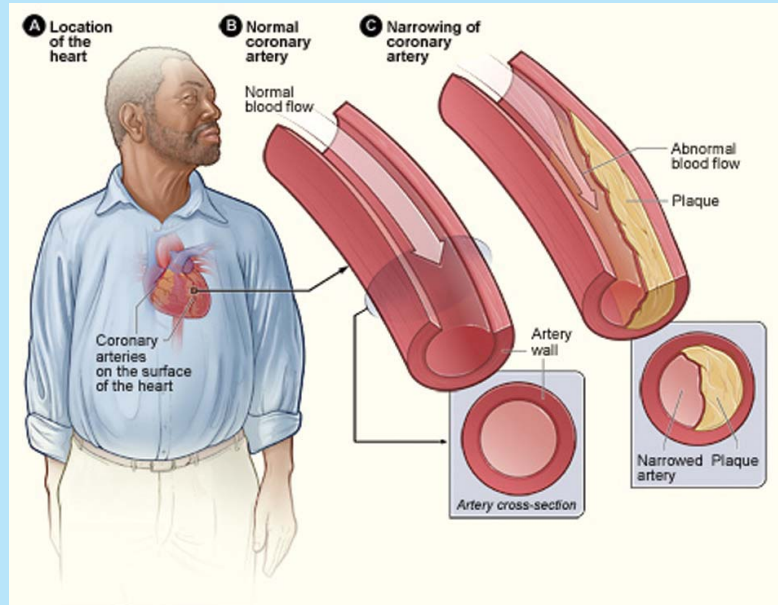
Breakfast provides important nutrients

If you miss breakfast you may miss out on important nutrients. Breakfast foods are good sources of nutrients such as calcium, iron and B Vitamins, as well as protein and fiber.

According to data from the National Health and Nutrition Examination Survey (NHANES) 2002, 18–20% of US adults regularly skip breakfast; men who skipped breakfast were at increased risk of gaining substantial weight or developing type 2 Diabetes and CHD. People who skip breakfast have higher levels of fasting insulin, triglycerides, and LDL-cholesterol. To investigate how skipping breakfast might impact heart health, the group analyzed data from participants in the study who were aged 45–82 when they replied to a questionnaire about eating habits. After adjusting for multiple factors, diet quality, calories, alcohol intake, eating frequency, sleep characteristics, physical activity, smoking, having a parent who had an MI at a young age, work status, and recent physical exam, reveals skipping breakfast linked with a 27% increased risk of CHD. The overall increased risk is higher in middle-aged men among 45- to 60-year-olds, those who skipped breakfast had a 50% higher risk of CHD than those who ate breakfast. Men aged >60 years who skipped breakfast did not have a significantly increased risk of CHD compared with other older men who ate **breakfast**.

The foods that best protect against heart disease include:

- **Oily fish** – such as mackerel, sardines, tuna and salmon which contain omega-3 fatty acids. This type of fat has been shown to decrease triglycerides and increase HDL-cholesterol levels,



improves blood vessel elasticity and thins the blood, making it less likely to clot and block blood flow.

- **Some vegetables oils** – such as corn, soy and safflower, which contain omega-6 fatty acids, and those containing omega-3 fatty acids such as canola and olive oil. All of these can help to lower LDL cholesterol when used instead of saturated fats such as butter.
- **Fruit and vegetables** – antioxidants in fruit and vegetables offer protection against heart disease. Fruit and vegetables are also important sources of folate, which helps lower the blood levels of the amino acid homocysteine, which appears to be linked to an increased risk of heart disease.
- **Fibre** – wholegrain cereals and fruit and vegetables.
- **Unrefined carbohydrate sources with a low glycaemic index** – foods such as wholegrain breads and breakfast cereals, legumes, certain types of rice and pasta are important for people prone to diabetes because they help keep blood sugar levels in check.
- **Legumes and soy** – soy protein has been shown to lower LDL cholesterol levels, especially if blood cholesterol levels are high.
- **Tea** – some evidence suggests that the antioxidants in tea can help prevent the build-up of fatty deposits in the arteries. The antioxidants may also act as an anti-blood clotting agent and improve blood vessel dilation to allow increased blood flow.

So eat breakfast if you want to reduce your risk of coronary heart disease.

Jancy kuruvila
1st year M.PHARM



RESEARCHERS CONTINUE TO REFINE CLASSIC TB VACCINE

Hopes are high for a new and improved tuberculosis vaccine: Serum Institute of India is planning on taking a promising vaccine - originally developed in Germany - and introducing it into the clinical setting. Studies have shown that the new vaccine is more effective and better tolerated than currently available options. Scientists from the Max Planck Society (MPG), Vakzine Projekt Management GmbH (VPM), and the Helmholtz Centre for Infection Research (HZI) co-developed the candidate vaccine called VPM1002 as part of a joint research project. The substance is currently undergoing phase II clinical testing. VPM1002 is based on another vaccine that was first introduced in 1921 called Bacillus Calmette-Guérin, or BCG. The vaccine, which consists of attenuated pathogens, prompts the human immune system to mount a response against the germ. Today, the use of these types of live vaccines has become standard and is even used as part of "classic" MMR immunizations. The special thing about VPM1002 is that it is being continually refined using gene technology, causing it to prevent diseases much



more effectively and safely than its predecessor. Preclinical studies, two phase I clinical trials, and one phase II clinical trial have already met expectations.

SCIENTISTS IDENTIFY NEW GENES THAT RAISE THE RISK OF ALLERGIC DISEASE

An international team of scientists conducting an analysis of several genome studies has discovered ten genes that are responsible for the pathogenesis of allergic sensitization. The findings have been published in the latest edition of Nature Genetics. Allergic diseases are on the increase worldwide. Allergies are caused by a complex interaction between genes and the environment. "The findings show that there is enormous genetic diversity underlying allergic diseases. In addition, lifestyle factors and environmental exposures will play a key role in future allergy research and treatment. On the basis of this genetic information, the scientists now aim to conduct further research into the molecular mechanisms involved in order to gain new insights into the development of allergies and other immune diseases. As part of their genome-wide association studies

(GWAs), the scientists compared the genetic profile of the study participants with the occurrence of typical allergy antibodies to those without allergies. They discovered that ten gene loci are involved in 25 percent of all cases of allergic sensitization. Allergic sensitization is the term given to the immunological process during which antibodies are formed against allergens, which are in effect harmless environmental substances. Exposure to these allergens can lead to allergic symptoms among those who are sensitized.

The comprehensive genetic analysis of objective measurements of allergic sensitization enables the identified genes to be evaluated as risk factors for allergic diseases. Moreover, all the identified genes are connected to the occurrence of other allergic conditions, such as hay fever and asthma.



RECENT BANNED DRUGS

<u>Sr. no</u>	<u>DRUGS BANNED IN INDIA (2010 ONWARDS)</u>	<u>INDICATION /USE</u>	<u>DATE OF NOTIFICATION</u>	<u>REASON FOR BAN</u>
1.	Rosiglitazone	Type II DM	12.11.2010	Cardiovascular risk
2.	Nimesulide formulations for human use in children below 12 years of age.	Analgesic	10.02.2011	Liver toxicity
3.	Cisapride and its formulations for human use.	GERD	10.02.2011	Heart complications like arrhythmias ,death
4.	Phenylpropanolamine and its formulations for human use.	Decongestant	10.02.2011	Stroke
5.	Human placental Extract 1. Topical application for wound healing, and 2. Injection for pelvic inflammatory disease.	Cosmetic	30.05.2011	Infections
6.	Sibutramine and its formulations for human use.	Anorexiant/ Antiobesity	10.02.2011	Stroke and Heart Attack
7.	"Gatifloxacin formulation for systemic use in human by any route including oral and injectable".	Infections	16.03.2011	Hyperglycemia
8.	Tegaserod and its formulations	Irritable Bowel Syndrome	16.03.2011	Heart attack, stroke
9.	Letrozole	Induction of ovulation in anovulatory infertility.	12.10.2011	Teratogenic Potential
10.	Serodiagnostic test kits for diagnosis of tuberculosis	Diagnosis of tuberculosis	07.06.2012	Inconsistent /Wrong results

EMILY JAMES, Asst.Professor, Dept.of Parmacology



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DIETARY PRINCIPLES AIM TO REDUCE THE RISK OF ALZHEIMER'S DISEASE

New dietary guidelines for the prevention of Alzheimer's disease have been developed by the Physicians Committee for Responsible Medicine (PCRM).

The guidelines are very similar to the habits that prevent heart disease in that they recommends avoiding saturated and trans fats, grounding the diet in plant-based foods, and adding sources of vitamin E and B. Combining this diet with physical exercise and avoiding excess metals, such as iron and copper in multivitamins, can maximize protection for the brain.

The 7 Dietary Principles to Reduce Alzheimer's Risk

1. Minimize saturated fats and trans fats.
2. Vegetables, legumes (beans, peas, and lentils), fruits, and whole grains should be the primary staples of the diet.
3. One ounce of nuts or seeds (one small handful) daily provides a healthful source of vitamin E.
4. A reliable source of vitamin B₁₂, such as fortified foods or a supplement providing at least 2.4 µg per day for adults) should be part of the daily diet.
5. Choose multivitamins without iron and copper, and consume iron supplements only when directed by your physician.
6. Avoid the use of cookware, antacids, baking powder, or other products that contribute dietary aluminium.
7. Engage in aerobic exercise equivalent to 40 minutes of brisk walking 3 times per week.

The Evidences

In the Chicago Health and Aging Project, individuals who consumed the most saturated fat (around 25 g each day) were 2 to 3 times more likely to develop Alzheimer's disease than those who consumed only half that amount.

But a Dutch study found no protective effect of avoiding saturated fats, although the population was somewhat younger than that in the Chicago study. High-fat foods and/or the increases in cholesterol can contribute to the production of β -amyloid plaques in the brain. High-fat foods also increase the



risk for obesity and type 2 diabetes, common risk factors for Alzheimer's disease.

A large study of Kaiser Permanente patients showed that participants with total cholesterol levels above 250 mg/dL in midlife had a 50% higher risk for Alzheimer's disease 3 decades later compared with participants with

cholesterol levels below 200 mg/dL. And the *APOE ɛ4* allele, which is strongly linked to Alzheimer's risk, produces a protein that plays a key role in cholesterol transport.

On the recommendation for vegetables, legumes, fruits, and whole grains, these foods are rich in vitamins, such as folate and vitamin B₆, that play protective roles for brain health. Studies of Mediterranean-style diets and vegetable-rich diets, such as the Chicago Health and Aging Project, have shown reduced risk for cognitive problems compared with other dietary patterns.

An Oxford University study of older people with elevated homocysteine levels and memory problems, supplementation with B vitamins improved memory and reduced brain atrophy.

On potentially harmful metals, excessive iron and copper have been linked to cognitive problems. And while the role of aluminium in Alzheimer's disease remains controversial, aluminum has been demonstrated in the brains of individuals with Alzheimer's disease, and studies in the United Kingdom and France have found increased Alzheimer's prevalence in areas where tap water contained higher aluminium concentrations.

Several studies have found a correlation between exercise and a reduced risk for Alzheimer's.

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