

## Nirmala College of Pharmacy

## Muvattupuzha

## @ur Heavenly Patran




Mar. George Madathikandathil
Bishop, Diocese of Kothamangalam

## Message.

I am very happy to see that Nirmala College of Pharmacy is bringing out a magazine 'NOVUS'. Education doesn't mean simply gathering information but it should mean overall formation of a personality and culture. Magazine not only help the students to showcase their potentials but also it improves their organizational ability. It also serves as an annual evaluation of their activities.
The Pharmacy education plays a pivotal role in the field of health care in our country and I am confident that our students can shoulder any responsibilities in this changing scenario of pharmacy education as well as industry. The students should attain deep knowledge in designing, implementing, conducting and evaluating research on drugs and patients in specific areas of their interest.
I congratulate the team of students, staff and the principal for bringing out the college Magazine for release. I take this opportunity to record my sincere thanks to the editorial board and all who have contributed one way or other.

Fr.Jose Pulloppillil
Administrator


## FROM OUR PRINCIPAL'S DESK

The profession of pharmacy demands a lot of dedication as it is directly concerned with life saving activities. It is very important that a pharmacist is an "all-rounder", with deep knowledge of medicines and a mature and pleasing personality to be of help to the ailing persons who is in need of his/her services. Extracurricular activities play a major role in moulding a student to be good individuals. Being confined to the four walls of classrooms and labs will only deteriorate a student's potentials and capabilities as the old saying goes "All work and no play makes Jack a dull boy." It is therefore important for any educational institution to give sufficient opportunities for the overall development of the students.

I hope this magazine will be an effective medium for developing the literary talents of our students. Let me congratulate all those who have contributed to the success of this magazine. I assume that it will be a source of entertainment and enlightenment for all its readers. Let it be an instrument of inspiration for many generations to come.

Prof. John Joseph


Mr. Fels Saju
Lecturer


Ms. Sini Baby
Sr. Lecturer

## Steafb Editers Wote...

"When you have dreams in your eyes you are alive When you have anxieties in your heart you are alive Learn to live freely like a breeze and to flow like a brook

Welcome every moment with open hands...
Because every second holds a surprise for you
To make your life more new and more fresh"

Pharmacy is a divine profession because it deals with life. Here, Nirmalites, the rising pharmacists, are trying to give a new life to your thoughts and to your visions through 'NOVUS'...means a new life. The magazine encapsulates a wide range of articles of both the staff and the students. After glancing through the 'Novus', certainly you will feel something new and fresh.

We express our heartfelt thanks to the enormous help and guidance we received from the principal and the administrator in the making of the magazine. We also express our gratitude to teaching and non-teaching staff of our college. We also express our sincere gratitude to all the members of the editorial board who put their heart and soul together for making it a success. Thanks to advertisers, printers, and all who supplied us with their valuable creation.

## We hope you enjoy turning the pages of 'NOVUS .'



## EDITOR'S NOTE

Time has changed. With time, everything has changed. From a mere embryo, fed and protected by the mother's womb, to a toddler, and finally to what we are today, changes have played a key role in our lives. Always changes result into something new...

NOVUS - our theme is a Latin word, literally meaning 'new life'. But, we Nirmalites have a different expansion for the word - "Nirmala Offers a Venture of Unique Sapience".

Nirmala College of Pharmacy is on a venture a venture to develop professionalism for those who seek it. Professionalism does not always mean a better and new life for the seekers but also to spread the glow in the world. Pharmacy field has inherent in it, the attitude of service and sacrifice in the interests of the suffering humanity. Our professionalism aims to alleviate sufferings of humanity and provide them a healthy and jovial life... a Novus.

Personally, I think we had a great year, 2011 - 2012. Time flew away as if caught up in a hurricane. But, the special moments we had in NCP, still remains in one of the brain cells. We have done our utmost to bring out the best in our magazine. Hope you enjoy it.

## Ebin Johny

Editor

Novus means "NEW LIFE" in Latin. Novus is defined as new, fresh, young, inexperienced, revived and refresh. As the name means, hope this magazine gives you a ray of hope in all your lives.


## Nirmala Offers a Venture of Unique Sapience



$2^{\text {nd }}$ year M.Pharm


Ist year M.Pharm



2009-2013 Batch


2010-2014 Batch


2011-2015 Batch


2012-2016 Batch

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## Ms. Deepa Jose Asst.professor



P
eople rely on the eyes for most things they do. But researchers say that even your eyes can deceive you.

An international team led by the wision centre in Australia, says that the information provided by the people's visual sensing system is often distorted, unreliable and subject to illusion.

According to the team leader Drlsabelle Mareschal, people tend to negard what they see as real world. In fact a lat of it is distortion, and it is occurring in the early processing of the brain, before ansciousness takes over.

## ROLE OF VISUAL CORTEX

Studies showed that the cells of amimary visual cortex create small simarions, which they then pass on to the neter levels of the brain, to interpret it as sentican.

A common example of this that is ater exploited by artists and designers is unoun as the tilt illusion where perfectly encial lines appear tilted because they are
placed on an oriented background, say the researchers.

The researchers analyzed a series of experiments in which they traced the origins of tilt illusion to the cells of primary visual cortex -the first stage is vision processing ,before the conscious mind takes over.

In their study to test at what level illusion occurs in the brain , unconscious or conscious and also to see if the higher brain is aware of the illusions it is receiving and how it tries to correct for them they found that brain seeks more contextual information from the background to try to work out the alignment of the object it is seeing.

The team subjected the volunteers to a complex test in which they had to indicate the orientation of a vertical line which was perceived as constantly tilting from side to side, against a fuzzy back ground that was also changing.

These illusions happen very fast, perhaps in milliseconds. The higher brain cannot always correct for them, as it does not in fact know that they are illusions.

introduced in 1950's. It acts as contact and stomach poison and has a slight fumigant action. It is used in vegetables, fruits, paddy, cotton, cashew, tea, coffee, tobacco and timber crops. It is also used as a wood preservative and to control tse-tse flies and termites. But now it is being detected as an important cause of pesticide poisoning in many countries.
IUPAC Name: $6,7,8,9,10,10-$ Hexachloro1,5,5a, 6, 9,9a-hexahydro- 6,9-methano-2,4,3-benzodioxathiepine-3-oxide

Technically endosulfan is a 7:3 mixture of stereoisomers, designated as $\alpha$ and $\beta . \quad \alpha$ and $\beta$ endosulfan are conformational isomers arising from the pyramidal stereochemistry of sulphur. $\alpha$-endosulfan is
more thermodynamically stable of the two, thus $\beta$ endosulfan irreversibly converts to the a form, although the conversion is slow.

## ENVIRONMENTAL FATE

Endosulfan is a ubiquitous environmental contaminant. The chemical is semi-volatile and resistant to degradation processes in the environment. Endosulfan is subject to long range atmospheric transport, i.e. it can travel long distances from where it is used. Thus, it occurs in many environmental compartments.

The compound breaks down into endosulfan sulfate, endosulfan diol, and endosulfan furan, all three of which have structures similar to the parent compound and, according to the EPA, "are also of toxicological concern...The estimated half-lives for the combined toxic residues (endosulfan plus endosulfan sulfate) which range from roughly 9 months to 6 years."



Acute effects: Endosulfan is highly toxic and can be fatal if inhaled, swallowed or absorbed through the skin. Acute oral toxicity is higher than dermal toxicity. Ingestion or breathing high levels of endosulfan may lead to convulsions and death. Endosulfan directly affects the CNS and recurrent epileptic seizures are also reported. Symptoms of poisoning include hyper activity, excitement, dyspnoea, apnoea, salivation, loss of consciousness, diarrhoea, anemia, nausea, vomiting, insomnia, blurred vision, cyanosis, foaming of mouth, tremor, dry mouth, lack of appetite, irritability, headache, decreased respiration, loss of memory, haematuria, albuminuria, confusion, dizziness, imbalance and lack of coordination.
Chronic effects: Endosulfan is a proven endocrine disruptor. It has potential to induce hypothyroidism. Endosulfan exhibits estrogenic properties. It induces proliferation of human breast estrogen sensitive MCF 7cells (invitro) thereby increasing breast cancer risk. It harms the reproductive system by affecting semen quality, sperm count, spermatogonial cells, sperm morphology and other defects in male sex hormones. It has adverse effects on CNS by inhibiting brain acetylcholine esterase, causing uncontrolled discharge of acetylcholine. Endosulfan ingestion is known to affect the kidneys and liver. It inhibits leucocyte and macrophage migration, causing adverse effects on humoral and cell mediated immune system. It is also a potential tumor promoter. Endosulfan study was conducted among the children in Kasargod district.

## ENDOSULFAN AND CANCER

Endosulfan is found to damage human RBC at concentrations of ippb-ippm. Both $\alpha$ and $\beta$ endosulfan are genotoxic HepG2 cells. Endosulfan is hepatotoxic, mutagenic, clastogenic and induce effects on cell cycle kinetics. Endosulfan has been shown to cause chromosomal aberrations in hamster and mouse and sex linked mutation in Drosophila. Endosulfan has caused mutation in bacterial and yeast cells. It is also known to cause mutation in mammals.

## Mr. Mohanachandran P.S. <br> Sr. Lecturer

## THE KASARGOD TRAGEDY

People in 15 villages were subjected to continuous exposure to endosulfan which was aerially sprayed 3 times every year, for 24 years. Congenital birth defects, reproductive health problems, cancers, loss of immunity, neurological and mental diseases were reported among the villagers. Following a public outcry, a number of health based scientific studies confirmed that the health problems were directly linked to the exposure of endosulfan

The UN - backed regime of 173 countries agreed to globally 'phase-out' the form of insecticide endosulfan, decision with significant implications for India, the world's largest manufacturer and user of the chemical. The phase-out commitment, often loosely referred to as a 'ban' will put endosulfan in Annex A of Stockholm convention on President Organic Pollutants, thereby clearing it for elimination.



๙ฺロாை セேวฺ1 2011-2015 Batch





















## พவி றிாరை <br> Hambe mome



Reshma Francis 2009-2013 Batch



























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Dhanya Roy 2011-2015 Batch

T
he four candles burn slowly. The first candle speaks "I am 'PEACE', but these days, nobody wants to keep me lit". Slowly the flame diminishes and goes out completely. The second candle speaks "I am 'FAITH', but I am no longer indispensable these days". And the flame gradually flicks out.

Sadly the third candle speaks, "I am 'LOVE' and I haven't got the strength to stay lit any longer. People put me aside as they don't understand my importance. They even forget to love those who are nearest to them". And waiting no longer, love goes out completely.

Suddenly a child enters the room and sees the three candles no longer burning. The child begins to cry. "Why are you not supposed to stay lit until the end?"

Then the fourth candle speaks softly. "Don't be afraid for I am 'HOPE' and while I still burn, we can re-light the other candles". With shining eyes, the child takes the candle of hope and lights the other three candles. With hope, no matter how bad things turn out, PEACE, FAITH and LOVE can shine brightly in our lives.



Vrindha.S. Kumar 2009-2013 Batch
 ew born infants no longer need their umbilical cords, so they have traditionally been discarded as a by-product of the birth process. In recent years, however the stem cell rich blood found in the umbilical cord has proven useful in treating the same types of health problems as those treated using bone marrow stem cells \& PBScs.

Umbilical cord blood stem cell transplants are less prone to rejection than either bone marrow or peripheral blood stem cells. This is probably because the cells have not yet developed the features that can be recognized \& attacked by the recipient's immune system. Also, because umbilical cord blood lacks well developed immune cells, there is less chance that the transplanted cells will attack the recipient's body, a problem called graft versus host disease. Both the versatility and availability of umbilical cord blood stem cell makes them a potent resource of transplant therapies.

In 1968, doctors performed the first successful bone marrow transplant. Bone marrow contains somatic stem cells that can produce all of the different cell types that make up our blood. It is transplanted routinely to treat a variety of blood and bone marrow diseases, Nirmala College of Pharmacy, Muvattupuzha
blood cancers \&immune disorders. More recently, stem cells have been used to treat some of the same blood based diseases

Pluripotent adult stem cells are rare and generally small in number but can be found in a number of tissues including umbilical cord blood. A great deal of adult stem cell research to date has had the aim of characterising the capacity of the cells to divide or self-renew indefinitely and their differentiation potential. In mice, pluripotent stem cells are directly generated from adult fibroblast cultures. Unfortunately many mice do not live long with stem cell organs.

Most adult stem cells are linkage restricted (multi potent) and they are generally referred to by their tissue origin (mesenchymal stem cell, dental pulp, stem cell etc). Adult stem cell treatments are useful to treat leukaemia \& related bone or blood cancer through bone marrow transplant as well as they are useful in veterinary medicine to treat tendon and ligament injuries in horses.

The use of adult stem cell treatments have been successfully used for many years to treat leukaemia \& related blood or bone marrow cancers through bone marrow transplants.

The use of adult stem cells in research \& therapy is not a controversial as the use of embryonic systems, because the production of adult stem cells don't require the destruction of an embryo. Additionaly, in instances where adult stem cells are obtained from the intended recipient (an autograft), the risk of rejection is essentially nonexistent. Consequently, more vs governmental finding is being provided for adult stem cell research. Multipotent stem cells are also

found in amniotic fluid. These stem cells are very active, expand extensively without feeders \& are not tumergenic. Amniotic stem cells are multipotent and can differentiate in cells of adipogenic, osteogenic, myogenic, endothelial, hepatic and neuronal lines.

Induced pluripotent stem cells are not adult stem cells, but rather adult cells (eg: epithelial cells) reprogrammed to give rise to pluripotent capabilities. Using genetic engineering with protein transcription process, pluripotent stem cells equivalent to embryonic stem cells have been derived from human adult skin tissue.

One concern of treatment is the risk of transplanted cells forming tumors and become cancerous if cell division continuous uncontrollably. Stem cells are widely studied for their potential therapeutic use and for their inherent interest.

## Nanda Bpol m nack

##  <br> in Delhi to Prem and Saroj Kohli. He has an elder brother,

 Vikash, and an elder sister, Bhavna. Virat attended school at Vishal Bharti and Savier Convent. Virat's father, Prem, worked as a lawyer and died in December 2006.Virat kohliis one of the consistent performer in the Indian Cricket Team. The smart, stylish and good looking Virat, who is known for his destructive batting style and efficient fielding is today the face of many brands. Virat the youth icon loves to play his game aggressively. Young, fresh in blood and always daring to go for the kill- that's the one and only Virat Kohli. He has an inner strength and a great capacity to endure hardships. He is dynamic, fascinating and often mysterious-a combination that draws many towards him.

He is a middle order batsman, who can also open the batting. He can also bowl right arm medium pace. Kohli was the captain of the victorious Indian team at the 2008 U/19 Cricket World Cup held in Malaysia. He represents Delhi in first-class cricket and plays for Royal Challengers Bangalore in the Indian Premier League. He also played for the West Delhi Cricket Academy. He made his One Day International (ODI) debut in 2008 and was part of the Indian team which won the 2011 World Cup.

Despite being a regular in the ODI side, Kohli only played his first Test in 2011 against West Indies in Kingston. But on the disastrous 2011/12 India tour of Australia, in which India's senior batsmen struggled throughout, Kohli stood out, scoring his first Test hundred in Adelaide. Virat Kohli is currently regarded as one of India's potential number three batman in Tests, after the retirement of Rahul Dravid following the Australian tour. Kohli was the recipient of the ICC ODI Player of the Year award in 2012.

Kohli became the fastest Indian to score 1000 runs in ODI cricket. He was India's leading run scorer in 2010, with 995 runs including three centuries from 25 matches at an average of 47.38 between 1 January 2009 and 1 September 2011, Kohli was India's second highest run-scorer in ODIs with 1994 runs at an average of 47.47.

Kohli captained the victorious Indian team at the 2008 U/19 Cricket World Cup held in Malaysia. Batting at number he scored 235 runs in 6 matches at an average of 47 , includin? century against the West Indies U-19s. He was commended for making several tactical bowling during the tournament.

Kohli was preferred over Raina for the 2011 woold cup and became the first Indian to score a century orfworld cup debut. He also scored 59 against West Indies while sharing a partnership with Yuvraj Singh. His 83 run partnership for the third wicket with Gautham Ganbhir was instrumental in India taking the upper hand during their run chase against Sri Lanka in the final. He made 282 runs in an innings at an average of 35.25.

Kohli played for Royal Challengers Bangalore at the 2008 Indian Premier League. He was bought for $\$ 30,000$ before the first season in 2008. He did not perform well, scoring only 165 runs in 13 innings at an average of 15 and taking only 2 wickets with his bowling.

But he improved marginally in the second season, scoring 246 runs in 16 innings with an average of 22.36 and taking 9 catches and efforting 2 run outs.

In the third season, he scored 307 runs, including two half centuries, in 13 innings at an average of 27.90. In the fourth season of the IPL, he was the only player that Royal Challengers Bangalore retained, preferred over the likes of Rahul Dravid, Jacques Kallis and Ross Taylor.

He was the 2nd highest run getter in the tournament behind Chris Gayle.

The 2012 Indian Premier League followed in April and May and Kohli scored 364 runs from 16 matches, with two half-centuries.

Records \& Achievements
Fastest Indian Cricketer to reach 1000 runs in ODIs Fastest Indian Cricketer to reach 3000 runs in ODIs Kohli's 183 runs is highest score by any batsmen in ODI against Pakistan.
Most runs in a Calendar year in ODIs for 2011 ICC ODI Cricketer of the year 2012.


## KKALLOOR GIFT PLANET

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Sahanas K.K. 2010-2014 Batch




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Success consist of going from failure to failure without loss

## of enthusiasm

Winston Churchill.

We come across success stories in every sphere of human activity. We can see people, starting from 'absolute zero' and achieve highest position in their respective fields. At the same time, those who have inherited an immense fortune end up as failure. What is the chemistry of success? Why do some succeed and some fail?
There are two distinctive elements behind every success story-hard work and perseverance. But when we get closer, attitude plays a major role. The successful person always construct a vision, develop skills, persist in face of adversity, learn from mistakes, empathize with others, develop communication skills etc...
Jack Welch ,the best business manager has evolved a formulae to assess the ability of a person to achieve success

4Es + $1 P$
E-Energy E-Energise E-Edge E-Execution P-Passion
ENERGY is 'positive energy', It indicates the ability to preserve in one's endeavour or effort. People with energy are always optimistic and adapt to changes easily. They start and end the day with great enthusiasm. They enjoy work and life.

ENERGISE is the 'ability to radiate the positive energy into others'.They make people around them cheerful and enthusiastic. They encourage their team members to make things imposssible to possible.
EDGE is the 'courage to take stern decisions'. People look at problems from different angles rather than solving it.But the person would know when to stop the analysis and take decisions. They even like to take responsibilities.
EXECUTION is the 'ability to get things done'. You must know how to implement the decisions taken. You must show courage to execute them even against opposition, unexpected problems etc......
PASSION is a catalyst. This makes the real difference between failure and success. People with high passion for work have all their senses involved in the job at hand. They have heart-felt, genuine and deep interest in job. People with passion are high achievers and always remain self driven and motivated. Life is a celebration for them. Success never comes till one is passionate about it.
There is one more dimension- KNOWLEDGE. We should have A to Z knowledge about the work. We should strive to enhance and update our knowledge continually.

The final element is LUCK. All successful people are extremely lucky. When you combine all the above attributes in your personality and work with passion you invite luck to smile on you, in the form of divine blessing. Wishing you all the best of luck.

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## CHITETHKUDYYL PAINTS

Paipra Jn.,Pezhakkappilly

## MUVATTUPUZHA

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## some uses of banana

Before you throw out whatever's left of your banana, think about the many ways you can use the skin in and around the home. Here is a useful guide...

Banana skins have been reported to be good at reducing warts and are useful for reducing pain and inflammation when rubbed over cuts and grazes.

Bananas are one of the healthiest and easiest to consume fruits available.
Simply peel off the skin and eat.
Rich in potassium, great for a school snack and hunger buster, bananas are more than just a fruit. Bananas are an excellent source of vitamin B, and contain moderate amounts of vitamin C , and manganese. Along with other fruits and vegetables, consumption of bananas may be associated with a reduced risk of colorectal cancer and in women, breast cancer and renal cell carcinoma.
Unripe bananas should not be stored in a refrigerator as the cold will cause them to rot.


Jincy Joy 2008-2012 Batch

Zumas contain tryptophan which induces maztion and also contain other compounds that am mprove your mood.

- For centuries the health and beauty benefits of zanana peel have been known for reducing Ithammation, due to the enzymes contained in the
tes also reported to be good at reducing warts and is seffle in reducing pain and inflammation when rubbed over cuts and grazes.

4. Banana peel contains antioxidants and minerals that assist with natural healing of the skin and have been used as a home remedy for psoriasis, warts, bruises and skin irritation.
Rub the inside of a banana peel on an insect bite for relief from itching.
5. For problem skin, smash a banana and add it to $1 / 4$ cup of natural yoghurt. Add 2 tablespoons of honey and apply this as a face mask - leaving it on your face and neck for 20 to 30 minutes before rinsing and patting dry.
Treat acne by rubbing the inside of a banana skin
over the area to reduce inflammation and swelling.
6. Banana peels rubbed over the forehead and cheeks can help tighten the skin and give it a fresher, healthier look.
Rub the inside of the banana peel on your face before bed and leave it overnight. Wash it off with warm water in the morning.
7. Eating bananas regularly can keep the digestive system running at an optimal level, restore energy and also provide the body with essential nutrients that help with cell regeneration.
8. Reduce the symptoms of depression - bananas contain tryptophan which induces relaxation and also contains other compounds that can improve your mood.
9. Raw bananas are a natural energy booster; each banana contains approximately 100 calories and is easily assimilated into the body.
10. Managing ulcers - bananas are easy to digest and absorb and will not put stress on the ulcers.
They also help to neutralise acids in the stomach, which can assist in preventing indigestion and other digestive problems that trigger ulcer problems.









































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Neenu John 2012-2016 Batch














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# T.B.Jn., Muvattupuzha 

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16. Swallow and Breathe

Fact: Humans are the only mammal that can't swallow and breathe at the same time.
Every other mammal, and many other non-mammalian animals, can breathe while they eat. In fact, human infants are also able to do so, which lets them breathe while they nurse. We lose this ability around the age of 9 months, when our voice box drops as part of our development. As children and adults, the human voice box lays unusually low in the neck compared to other animals. This allows sound to resonate much more, which is why we are able to produce the wide range of sounds that makes up our speech.

## 17 Second Brain

Fact: You have a second brain in your gut.
Well, sort of. You have around 100 million neurons, more than are in your spinal cord, that line your gut from your esophagus to your anus. This is known to scientists as the enteric nervous system. This second brain is incapable of conscious thought and is largely responsible for digestion, but it does more than that. If you've ever felt "butterflies" in your stomach or felt as if you've been punched in the gut when receiving bad news, that was caused by your enteric nervous system. This also plays a roll in your overall mood, why certain foods can alter your mood and why bad situations or feelings often cause you to lose your appetite.

## 18 Loneliness

Fact: Loneliness is physically painful.
Ok, you probably knew that. But do you know why? Researchers at the University of California asked volunteers to play a computer game that simulated a simple game of catch with two other players. What they didn't know was that the other "players" were just the computer and it was designed to leave them out after a few minutes of play, resulting in feelings of loneliness and rejection. They found that the feeling of loneliness is actually processed in the same part of your brain as physical pain, called the anterior cingulate cortex. This explains the human desire to fit in, to seek out companionship and helps to understand the power of peer pressure. Scientists are also hoping to use this information to help explain and treat some forms of depression.

## 19 Saliva

Fact: You salivate more before you vomit.
This is an automatic bodily reflex designed to protect your throat, mouth and teeth. Stomach acid is, of course, highly
acidic and if it weren't for the lining in your stomach it would eat a hole right through it. Unfortunately, you don't have that same lining in your throat or mouth. Salivating before vomiting helps to dilute and rinse away the acid so it won't harm the rest of your body. Your saliva can also help to neutralize the acid somewhat. This is also why it's a good idea to rinse out your mouth and brush your teeth after you vomit.

## 20 Bitter Sweet

## Fact: Cut yourself? Put sugar on it!

Healers in Africa have been putting crushed sugar cane on wounds for generations. Moses Murandu is a nurse who grew up watching his father use the remedy in Africa and was surprised to find that doctors in England didn't use it. He started a study to research the idea, testing it on patients with bed sores, leg ulcers and amputations before dressing the wounds. They found that the sugar can reduce pain and kill bacteria that slow healing. Sugar is hygroscopic, meaning it naturally absorbs water which the bacteria need to survive. Sugar is also much cheaper than more modern antibiotics. So the next time you cut yourself, give it a sprinkle of sugar before putting on a band-aid!

## 21 Forgetful

Fact: Forget why you walked into a room? There is a reason. Have you ever walked into a room and forgot why you were there? And after that, have you ever noticed that you can sometimes remember if you go back through the doorway? There is actually a reason for that. Researchers in Notre Dame conducted several experiments on rooms and their effect on memory. Subjects in the study were divided into two groups and given a simple task while traveling the same distance. The only difference is one group went through a doorway and the other didn't. They found that people who traveled through the doorway were three times more likely to forget their task. Researchers concluded that our mind perceives doorways as "event boundaries" and that decisions you made in that room are "stored" there when you leave. That is also why you can remember if you go back into that room.

## 22 Color Vision

Fact: Some woman actually see more colors.
Frustrated because you told your hubby to bring your peach shirt and he grabbed a pink one? It might not be his fault. A study from the University of California shows that up to 50\% of women carry four types of color receptors, or iodopsins, rather than the usual three. Normal visioned people will look at a rainbow and see seven different colors, while one with four receptors will see around 10 colors. The reason this happens in woman is that the red and green receptors are located on the X chromosome, while the blue is on the Y. The red and green receptors can be slightly shifted
27. The human genome: Quick facts

The genome is the list of instructions, encoded in DNA (deoxyribonucleic acid), needed to make a human DNA and protein. The four letters in the DNA alphabet -A, C, G and $T$ - are used to carry the instructions for making an organism. The order (or sequence) of these letters holds the code - just like the order of letters that makes words mean something. Each set of three letters corresponds to a single amino acid.
There are 20 different building blocks - amino acids used in a bewildering array of combinations to produce our proteins. The different combinations make proteins as different as keratin in hair and haemoglobin in blood.
28. The genome

The human genome is made up of 3 billion (3 000000 000) bases of DNA, split into 24 chromosomes.

This information...
would fill a stack of paperback books 200 ft ( 61 m ) high would fill two hundred 500-page telephone directories would take a century to recite, if we recited at one letter per second for 24 hours a day
if spread out 1 mm apart, would extend 3000 km (1864 miles) or about 7000 times the height of the Empire State Building.
29. Human cells

The human body is made up of 100 trillion cells. Each cell has at least one nucleus, which houses the chromosomes.
There is 1.8 m of DNA in each of our cells packed into a structure only 0.0001 cm across (it would easily fit on the head of a pin).
If all the DNA in the 100 trillion cells of the human body was put end to end it would reach to the sun and back over 600 times [ 100 trillion $\times 6 \mathrm{ft}(1.8 \mathrm{~m})$ divided by 92 million miles $(148,800,000 \mathrm{~km})=1200$ ].
Most human cells contain 46 chromosomes: pairs of chromosomes 1-22, and a pair of sex chromosomes (females have two Xs ; males an X and a Y ). Sperm and eggs contain one of each chromosome.
30. Genes and variation

Housed along each chromosome is a selection of genes. The human genome contains about 20,000-25,000 genes.
Mice also have about 20,000 genes; in the nematode (C. elegans), the number is around 19,000; in yeast (S. cerevisiae) there are approximately 6000 genes; and the microbe responsible for tuberculosis has around 4000.
Between humans, our DNA differs by only 0.2 per cent, or 1 in 500 base (letters). (This takes into account that human cells have two copies of the genome.)Human DNA is 98 per cent identical to chimpanzees. te tiny capilaries, but also include small veins and arteries. This means if you are "only" 10 pounds overweight your heart has to pump blood through an extra 70 miles of blood vessels. The good news is that this also works in reverse. If you lose a pound of fat, your body will break down and reabsorb the no longer needed blood vessels. This is encouraging to dieters, as one pound does not seem like a lot to lose, but even that little bit of sifference will result in a large benefit for your heart!

















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I will Be Back...
I will be the one, beloved one...
Now I miss you mom
I guess you were mom all the time Worried about all...

As well as the stars in the sky still you burning for the others 1 knew, I am seeing you
But my faith is gone.
And I want to fly from
Darkness to light
Hold my hands
Now I am out of trust I know
A helping hand to make all right one day I will be back again And I will be the one The one from the sky....


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## Jesus Youth initiations

 in our campus- One day programme
- Prayer meetings
- Prayer box
- Retreat

Jesus Youth is an international Catholic youth movement with a charismatic spirituality. It had its beginnings in Kerala (India), but is now active in nearly 30 different countries around the world.

Jesus Youth is an initiative of young people, who, filled with the Holy Spirit try to reach out to other young people. The strength of the movement is its special focus on a life centered on Lord Jesus Christ: beginning with an experience of God nourished by prayer, the Word of God, the sacraments and fellowship, and sharing the Good News of Jesus Christ with others.

Though not an actual community, Jesus Youth is a network of small but vibrant groups of young people. In their own life situations, they strive to give time to the Lord, responding to the challenges of today's world in the power of the Holy Spirit.

## Campus ministry

College life is the time when student's minds and hearts will turn to the deepest questions of life, its meaning, future, love, hope etc... All are searching for answers for these questions, though often not in the right places. With the help of an exciting and healthy Catholic Campus Ministry in the college, today's youngsters will never miss out on the great adventure that God has for them!


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Ajmi K．A． 2009－2013 Batch










































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## WHAT IS MATURITY?

- Knowing myself.
- Asking for help when I need it and acting on my own when Idon't.
- Admitting when l'm wrong and making amends.
- Accepting love from others, even if I'm having a tough time loving myself.
- Recognizing that I always have choices, and taking responsibility for the ones I make.
- Seeing that life is a blessing.
- Having an opinion without insisting that others share it.
- Forgiving myself and others.
- Recognizing my shortcomings and my strengths.
- Having the courage to live one day at a time.
- Acknowledging that my needs are my responsibility.
- Caring for people without having to take care of them.
- Accepting that l'll never be finished - l'll always be a work-in-progress.

appiness is ephemeral, subject to the vagaries of everything from the weather to the size of your bank account.

We're not suggesting that you can reach a permanent state called "uminess' and remain there. But there are many ways to swerve off the oath of mimy. anger, frustration and sadness into a state of happiness once or even merail times throughout the day. Here are 20 ideas to get you started.

Pactice mindfulness: Be in the moment. Instead of worrying about your theckup tomorrow while you have dinner with your family, focus on the here and now- the food, the company, the conversation.
augh Out Loud: Just anticipating a happy, funny event can raise levels of motorphins and other pleasure inducing hormones and lower production of limess hormones.

Zerto sleep: We have become a nation of sleep-deprived citizens. Taking a aly rap or getting into bed at 8p.m. one night with a good book and turning telight out an hour later can do more for your mood and outlook on life than any number of bubble baths or massages.

[^0]Ms. Minu B. Pattasseril<br>Asst. Professor

6. Just say No : Eliminate activities that aren't necessary and that you don't enjoy.
7. Make a list: There's nothing like writing down your tasks to help you organize your thoughts and calm your anxiety. Checking off each item provides a great sense of fulfillment.
8. Do one thing at a time: It was found that people who do multitask are more likely to have high blood pressure. Take that finding to heart.
9. Garden: Not only will the fresh air and exercise provide their own stress reduction and feeling of well-being, but the sense of accomplishment that comes from clearing a weedy patch, watching seeds turn into flowers, or pruning out dead wood will last for hours, if not days.
10. Tune out the news: For one week go without reading the newspaper, watching the news, or scanning the headlines online. Instead, take a vacation from the misery we're exposed to every day via the media and use that time for a walk, a meditation session, or to write in your journal.
11. Take a dog for a walk: There are numerous studies that attest to the stress-relieving benefits of pets.
12. Scent the air: Research finds that the benefits of aromatherapy in relieving stress are real. In one study, people exposed to rosemary had lower anxiety levels, increased alertness and perform math computation faster. Adults exposed to lavender showed an increase in the type of brain waves that suggest increased relaxation.
13. Ignore the stock market: Researchers found a direct link between the daily performance of the stock market and the mental health of those who closely followed it.
14. Visit a quiet place: Libraries, museums, gardens and places of worship provide islands of peace and calm in today's franctic world. Find a quiet place near your house and make it your secret getaway.
15. Volunteer: Helping others enables you to put your own problems into perspective and also provide social interaction. One study found that volunteer work enhanced all six aspects of well-being: Happiness, Life satisfaction, Self-esteem, Sense
of control over life, Physical health and depression.
16. Spend time alone: Although relationships are one of the best antidotes to stress, sometimes you need time alone to recharge and reflect. Take yourself out to lunch or to a movie, or simply spend an afternoon reading, browsing in a book store or antiquing.
17. Walk mindfully: You probably already know that exercise is better than tranquilizers for relieving anxiety and stress. But what you do with your mind while you are walking can make your walk even more beneficial.
18. Give priority to close relationships: One study found that those who had a lot of supportive friends were much more likely to have healthier blood pressure, cholesterol levels, blood sugar metabolism and stress hormone levels than those with two or fewer close friends.
19. Take care of the soul: For many people faith provides a support community, a sense of life's meaning, feelings of ultimate acceptance, a reason to focus beyond yourself, and a timeless perspective on life's woes. Even if you're not religious, a strong spirituality may offer similar benefits.
20. Count your blessings: People who pause each day to reflect on some positive aspect of their lives experience a heightened sense of wellbeing.



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## MUVATTUPUZHA

## HiHART orChuins

Giving is a mother like quality. Mothers know most about the joy of giving. It is said that we all make a living by what we get, and make a life by what we give. Service to humanity means serving our fellow human beings who by virtue of birth or circumstances do not have the innate abilities to enjoy life.

Here is the story of a woman who was travelling alone in the mountains. She found a precious stone in a stream. The next day she met another traveller who was hungry. The woman opened her bag to share her food. The hungry traveller saw the precious stone and asked the woman to give it to him. She did so without hesitation. The traveller left, rejoicing in his great fortune. He knew the stone was worth enough to give him security for a life time. But a few days later he came back to return the stone to the woman. He said to the woman, I have been thinking. I know


Dimple Abraham 2009-2013 Batch
> "Effort only fully releases its reward after a person refuses to quit."

> Napoleon Hill.

how valuable the stone is, but I give it back in the hope that you can give me something even more precious. Give me what that enabled you to give me the stone. The woman smiled and said " the joy of giving".

Experience the joy of giving. The art of living is in the art of giving. Art of giving is in the heart of giving.



Words that need to be spoken should not be inside.
The hurt, pain or jealousy a person feels cannot hide.
Sorrow and anger can be and will be suppressed.
But this only leads to a person feeling depressed. Anger is a deadly toxin in which the bodyflows. When it takes over limb by limb, everyone knows. The body-The mind controls and manipulates. As the poison enters the veins and circulates. When the poison reaches the heart, it's too late. Disastrous emotions take over, such as revenge and hate. The antidote to cure these emotions is not so hard to find. We must search to learn to control our spirited bodies and minds.

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The Gerson
THRepapy


Asha Elisabeth 2009-2013 batch

With its whole-body approach to healing, the Gerson Therapy naturally reactivates your body's magnificent ability to heal itself - with no damaging side effects. This powerful, natural treatment boosts the body's own immune system to heal cancer, arthritis, heart disease, allergies, and many other degenerative diseases. Dr. Max Gerson developed the Gerson Therapy in the 1930s, initially as a treatment for his own debilitating migraines, and eventually as a treatment for degenerative diseases such as skin tuberculosis, diabetes and, most famously, cancer.

The Gerson Therapy's all-encompassing nature sets it apart from most other treatment methods. The Gerson Therapy effectively treats a wide range of different ailments because it restores the body's incredible ability to heal itself. Rather than treating only the symptoms of a particular disease, the Gerson Therapy treats the causes of most degenerative diseases: toxicity and nutritional deficiency.

An abundance of nutrients from copious amounts of fresh. organic juices are consumed every day, providing your body with a super-dose of enzymes, minerals and nutrients. These substances then break down diseased tissue in the body, while coffee enemas aid in eliminating toxins from the liver.

Throughout our lives our bodies are being filled with a variety of carcinogens and toxic pollutants. These toxins reach $u$ through the air we breathe, the food we eat, the medicines we tale and the water we drink. The Gerson Therapy's intensive
detoxification regimen eliminates these toxins from the body, so that true healing can begin.

## How the Gerson Therapy Works

The Gerson Therapy regenerates the body to health, supporting each important metabolic requirement by flooding the body with nutrients from about $15-20$ pounds of organically grown fruits and vegetables daily. Most is used to make fresh raw juice, up to one glass every hour, up to 13 times per day. Raw and cooked solid foods are generously consumed. Oxygenation is usually more than doubled, as oxygen deficiency in the blood contributes to many degenerative diseases. The metabolism is also stimulated through the addition of thyroid, potassium and other supplements, and by avoiding heavy animal fats, excess protein, sodium and other toxins.

Degenerative diseases render the body increasingly unable to excrete waste materials adequately, commonly resulting in liver and kidney failure. The Gerson Therapy uses intensive detoxification to eliminate wastes, regenerate the liver, reactivate the immune system and restore the body's essential defenses - enzyme, mineral and hormone systems. With generous, high-quality nutrition, increased oxygen availability, detoxification, and improved metabolism, the cells - and the body - can regenerate, become healthy and prevent future illness.

## Aluicing

Fresh pressed juice from raw foods provides the easiest and most effective way of providing high quality nutrition. By juicing, patients can take in the nutrients and enzymes from nearly 15 pounds of produce every day, in a manner that is easy to digest and absorb.


Every day, a typical patient on the Gerson Therapy for cancer consumes up to thirteen glasses of fresh, raw carrot/apple and green-leaf juices. These juices are prepared hourly from fresh, raw, organic fruits and vegetables, using a two-step juicer or a masticating juicer used with a separate hydraulic press.

## The Gerson Diet

The Gerson diet is entirely organic and vegetarian. The diet is naturally high in vitamins, minerals, enzymes, micronutrients, and extremely low in sodium, fats, and proteins. The following is a typical daily diet for a Gerson patient on the full therapy regimen:

- Thirteen glasses of fresh, raw carrot/apple and green-leaf juices prepared hourly from fresh, organic fruits and vegetables.
- Three full vegetarian meals, freshly prepared from organically grown fruits, vegetables and whole grains. A typical meal will include salad, cooked vegetables, baked
potatoes, Hippocrates soup and juice.
- Fresh fruit and fresh fruit available at all hours for snacking, in addition to the regulardiet.


## Supplements

All medications used in connection with the Gerson Therapy are classed as biologicals, materials of organic origin that are supplied in therapeutic amounts.

- Potassium compound
- Lugol's solution
- Vitamin B-12
- Thyroid hormone
- Pancreatic Enzymes


## Detoxification

Coffee enemas are the primary method of detoxification of the tissues and blood on the Gerson Therapy. Cancer patients on the Gerson Therapy may take up to 5 coffee enemas per day.

## THE BOND OF FRIENDSHIP

 The Bond of friendshipA bond without an end
A rope without a knot
An ear where secrets are told
And things which cannot be sold.
A tree with flowers and fruits
A plant with all its roots
A ladder which reaches the sky
To whom you can never say bye.
A bow with an arrow
A club of joy and sorrow
Members of it are called friends,
I say it never ends.
A star which twinkles bright, A moon which shines all night A ship which does not sink It's the bond of friendship....


Jithu P.Raju 2009-2013 Batch


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A month before the exams Your face winces in pain Oh! God just great


Bibina Mathew 2011-2015 Batch

I've got to start studying again
So much work, so little play.
I think my hairs going grey
The class passes by
All too quick
Revision has begun
But why don't you feel at ease?
When all of its done.
The exam time-table is out
Your face clouds in gloom
You watch your pals chat
While you are trying your best,
To gather up your brain cells
Your last day of rest
You study the entire day till you are sure.
You have cracked your head
The only comfort its 12 'o' clock.
You drag yourself to bed
Next day you creep in to the exam hall
You gallop through the paper fast



Janet Thomas 2009-2013 Batch

Aren't you familiar with the names of health drinks like boost, bournvita etc.?? In addition to this, you will come across another name "probiotics" . Don't be wonder struck. It's a reality. Probiotics is a treatment in which one is given a 'drink' containing ' friendly bacteria' in order to help useful bacteria in their fight against their harmful brethren.

Scientists have found that drinks containing "friendly bacteria" (probiotics ) can cut the length of common cold by nearly a quarter. They have also found that symptoms such as headaches, coughing and sneezing were reduced among those who regularly took a supplement of bacteria that help the gut digest food and is thought to boost the immune system. The health benefits of friendly bacteria first came to attention of the general public in 1980, when Dr. Elie Metchnikoff ( a Russian biologist working in the Pasteur Institute ) wrote a book "The Prolongation of Life". Research has suggested that probiotic bacteria can increase the absorption of minerals and vitamins, and improve digestion, especially of milk products, improve our immune system by producing antimicrobial substances (bacteriocins) that deter various pathogens; increase absorption of calcium ; produce B Vitamins, support healthy liver functions ; normalize bowel elimination problems and promote regularity and prevent intestinal infections.


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1. CLASSIC
2. DICTIONARY
3. CIGARETTE
4. TEARS
5. DOCTOR
6. NURSE
7. POLITICIAN
8. SMILE
9. CONFERENCE
10. COMPROMISE
11. COLLEGE
12. ETC
13. SECRET
14. EXAMINATION
15. HEART BEAT
16. LICENSE

- A book which people praise but do not read.
- Place where divorce comes before marriage.
- Pinch of tobacco rolled in a paper with fire at one end and a fool at other end.
- The hydraulic force by which masculine with power is defeated by the feminine water power.
- A person who kills your ills by pills and kills you with his bills.
- A lady who loves and cares you till her shift end.
- One who shakes your hand before election and confidence after.
- A curse that can set a lot of things.
- The confusion of one man multiplied by the number of present.
- The art of directing the cake in such a way that, everybody believes he got the biggest piece.
- A place where you can relax your sternous hostel life.
- A sign to make others believe that you know more than you actually do.
- Rapidly spreading news.
- Gives you an opportunity to say"l will do it next time"
- Proof to say that you are reading this.
- Gives you permission to break the lane.


Priya Jose
2009-2013 Batch

Moods, says the experts, are emotions that tend to become fixed, influencing one's outlook for hours, days or even weeks. That's great if your mood is a pleasant one, but a problem if you are sad, anxious, angry or simply lethargic.

Perhaps the best way to deal with such mood is to talk things out, sometimes, though, there is no one to listen. Modern Pharmacology offers abundant number of anti-depressants and anti-anxiety drugs. However, in the moments of bad moods, try one of these antidote instead of rushing to the chemist. Because, what people don't realize is that scientist have discovered the effectiveness of several non drug approaches to set you free from an unwanted mood. These remedies are not toxic.

Aerobic exercises seem to be the most effective cure for a bad mood. Aerobic exercises such

# Beat that uggly moodl 

as running, cycling, walking or swimming can boost the heart beat rate, increase circulation of blood \& improve the body's utilization of oxygen.
"Colour can be a nutrient for the mind as vitamins are for the body", says a colour psychologist. He suggests to keep away from red to defuse irritability \& anger. Avoid wearing colours that make you feel down or depressed such as black or dark blue. Such people should go for warm, bright and active colours that lighten your mood. Soft shades of blue have a calming effect and decreases anxiety \& tension.

There is also a scientifically established relation between food and mood. Malnutritioned teenagers experience unhappy moods. Insufficient protein intake produces a weak feeling; low blood sugar triggers off painful hunger and irritability. Skipping meal can trigger an emotional outburst or flood of unpleasant feelings in teenagers. Growing teenagers may therefore need periodic snacks in addition to the "square" meals a day to keep their energy levels high and moods positive. To feel relaxed or sleepy, we need to take high carbohydrate and low protein foods an hour before bed time.

People are often depressed when their thoughts are negative and distorted. If you avoid being tensed and think positive thoughts, you will find peace of mind. So you should lift yourself from such disturbing thoughts and try to spend more time with people you love and those who care for you.

So all you lovely folks out there, its your own life you are living, so why let that ugly mood spoil all the fun for you, when you definitely can do something about it Cheer up! Chin up! Try out some of those exercises, put on some soothing colours and dig into your favourite health snack or meal and you'll be on the top of the world again; having beaten that ugly mood. All the best !


Seven techniques to improve human relations

1．The six most important words ： ＂I admit I made a mistake．＂
2．The five most important words ：
＂You did a great job＂
3．The four most important words ：
＂What is your opinion？？＂
4．The three most important words ：
＂If you please＂
5．The two most important words ：
＂Thank you＂
6．The most important word：
＂We＂
7．The least important word ：
＂।＂

Priya Jose 2009－2013 Batch

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# Nutricosmetics 

Ms. Manju Maria Mathews<br>Asst. Professor

Nutricosmetics is the latest food trend that is becoming widely popular as a result of increasing consumer desire to go beyond traditional beauty solutions. Factors such as rising consumer awareness, emergence of spa culture, and inclination towards less invasive beauty treatments are driving future acceleration.

Nutricosmetics are ingestible products that are formulated and marketed specifically for beauty purposes.

Nutricosmetics should not be confused with the therhybrids:

## Dosmeceuticals

Troical cosmetic products that claim to have medicinal z trug like pharmaceutical benefits.
Eramples: anti-aging products, skin whiteners/ nhteners, acne aids, whitening toothpastes, toothwhitening systems, antiperspirants.

## hutraceuticals

4 aod or a beverage that provides medical or health mefits, including the prevention and/or treatment of a mase in a fashion similar to pharmaceutical agents.
zamples: cholesterol-lowering, diabetes management ne artar control products.
thicosmetics generally address three specific areas:
n-Repair and prevention ,Sun protection, Firmness, -rnentation, Whitening, Slimming

Retention and growth, Restoration,

## Nourishment, Volumizing

 Nails-Strengthening Nutricosmetics are of either Pill type or Drinkable type Nutricosmetic ingredientsIngredients such as collagen, lycopene, lutein, green and white tea, aloe vera and grape seed, all have been used in products with beauty claims, including protecting against premature aging and sun damage and promoting skin firmness.

Age-defying antioxidants such as vitamins A, C and $E$, selenium, zinc, polyphenols and lycopene have also been among the most common antioxidants employed in functional foods and beverages as well as dietary supplements. Vitamin C, for example, has a vital function in the production of collagen in the dermis.

Brands - One of the major recent launches includes the lycopene-containing supplement Innéov Fermeté, a joint collaboration between food giant Nestlé and global personal care player L'Oréal. Lycopene was initially marketed on the basis of its cancer-fighting properties; however, it is now promoted as a beauty/skin health enhancer. Innéov Fermeté, designed to be taken daily, reportedly slows the effects of skin aging.

Collagen, a protein important for healthy hair, nails and skin that accounts for up to $75 \%$ of the body's skin, bone and muscle tissue, is another popular beautyboosting ingredient added to both skin care products and functional food and beverages alike. Collagen-
supporting food products claim to boost the body's natural production of collagen and promote skin rejuvenation and radiance

Several products with collagen have been launched in different markets in recent years, including Kaiku Colageno yogurt with collagen (Spain, 2008), Nescafé Body Partner 3in1 Coffee with collagen (Malaysia and Singapore 2009) and Jelly Collagen Plus from Maruha Nichiro Corp, a functional cup jelly snack with added collagen (Japan, 2010).

There are fortified/functional and better-for-you foods, which, in addition to popular health claims, also contain a beauty-from-within element. Yili Y-Yoperi drinking yogurt, a low-fat yogurt fortified with collagen protein and fat-free Vitagen Collagen Less Sugar drinking yogurt with probiotics, collagen peptides and vitamin C ,both target women and are just two examples of how manufacturers are adding value to everyday staple food items while simultaneously introducing the beauty-fromwithin concept. Nivea's Goodbye Cellulite range, is also notable for its claims in tackling cellulite through the use of both a nutricosmetic pill and a cream. The Goodbye Cellulite capsules and gel both contain L-carnitine, which is reputed to aid in dissolving fat. Such products seem to be proving more palatable to consumers who are skeptical about nutricosmetics because they combine traditional topical products with less familiar delivery formats.

## Challenges

Dove Vitalize (dark chocolate enriched with B vitamins) and Dove Beautiful (including vitamins C and E , biotin and zinc) chocolate ranges, launched by packaged food giant Mars in the U.S. in February 2008 was a failure. Despite significant investment in product promotion, including a tie-in with New York Fashion Week, and the ample marketing support of Mars, high hopes failed to materialize into actual sales and the product was withdrawn at the end of 2008. U.S. consumers did not buy into the concept as a whole because they doubted the health benefits of chocolate.Another reason for the reduced acceptance of nutriceuticals is the possible time delay for the results.

The introduction of nutricosmetics is little problematic due to the lack of a clearly established regulatory system.
Beauty food manufacturers also face a challenge in finding appropriate retail channels through which to sell their products.

The challenges for manufacturers will be to raise awareness and educate consumers as to how nutricosmetics work and to prove their efficacy. At the same time, product claims should better explain the nature of ingredients so as to improve communication with consumers wanting to understand what they are ingesting.

## Future.

Global Nutricosmetics market is projected to reach USD 4.24 billion by the end of 2017. This is owing to various factors such as, growing urbanization, growth in aging population, greater spending power, and the need to look younger and attractive through natural methods. Growing awareness about health among consumers worldwide and emphasis on total wellness and health is another driving force. Although in the developing stage, the Nutricosmetics industry is expected to witness healthy growth in the near future. Technological developments and products innovation is contributing significantly to the growth of this market. Manufacturers are emphasizing on the development of natural and organic products as they are in great demand from consumers across the globe.


## घH39 conos <br> nonocto



Aja Rose Gigi 2011-2015 Batch

























































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## Mabue ine compecte showroom


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E.E. SHAJAHAN

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# E INGURANGE AGENTI 


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## INDIAN TRADERS

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##  Domblinis oynmarub..





























## 



Reenu Saby 2009-2013 Batch

There is no one to look at her
She don't know what is to be loved
And she has no one, to give her a kiss
All she knows is that, she is alone!
She talks to no one
She sits on a little corner
Watching the people walking and
Watching the children playing.
She walks through the dark shadow
Begging for grain
For she had not eaten for days
And now her head was going crazy.
Hey! Is there no one to look at her?
She begs and begs until she reaches a lonely road And she moans and cries like a mad dog

But there is no one to look at her.
She lay on the ground weeping and weeping And now......She was no more in the world But she wore a smile on her face And her teeth glittered in the moon light. "All she knows is that she is alone".

## PRESCRIPTION FOR HAPPIIESS



Prestin Thomas
2009-2013 Batch
ASPIRE TO REACH YOUR POTENTIAL
BELIVE IN YOURSELF
CREATEA GOOD LIFE
DREAM ABOUT GOOD THINGS
EXCERCISE FREQUENTLY FORGIVE OTHERS MISTAKES GLORIFY THE CREATIVE SPIRIT HUMOUR YOURSELF AND OTHERS IMAGINE GREAT THINGS
JOYFULLY LIVE EACH DAY KINDLY HELP OTHERS LOVE ONE ANOTHER
MEDITATE DAILY
NURTURE THE ENVIRONMENT ORGANISE YOURSELF
PRAISE THE PERFORMANCE WELL
QUESTION MOST THINGS
REGULATE YOUR BEHAVIOUR
SMILE OFTEN
THINK RATIONALLY
UTILISE TIME
VALUE LIFE
WORK FOR GOOD CAUSE
X-RAY AND CAREFULLY EXAMINE PROBLEMS YEARN TO IMPROVE


The day I stepped into Nirmala The day I became Nirmalite I felt a bit strange
Something strange occurred to me My heart began to change

I became a better person
My smile grew still wider Each time I stepped into campus I was welcomed with arms open wide And that made me feel fresh and free I felt great with the feeling


Joshma George 2011-2015 Batch

And softness of this place
I understand completely that
No one could take its place
The world became less important
While my role as a student in this college
Became my greatest thrill
I realize without a doubt that
This college has made me whole
The sweet memories in this college have
Fulfilled my heart and have touched my soul
It has raised my spirit
And has made a difference in my life .


Vineetha V.C Ist Year M.Pharm

## 








 ©omb






























2012-2013


Anjana Sasi 2009-2013 Batch

1. You Forget $90 \%$ of Your Dreams

Within 5 minutes of waking half of your dream is forgotten. Within $10,90 \%$ is gone.
2. Blind People also Dream

People who became blind after birth can see images in their dreams. People who are born blind do not see any images, but have dreams equally vivid involving their other senses of sound, smell, touch and emotion.
3. Everybody Dreams

Every human being dreams (except in cases of extreme psychological disorder). If you think you are not dreaming-you just forget your dreams.
4. In Our Dreams We Only See Faces That We already Know
Our mind is not inventing faces - in our dreams we see real faces of real people that we have seen during our life but may not know or remember. We have all seen hundreds of thousands of faces throughout our lives, so we have an endless supply of characters for our brain to utilize during our dreams.

# INTERESTING FACTS ABOUT DREAMS 

## 5. Not Everybody Dreams in Color

A full $12 \%$ of sighted people dream exclusively in black and white. The remaining number dream in full color. Studies from 1915 through to the 1950s maintained that the majority of dreams were in black and white, but these results began to change in the 1960 s. Today only $4.4 \%$ of the dreams of under- 25 year-olds are in black and white. Recent research has suggested that those changing results may be linked to the switch from black-and-white film and TV to color media.
6. Dreams are Symbolic

If you dream about some particular subject it is not often that the dream is about that. Dreams speak in a deeply symbolic language. Whatever symbol your dream picks on it is most unlikely to be a symbol for itself.

## 7. Emotions

The most common emotion experienced in dreams is anxiety. Negative emotions are more common than positive ones.

1. You can have four to seven dreams in one night. On average you can dream anywhere from one or two hours every night.
2. Animals Dream Too

Studies have been done on many different animals, and they all show the same brain waves during dreaming sleep as humans. Watch a dog sleeping sometime. The paws move like they are running and they make yipping sounds as if they are chasing something in a dream.

## 10. Body Paralysis

Rapid eye movement (REM) sleep is a normal stage of sleep characterized by rapid movements of the eyes. REM sleep in adult humans typically occupies 20-25\% of total sleep, about 90-120 minutes of a night's sleep.
During REM sleep the body is paralyzed by a mechanism in the brain in order to prevent the movements which occur in the dream from causing the physical body to move. However, it is possible for this mechanism to be triggered before, during, or after normal sleep while the brain awakens.
11. Dream Incorporation

Our mind interprets the external stimuli that our senses are bombarded with when we are asleep and make them a part of ourdreams. This means that sometimes in our dreams we hear a sound from reality and incorporate it in a way. For example you may be dreaming that you are in a concert while your brother is playing a guitar during your sleep.

## 12. Men and Women Dream Differently

Men tend to dream more about other men. Around $70 \%$ of the characters in a man's dream are other men. On the other hand, a woman's dream contains almost an equal number of men and women. Aside from that, men generally have more aggressive emotions in their dreams than the female lot.


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# A voraces for 

Pharmacy .....






## Mr. Manoj Joseph <br> Managing Director SANCE Laboratories \& Pharmaceuticals, Pala

- In Kerala there were no well-established pharmaceutical industries when you started your firm. Even then, you had shown a great courage to start an industry. Which are the factors that attracted you to choose Kerala to start an industry?

My family had a pharmaceutical manufacturing unit from 1983. It was a very small unit and was totally a manually operated one. We were manufacturing LVPs and SVPs and were supplying to various states - Kerala, Tamilnadu and Goa. I got associated with the industry in 1989 and after running the industry for 8-9 years, we strongly felt the need to increase the product basket / branch out to new markets / upgrade technologically to stay in the market and survive. Also, Indian Pharma industry was going through a process of technological upgradation with the introduction of concepts such as schedule 'M', GMP, GLP, GDP etc. So to sustain and develop the business, we decided to put up a new manufacturing plant which would take care of the requirement of the people \&industry for the next decade. In our search spanning a period of a couple of years, we visited a lot of pharmaceutical industries scattered all over India to update ourselves on the new manufacturing technologies and to familiarize with the current market requirements. In our search for the product range, we zeroed in on the antibiotic range since this
product range is insulated from the vagaries of the economic situation since antibiotic is used only in specific cases / situations. Among the different antibiotic ranges available, cephalosporin is a group where there is much of research happening and was deemed to be the product range for future.

Now the point to be answered trickles down to 'why in Kerala' when there are lot of adverse factors affecting the survival of industries in Kerala... as you are aware, Pharma Industry requires a clean environment for its smooth operations and our pristine villages offers the ideal environment for the same. Kerala's militant trade unions always had bought a bad name for the state; nationally and internationally, but my personal experience of managing an industry for a decade has given me different perspectives and insights in the subject and was confident that if we can strike the right chord with the people, nothing will be impossible. Why specifically Kozhuvanal ? - Our family had its roots my father and my great grandfather were from Kozhuvanal and my father is the first doctor from this village. Naturally we had a special attachment with this place wherein everyone is known to us.

Kerala's pharmaceutical market is touted to be in the range of 1300-1500 Crores per month. $99 \%$ of this market is conquered by the other state
companies and we, the people of Kerala couldn't do anything to make inroads in this segment. Our venture was a fight against this and even after 5-7 years of operation with the unit, we are finding it difficult even now to crack the Kerala market. Attitude of all involved - doctors, paramedics and the patients have to change for good and should feel confident in the products manufactured in the state rather than havingablind beliefs on products from other states.

## - What about the attitudes and responses from

 government and other authorities towards the pharmaceutical industries. Is it favorable for a pharmaceutical entrepreneur?The government is either neutral or antagonistic. You won't get a word of support or an action which will take you to a comfort zone. There is nothing big for any industry in Kerala and same applies to pharmaceutical industry as well.

In Kerala, people are more bothered about others rather than themselves and hence any activity taken by
anyone will be highly scrutinized and subjected to lot of discussions and arguments. In the modern sociological studies about the people of kerala - their attitudes / responses etc, sociologists have come up with lot of theories and explanations for the psychology of people of Kerala. Hence the responses from the government will also be on the same lines and you can't expect them to be different since it is a govt. for the people, by the people and of the people....

## - According to you, what will be the future of the pharmaceutical industrial sector in Kerala?

We, the pharmaceutical manufacturers, should open our eyes, start visiting and experiencing other markets. Based on theseexperiences, they should come up with ideas, projects to cater the requirements of the markets which will bring them definite success. Still we try to remain in our own cocoon, and so nothing will change us and things will remain like this forever....

# Dr. Shoba John MBBS, MD Amrutha Institute of Medical Science 




























## Mr. Joseph Vazhackan MLA, Muvattupuzha






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## Mr. Giji Varghese

Branch Manager IIFL, Muvattupuzha

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What is a nutraceutical? This word-with "nutra" derived from nutrition and"ceutical" from pharmaceutical-refers to substances that may be considered as a food or part of a food and may provide medical and health benefits.

## NUTRACEUTICALS



## Nutritional Supplements

## INTRODUCTION

Using food products to promote health and cure disease is nothing new. Some common drugs used today are based on plants used in the distant past. Aspirin and other fever and pain relievers rely on chemicals similar to those found in willow bark. Opium, from poppies, is the basis of the potent pain reliever morphine. Many countries, such as India, China, and Tibet, have a long tradition of relying on herbs and other plant products (botanicals) for treating health problems. In the United States, nutraceuticals are considered part of the field of complementary and alternative medicinesubstances or treatments that can be used along
with, or instead of, the usual medical approach. There are basically two types of nutraceuticals: dietary supplements and functional foods.

## By Definition

Several terms need to be defined in order to gain an understanding of nutraceuticals.
Nutrient: As defined by AAFCO (1996), "a feed constituent in a form and at a level that will help support the life of an animal." The chief classes of feed nutrients are proteins, fats, carbohydrates, minerals and vitamins.
Feed: As defined by AAFCO (1996), "edible materials which are consumed by animals and contribute energy and/or nutrients to the animal's diet
Food: As defined by the Food, Drug and Cosmetic Act (1968), "an article that provides taste, aroma or nutritive value. Food and Drug Administration (FDA) considers food as 'generally recognized as safe' (GRAS)."
Drug: As defined by AAFCO (1996), "a substance intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals. A substance other than food intended to affect the structure or any function of the body of man or other animals."
Dietary Supplement: As defined by the Dietary Supplement Health and Education Act (DSHEA, 1994), "a product that contains one or more of the following

dietary ingredients: vitamin, mineral, herb, or other botanical, and amino acid (protein). Includes any possible component of the diet as well as concentrates, constituents, extracts or metabolites of these compounds."
Nutraceutical: As commonly defined by the dietary supplement industry, "any nontoxic food component that has scientifically proven health benefits, including disease treatment and prevention."
Veterinary Nutraceutical: As defined by the newly created North American
Veterinarian Nutraceutical Council, Inc. (NAVNC), "a substance which is produced in a purified or extracted form and administered orally to patients to provide agents required for normal body structure and function and administered with the intent of improving the health and well-being of animals."
Food or Drug
Using the above definitions, it is still difficult to determine what is and what isn't a nutraceutical. Are nutraceuticals considered food or feeds? According to definition, a feed is an edible substance that contributes energy or nutrients to an animal's diet. Feeds can make claims only about the nutrients they contain and the scientific functions of those nutrients. Both of the definitions presented in this paper for nutraceuticals either include the word "food" or state they are "required for normal body structure and function." A potential difference between a feed and a nutraceutical is that a nutraceutical is unlikely to have an established nutritive value (Boothe, 1997). Feeds are required to have nutritive value and are
accountable, via labeling, for these values. Another difference between a feed (food) and a nutraceutical is that feed is generally recognized as safe (GRAS). Nutraceuticals may contain substances that are "natural" but may not be generally recognized as safe. The other component of our definition of nutraceutical includes the statements "for disease treatment and prevention" and "administered with the intent of improving the health and well-being of animals." When a dietary supplement,nutraceutical or other feed is intended to be used for the treatment or prevention of disease, in essence it "becomes" a drug (Dzanis, 1998). Drugs are subject to an approval process prior to marketing. To be approved, a drug must demonstrate safety and efficacy for its intended use (Dzanis, 1998). Drugs that are not properly approved are subject to regulatory action. Nutraceuticals are not drugs simply because they have not gone through an approval process (Boothe, 1997). From this discussion, it seems nutraceuticals fall somewhere in between food and drug. They have many advantages over either food or drug since they are not required to list nutrient profiles as required by feeds, and in many cases are intended to treat or prevent disease without first undergoing proper drug approval. Determining if a product is a food, or is subject to regulation as a drug, is a function of the manufacturer's claims that establish intent. Boothe (1997) cites the example of vitamin $E$. When vitamin $E$ is added to the diet as an essential nutrient it is considered a feed component. However, when vitamin E is claimed to treat or prevent azoturia (tying-up) in horses, it is a drug.

CLASSIFICATION OF NUTRACEUTICALS
Regarding the promise of nutraceuticals, they should be considered in two ways:

- Potential nutraceuticals
- Established nutraceuticals

A potential nutraceutical is one that holds a promise of a particular health or medical benefit; such a potential nutraceutical only becomes an established one after there are sufficient clinical data to demonstrate such a benefit.
The food products used as nutraceutical are categorized as:

Probiotic
Prebiotic
Dietary fiber
Omega 3 fatty acid
Antioxidant

## Regulations

The primary set of rules governing the human nutraceutical market is the Dietary Supplement Health and Education Act (DSHEA) passed in 1994. This act does not permit FDA to consider a new product a "drug" or "food additive" if it falls under the definition of a "dietary supplement," which includes among other substances any possible component of the diet as well as concentrates, constituents, extracts or metabolites of these components (Dzanis, 1998). This gives human nutraceutical manufacturers a wide range of substances that may be able to satisfy these requirements. The other major component of this act shifts the burden of safety. The FDA now has to prove a substance is unsafe rather than the manufacturer proving the substance safe (Dzanis, 1998). The DSHEA rules do not apply to nutraceuticals intended for animals. In a nutshell, the federal government has cited differences in metabolism of substances between humans and animals and potential safety issues with nutraceuticals used in food producing animals as reasons to exclude animals from provisions of the DSHEA. Therefore, expressed or implied claims relating use of a product with the treatment or prevention of disease, or with an effect on the structure or function of the body in a manner distinct from what would be normally ascribed to "food" (e.g. that it does something other than provide known essential nutrients), could cause a product to be subject to regulation as an unapproved "drug" (Dzanis, 1998).

## Safety and Efficacy

Many nutraceuticals are being used as alternatives for both nutrition and medicine. A substantial number of these products make illegal drug claims without regulation and proper data to support their safety and efficacy. As such, consumers need assurance that a product is safe and hopefully able to do what it say it does. Above anything else, nutraceuticals should be safe. Stock
should not be taken in the old adages "if a little is good, a lot is better" or "it can't hurt." Nutraceuticals, like many substances, may cause problems due to direct toxic effects, or by delay of more appropriate treatment (Dzanis, 1998). Safety of a nutraceutical product is often easier to establish than efficacy. Studies that test doses of nutraceutical several fold greater than the intended (recommended) dose help to establish toxicity data. These studies must test animal reaction to the product both short- and long-term. Finally, a lack of reported toxicity problems with any nutraceutical should not be interpreted as evidence of safety (Boothe, 1998).
Does the nutraceutical do what it says it can do? Is the product effective?
Evidence of efficacy is generally provided by studies that document the pharmaceutical, pharmacokinetic, and pharmacodynamic characteristics of a compound (Boothe, 1998).

Pharmaceutical data are an evaluation of quality of manufacturing, purity of product and accuracy of labeling.

Pharmacokinetic dataconsists of tracking the compound through the animal's body. It also answers questions about absorption, tissue distribution, metabolism and excretion.
Pharmacodynamic evaluation describes how the animal responds to the compound.This step is the most difficult to define for nutraceuticals since most of these compounds are involved in a cascade of different reactions throughout the body.

Since the market for nutraceuticals is booming, many products are available that have not been tested for either safety or efficacy. A simple test of a quality nutraceutical product may be to ask for research data (peer reviewed and published) which support the product. This will go a long way in limiting quackery and the ever present danger of parting you from your money.

## MARKET TRENDS OF NUTRACEUTICALS

The nutraceutical industry's three main segments include functional foods, dietary supplements, and herbal or natural products. Nutrition Business Journal (NHJ) identified and $\$ 80$ billion nutraceuticals market in 1995 by considering natural and organic foods (\$6.2billion),functional foods(\$13.4billion), certain lesser-evil foods with reduced or no unhealthy ingredients(\$23billion), dietary supplements ( $\$ 8.9$ billion) and selected market standard foods/\$28.3bijlion). MAD has begun tracking riucraceacicats maruscry growth. The most rapidly growing segments of the industry were dietary supplements and natural or herbal products.


## FUTURE OF NUTRACEUTICALS

Increasing awareness levels about fitness and health,spurred by media coverage are prompting the majority of people to lived healthier life styles, exercises more and eat healthy. The expanding nutraceutical market indicates that end users are seeking minimally processed food with extra nutritional benefits and organoleptic value. This development, in turn, is propelling expansion in the nutraceutical markets globally. The emerging nutraceuticals industry seems destined to occupy the landscape in the new millennium. Its tremendous growth has implications for the food, pharmaceutical, healthcare and agricultural industries.

In tomorrow's market, the most successful nutraceutical players are likely to be those companies in which functional product are just a part of a broad line of goods satisfying both conventional and health value point. Future demand of nutraceutical depends on consumer perception of the relationship between diet and diseases. Long term clinical studies are required to scientifically validate the nutraceutical in various medical conditions. The interaction of nutraceutical with food and drug is another area, it should be taken into consideration.

## CONCLUSION

It becomes blatantly clear from the brief summaries above that product testing in the horse is sparse for the number of nutraceuticals available on the market. Since efficacy and safety testing are not required in order to market a product (as long as the product does not have medicinal or performance enhancing claims on the label or in the literature), it is difficult to say whether the testing will ever be done. Certainly, if testing ever became required for nutraceuticals, the resulting increase in price of the products may make them prohibitively expensive. Because of the lack of regulation for these products, horse owners themselves become the researchers and their beloved horses the subjects in their own fact finding missions on the truth and efficacy of the nutraceutical.

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The terrific visuals of female fetus floating in a lake of Udaipur, Rajasthan raises goose bumps. It remained one about the touching autobiographical sentiments of an unborn baby "the anesthetist is getting ready to give you the blessed relief of Greeshma G. Nair oblivion. Before you go away pause for a 2009-2013 Batch moment and say good bye. Mother, dearest mother, my own mother may God bless you and care for you always. Yes I am now ready for my journey back to infinity, my mother may you forgive yourself for not knowing what you have destroyed."

We almost accept that human life in all forms is sacred, for some of us this is a matter of religious faith, for others of secular but deep philosophical faith. The essence of all religious and legal philosophies is that every human being have infinite importance, in all its forms.

Every government has the right and duty to protect the lives of all human being in that nation regardless of degree of dependency, degree of perfection, age, sex or place of residence ( living in or out of the womb).

An alteration to this is a discrimination
against certain classes of living humans on the basis of age ( too young) and the place of residence (still living in the womb).

The claim about the human worth and inherent dignity is the corner stone of International Law of Human Rights. The permeable of the universal declaration of Human Rights (1948) speaks "the inherent dignity of all members of the human family and the dignity and the worth of human person."

We know that human fetus also have this inherent dignity and worth. Because it is biologically proved that life starts in the womb and nothing has been added to a fetus except oxygen and nutrition. It is difficult to draw a boundary line between human fetus and human life on the basis of any facts. Therefore the international killing of any human fetus is morally forbidden actually it amounts the liability of homicide.

Moreover 'human' means one of the biological beings who belong to the species Homo sapiens. Such beings are unique from all other beings in that we have 46 chromosomes in every cell. The ingredients clearly fulfilled in a human fetus.

## Why the world need tolerane?



Tinu Joshy 2008-2012 Batch
We are indeed living in a busy world. In this world of corruption, we don't even have the time to look at others with an inner eye. In such a case, the need for tolerance seems significant. As Arthur Helps puts it, ' Tolerance is the only rest test of the civilization'. Tolerance is the capacity for alluring or respecting the belief or behaviour of others when these differ from our own. It helps us to adjust relationships with each other and work together for a common purpose. Overall it seems to be a motherly characteristic. Tolerance is an essential factor for all the areas of community life. Since values of life must be inculcated from the family, tolerance must begin at home. A child growing up in a good environment can succeed in life. In a well adjusted family, there would be tolerance among parents and children. India is a secular country which shelters all the religions of the world. Religious tolerance is the backbone of a cultured and civilized society. As Swami Vivekananda said," I am proud to belong to a nation which has sheltered the persecuted and the refugees of all the religions and all
nations of earth". Yes, religious tolerance is a key factor for achieving global peace. We should realise that all religions though they have different beliefs and practises ultimately leads to God.

The religious authorities need to take an extra case not to provoke the other religions. Today the world is struck with violence. It has been a witness to clashes and violence all around. Violence, terrorism and fanaticism have caused untold miseries to innocent people who have become victims. Citizens go on striking, but their demands are not met. These are all due to intolerance existing between government and citizens. We should accept the fact that all men make mistakes. One should find out his own fault before turning to others. But admitting all these problems, we should not think that the world is going to end or so. Tolerance can be cultivated through respecting religious beliefs and behaviours of others. We should live in harmony with each other. We should also respect good attitudes and values of others. We need not despair. As every cloud has a silver lining, every problem has a solution. We are at crossroads and don't know which turn to take since we are covered in darkness. But no doubt, this darkness will fade, as the yonder horizons are lit with the surging colors of the glorious dawn. Then, we will begin our journey again trekking towards our destination.


## IITROUS OXIPE LAUGHING GAS

An aching tooth is never funny. But dentist who yanks it out may well first put you to sleep with a few whiffs of nitrous oxide, commonly known as laughing gas.

Nitrous oxide $\mathrm{N}_{2} \mathrm{O}$ is a colorless gas, almost odorless. It was discovered in 1772 by English Scientist and Clergyman Joseph Priestly. He made $\mathrm{N}_{2} \mathrm{O}$ by heating ammonium nitrate in the presence of iron fillings and then passing the gas that came off ( NO ) through water to remove toxic byproducts.
The reaction he observed was:

$$
\begin{gathered}
2 \mathrm{NO}+\mathrm{H}_{2} \mathrm{O}+\mathrm{Fe} \rightarrow \mathrm{~N}_{2} \mathrm{O}+\mathrm{Fe}(\mathrm{OH})_{2} \\
\mathrm{~N} \equiv \mathrm{~N}+\mathrm{O} \rightleftharpoons \mathrm{~N}^{-}=\mathrm{N}^{+}=\mathrm{O}
\end{gathered}
$$

Following Priestly's discovery, Humphry Davy experimented with physiological properties of the gas such as its effects upon respiration. He administered the gas to visitors. Amusing effects were watched on peoples who inhaled it and coined the term "laughing gas". He noticed that nitrous oxide capable of destroying pain, when used in surgical operations in which no great effution of blood takes place.


Nitrous oxide is a dissociative anesthetic which is an NMDA antagonist's at anasthetically relevant concentrations, inhibits both ionic currents and exicitotoxic neuro degeneration mediated through NMDA receptors, but the actual mechanism is still unknown. However, it's been observed that $\mathrm{N}_{2} \mathrm{O}$ depresses all forms of sensation- especially hearing, touch and pain and seems to disinhibit some emotional centers in brain.

So nitrous oxide is known as laughing gas due to the euphoric effects of inhaling it, a property that has led to its recreational use as a dissociative anaesthetic.

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