



KADAMBINI ORTHOPAEDIC & SPINE TRUST (Kadambini Charitable Trust)

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NEWS LETTER



Dear friends,

Some of you might be reading this letter for the first time, while for some of my friends and well-wishers this will be my fifth newsletter. I wish you all a very happy Holi, which is just a few days away.

In this newsletter I would especially like to thank all those who participated with me on 15th December 2013 in "Airtel Delhi Half Marathon". I had never imagined that I would get such an overwhelming response. Of the 74 friends and patients who had registered for the "Great Delhi Run", on behalf of my trust, seventy runners participated in the race. Most of them had spine surgeries by me and I requested them to "run for a cause". The aim was to create awareness for spine related health problems & they all heartily agreed.

The joy of giving, sharing, helping and doing something for a good cause is universal. Given an opportunity every human being has a kind heart. During the marathon I observed the joy of running in each one in our group, even for those who were finding it difficult to walk such a long distance after major spine surgeries.

We read newspapers everyday and I think you will all agree that when you go through its contents we feel sad. Most of the catching news in print media and breaking news in television is about crime, murder, rape, scandals, scams, politics etc. The pages are full of disasters, corruption, religious disputes, wars among nations, and politics of one-upmanships. There is a goonda raj prevailing all over the world.

Commercialization, industrialization, environmental degradation, improper urban planning, poor long-term financial management, are the rule of the day.

As doctors we dissect human beings in the cadaveric labs to learn about human anatomy. We realize that God has made us all as one. The segregation by faiths, the creation of castes, and the differentiation of colors is all manmade. Every day we hear politicians create more divide among individuals by creating divisions along narrow lines. Everyone is playing vote bank politics.

The beauty of India is about the unity in diversity. No other country can boast of such a secular nation where each one of us can practice and preach what we want to do so. Sincere and ethical journalist, writers, and spiritual leader like M.J.Akbar, Gurucharan Das, Chetan Bhagat, Sri Jagdivasudev all write regular columns in newspaper depicting the true picture of India and suggesting directions.

In this maze of confusion, there is a silver line in the dark clouds over India. India has more NGO's per person than we have Doctors per person. A lot of organizations are doing a lot of work for upliftment of society, environment and many other issues.

In the Marathon there is an event called "The Great Delhi Run" in which we participated. I was surprised to see so many NGO's working for a better India.

Philanthropy in India has increased; corporate social responsibility has become mandatory. I request all my friends and well wishers who are reading this letter, make a pledge to help some cause, any cause they are keen to help in. Each one of us has a duty to help our family, our friends, our locality, our town, and finally look after mother India.

If you would like to help in my NGO, where my aim is to spread awareness, treat Spine and orthopedic problems, fund and operate on children with spinal deformities and other health issues which are close to my heart then please write to me at spineshankar@gmail.com.

Lastly I dedicate this issue of the newsletter to all my friends and patients who ran in the Airtel half marathon in Delhi on 15th December 2013. I look forward to help from all of you in the coming years.


Shankar Acharya
Trustee (KOST-KCT), NOBEL 2005, Sushrutam 79, SPAI 76

Complications of Diabetes Mellitus

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The high blood sugar (hyperglycemia) observed in diabetes mellitus patients is responsible for a number of complications. In fact, all parts of the body are affected by the high blood sugar levels. In this article, the effect on various body systems will be discussed in brief.

Kidneys

Diabetes of long-standing duration results in damage to the kidneys. In the early stages, small amounts of albumin start to pass in the urine which is considered miniscule amounts and is called microalbuminuria. These small amounts can be detected by use of specialised dipsticks and quantitation of urinary albumin in a 24-hour urine sample. At the stage of microalbuminuria, dietary protein restriction, cessation of smoking and good control of blood sugar and blood pressure along with use of drugs like ACE-inhibitors can result in reversal of this stage of microalbuminuria to normoalbuminuria (no detectable albumin in urine).

Microalbuminuria stage is an early stage and over a variable period of time can progress to macroproteinuria and kidney failure; eventually progressing to end-stage kidney diseases (ESKD), wherein patient requires dialysis and kidney transplantation. Therefore, it is necessary to intervene at the stage of microalbuminuria or early proteinuria. To detect this stage of kidney failure early, yearly blood urea and serum creatinine values and detection of albumin/protein in urine needs to be performed. Persistent presence of protein in urine, elevation of blood urea and serum creatinine values indicate 'kidney failure'.

Patients develop swelling around the eyes and feet and the whole body, breathlessness, decrease in haemoglobin and paleness, easy fatigability and lethargy when the kidneys start to fail.

Nerves

The small and micro vasculature (ie blood vessels) are affected because of persistently high blood sugar levels and these become hardened (stiff) and narrowed; resulting in improper nutrition to the nerves in the body- a stage called neuropathy. Numbness, tingling, pins and needles sensation, pain and loss of touch sensations in the feet and hands are the early symptoms perceived by patients who develop neuropathy.

Apart from an enquiry in to these symptoms, it is important that yearly testing with 10 g monofilament is performed. At times, nerve conduction testing may be performed to diagnose neuropathy.

Control of blood sugar, blood pressure and lipids is essential for control of neuropathy. In severe neuropathy, bulk of muscles can be lost and weakness in strength of muscles is observed apart from unexplained weight loss. Some drugs can bring relief in symptoms of neuropathy, however this complication is very incapacitating at times.

Autonomic neuropathy can also be observed and it can manifest as sudden decreases in blood pressure on standing from a lying down position, absence or increase in sweating, loss of hair,

difficulties in urination or holding of urine, erectile dysfunction, premature ejaculation, dryness of vagina in females, fullness of abdomen after eating food and even arrhythmias.

Eyes

Recurrent styes, dryness of eyes and change in power of lens are seen in diabetics with uncontrolled blood sugar. Premature cataract is also observed in diabetics. However, the most dreaded affect of diabetes is seen on the retina, which is because of the small blood vessels being affected and is known as diabetic retinopathy which is one of the leading causes of blindness.

A dilated fundus examination is a must every year for diabetics. Control of blood pressure, blood sugar and lipids along with timely and regular intake of medicines is a must to prevent progression of this complication. Laser treatment is used for treatment of severe retinopathy.

Heart

The effect of autonomic neuropathy on the heart has already been described. The blood vessels in diabetic individuals become narrowed much earlier than non-diabetic individuals and this is known as 'accelerated atherosclerosis'. Due to this stiffening and narrowing of blood vessels, the coronary vessels (coronary arteries supply the heart muscles) also become narrowed and blood supply to the heart is also narrowed causing 'heart attack' (in medical terms, it is called myocardial infarction). Diabetic individuals are three-times more likely to have a heart attack as compared to non-diabetic individuals and moreover, it is much more severe. Diabetic individuals may not have the symptom of angina (chest pain, which is considered to be the cry of the dying heart) preceding the heart attack, and this is known as 'silent' heart attack. Long duration diabetes is also associated with weakening of the heart muscles resulting in a condition called 'diabetic cardiomyopathy'.

Brain

The chances of paralysis resulting from stroke (Brain attack- or loss of blood supply to part of the brain) are also higher in diabetic individuals. Just like the blood vessels carrying oxygen-rich blood to the heart are narrowed, similarly, the blood vessels supplying the brain are also affected and can result in stroke, which can result in paralysis and be incapacitating for life. Acute surges in blood sugar can also result in coma states.

Feet

The feet are affected because of the neuropathy (described above) and the vasculopathy (affect on blood vessels) and wounds, dry skins, infections and abscess (collection of pus) may occur. Non-healing wounds and infections can result in gangrene and septicaemia, wherein amputation of a portion of the leg or the whole leg may need to be performed.

The above brief information for the readers is to make them aware about the serious and devastating complications which can happen in patients suffering from diabetes. Therefore, prevention of these complications is a must and in this regard, it is pertinent to effectively control one's blood pressure, blood sugar levels, lipid parameters and weight. Regular exercise and control on diet along with timely intake of medicines is a must. Cessation of vices like smoking and alcohol is need of the day; and increased intake of fruits and vegetables should be promoted.



PHYSICAL ACTIVITY: A KEY TO LONGEVITY!!

Dr Anita S Acharya

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If you remember your good old school days, we had our PT (Physical training) classes'. We still have in schools where various kinds of sports, aerobics, and yoga are encouraged amongst school children! Though the children have ample opportunities to participate in various extra-curricular activities and be physically active, a growing trend of obesity and over-weight is being seen over the years.

In a typical urban area playgrounds are limited, parks are scanty and people try to be mostly indoors watching TV or sitting with their computers. The result of this little physical activity makes them a "Couch potato". Limited walking, use of lifts rather than stairs, using motorised vehicles again leads to a very sedentary lifestyle. This lifestyle along with faulty dietary practices which is mostly seen in urban areas leads to a gamut of physical illnesses like obesity, diabetes, raised blood pressure, arthritis, cardio-vascular diseases and even cancers. Obesity is now a growing concern among teenage adolescents and youth.

Physical activity as defined by WHO any bodily movement is produced by skeletal muscles that requires energy expenditure.

The WHO recommendations for physical activity are:

1. for children and adolescents: 60 minutes of moderate to vigorous intensity activity per day;
2. for adults (18-64 years): 150 minutes of moderate-intensity activity per week or 75 minutes of vigorous-intensity activity per week. Moderate-intensity activity includes walking, swimming, dancing, hiking, gardening, cycling, occupational, household chores, playing games, sports or any planned exercise.

However, a word of caution for pregnant, post-partum women and persons with any previous cardiac events, other chronic medical conditions need to seek medical advice and extra precautions before embarking on any moderate/vigorous intensity physical activity.

What are the benefits of physical activity?

Regular physical activity like brisk walking has several benefits.

1. Control your weight

Both physical activity and diet play a very important role in keeping your weight under check. One tends to put on weight when the calories you eat are in excess than that which you can burn. It's how you balance your calories. It is recommended that you work 150 minutes of moderate-intensity aerobic activity or 75 minutes of vigorous-intensity aerobic activity per week. To lose weight you may need to do more physical activity than mentioned above as it would vary from person to person.

2. Reducing the risk of Diabetes

If you are already suffering from diabetes regular moderate-intensity physical activity will keep your blood sugar in check. And for those who have not yet developed diabetes, it will reduce the risk of developing diabetes. It also helps in preventing the onset of metabolic syndrome. In this syndrome, there is a combination of two or more factors like increased blood pressure or blood sugar, raised triglycerides, low HDL cholesterol and accumulation of excessive fat around the waist.

3. Reducing the risk of High Blood Pressure, Coronary Heart Disease, Stroke, Colon Cancer, breast cancer and depression.
4. Improves muscular and cardio-respiratory fitness
5. Improves bone health. Reduces the risk of falls and subsequent hip and spine fractures

Risks of Physical Inactivity (WHO):

1. Physical inactivity has been identified as the fourth leading risk factor for global mortality causing 6% of all deaths. An estimated 3.2 million people die globally because of physical inactivity. It carries the same level of risk as high blood sugar (6%) only to be outstripped by high blood pressure (13%) and tobacco use (9%).
2. Physical inactivity is the main cause for approximately:
 - 21–25% of breast and colon cancers
 - 27% of diabetes
 - 30% of ischaemic heart disease.

What are the reasons for physical inactivity?

Urbanisation and industrialisation has led to a sedentary life style in jobs and even at home. Also during leisure time people tend to be inactive either staying indoors, watching TV or playing with the computers. Other environmental factors could be lack of parks, walking tracks, sports/recreational facilities, high volume traffic on the roads, air pollution, increased crime and violence outdoors etc.

How to increase physical activity?

Individuals, families and societies /communities at large can take responsibility to increase physical activity. Walking tracks may be developed in parks which should be accessible and safe, schools to have safe places and facilities for children to spend their leisure time, quality physical education to be imparted to children in schools. This will encourage them to indulge in physical activity throughout their lives. The work places should encourage people to engage in physical activity and use stairs instead of lifts.

The benefits of physical activity have been briefly described. Those who are indulging in regular physical activity should continue to do so and those who have not yet started should pull up their socks and start doing it. Some physical activity is better than "no physical activity".

CONGRATULATIONS TO NANA

I would like to express my heartfelt congratulations to my eldest brother, Dr. Subrat Kumar Acharya for receiving the Padma Shri Award 2014 in recognition of his distinguished contribution to the field of gastroenterology. Presently, he heads the Department of Gastroenterology at AIIMS, which was awarded as India's best at the CNBC TV18 India Healthcare Awards 2011. He has over 200 novel research papers in reputed international and national journals to his credit. He also has achieved several awards in appreciation of his outstanding scientific and professional contribution, notably: JC Bose Fellowship, SR Naik Oration Award (2010), PN Chuttani Oration Award (2009), Ranbaxy Research Award (2007), Samanta Chandrasekhar Award (2005), Mitra Olympus Endoscopy Award (1995), PN Berry Trust Award (1991), Commonwealth Fellowship Award (1991), Best Young Investigator Award (1990) and Om Prakash Memorial Award for the Best Young Indian Gastroenterologist (1990). He is also a Fellow at the Indian National Science Academy (FNA, 2010), at the National Academy of Sciences (FNASc, 2004), and at the Indian Academy of Sciences (FASc, 2000). However, it is not just his academic prominence, but also his accurate, detailed and well-thought diagnostic abilities, his incisive and sharp thinking, his passion and drive about his work, his vision and experience, and commitment to his patients that makes him such a sought after gastroenterologist and an inspiration to us all.



LIFE STYLE DISEASES

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These days we often hear about diseases like diabetes, high blood pressure, obesity, heart diseases, etc. Have you wondered what causes these diseases? This happens because of the defective lifestyle that we follow.

What are life style diseases?

A life style is the pattern of living that we follow - how we work, what and when we eat, how and when we sleep, etc. The stress of modern day living, irregular eating habits, sleep deprivation, smoking, alcohol intake and less physical activity has all resulted in an inventory of lifestyle diseases that we face every day.

Life Style Diseases are:

- High Blood Pressure
- Heart Disease
- Obesity
- Chronic Obstructive lung disease
- Lung cancer
- Anxiety and depression
- Fatty Liver
- Osteoporosis
- Stroke

You may have observed the following: -

- More and more young people are seen smoking and drinking although these are harmful to health
- Our nutritious, balanced meals are giving way to fast food and junk food, vegetables are being rejected in favour of cheese and butter, soft drinks are replacing milk
- We prefer to use a car or bus instead of walking
- More and more machines are being developed each day to help us with our work.

Unhealthy diet, tobacco smoking, and alcohol drinking, as well as a lack of exercise may also increase the risk of developing certain diseases, especially later in life. All of these are factors which are directly responsible for life style diseases.

WHAT CAN WE DO ?

People need to change their habits in the direction of healthier living. We can do a lot to prevent the occurrence of life style diseases. Some suggestions are:

- Take up regular exercise like walking, yoga, cycling, etc
- Take a balanced diet at proper meal times
- Practice yoga or meditation to avoid stress in life
- Do not smoke or consume tobacco in any other form
- Keep away from smoking and drinking as far as possible.

We can have a very healthy life if we remain conscious of our life styles. It is also possible to keep these diseases under control, if we make sensible alteration in our life styles.

Take regular exercise

About 30 minutes of moderate activity like brisk walking at least five days a week is essential for adults. Children and young adults can exercise for at least 60 minutes every day. Also, 30-60 minutes of moderate exercise every week burns around 600-1200 calories per week. You don't have to sweat it out in a gym to achieve your exercise goals, rather, slowly increase the duration and intensity of your exercise to achieve bigger goals. Regular exercise also decreases the risk of cardiovascular diseases by almost 40 per cent.

Maintain a healthy weight

Being overweight can put you at risk of developing heart diseases, high cholesterol, high blood pressure and diabetes. Did you know that after 18 years, every one kilogram of weight gain increases your risk of heart diseases by three per cent. So the best way to calculate your weight is by checking your body mass index (BMI), which takes into account your weight and height to identify whether you have a healthy or unhealthy percentage of body fat. A BMI of 23 or a higher BMI is linked to blood fats, high BP, risk of stroke and heart diseases.

According to a study, it was estimated that, if every person maintained his or her optimal weight, this would lessen cardiovascular disease by 25 per cent and lower strokes or episodes of cardiac failure by 35 per cent. Reducing your weight by just 10 per cent can decrease your blood pressure, lower your blood cholesterol levels and reduce your risk of diabetes.

Stop Smoking

According to a large study done on Tobacco Control, 'Smoking just one to four cigarettes a day almost triples a smoker's risk of heart disease and lung cancer.' Smoking and tobacco are one of the major risk factors for all heart diseases and smoking narrows your arteries leading to Atherosclerosis, which can cause a heart attack. Low nicotine cigarettes, smokeless tobacco and low-tar cigarettes might be promoted as healthy and safe but they are also risky.

Get regular health screenings

If you are suffering from diabetes mellitus, high blood pressure and high cholesterol then you are at a higher risk for other heart diseases. So it is advised to test your blood sugar levels regularly to understand your heart health. One can reduce the risk of heart disease by 60 per cent if he/she can control their blood sugar levels.

Do not worry too much

Make time for de-stressing activities like exercise and meditation to live a long, healthy disease free life.

ACKNOWLEDGEMENTS

This news letter will coincide with the 8th KOST camp. I have been extremely lucky to be able to hold these camps so successfully in Odisha. A successful camp needs a lot of hard work and team effort. I will be failing in my duties if I do not acknowledge all those who helped in the success of these camps.

I thank Shantanu and all members of his OPTCL team for having organized this 8th camp at Bhubaneswar. Dr Sivaji Patnaik has been instrumental in getting all the doctors for the camp everytime.

I thank Rupa, Sivaji and all his friends who have spared their valuable time for their humane services. All my friends from NOBEL 2005 have always supported wholeheartedly for the success of the camps.

All members of SUSHRUTAM (my medical college friends) have gone out of their way by spending their time, energy and money to come and offer their services. I thank all my family members for their constant encouragement and support to continue these activities.

I am grateful to Gaurav Anand, Sumanta and his team in from Stadchem Pharma, Kamal & Gopesh from Dr. Reddy Labs have always gone out of their way to provide logistics for the camps. Other pharmaceuticals have helped me with medicines namely Wanbury, J & J, Alkem, Ranbaxy, Zuventus, DelCure Life Science, Zydus Nutriva, Abbott, Glenmark, GlaxoSmithKline, Lupin, Intas, Zuventus, Novartis, Sun, Pharmed, Zydus Synovia, Akumentis, USV Limited & Macleods Pharma & I Thank them all. I am grateful to Rakesh, Sandep, Satish, Sailesh & Surender of Delhi team for their constant hard work.

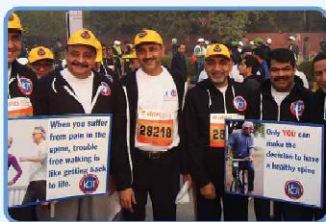
I thank the Patients attending the camps for having put their trust in us and encouraging us to do better everytime.

Shankar Acharya

Trustee KOST, Member NOBEL2005, Shustrutam79, SPAI 1976

KADAMBINI ORTHOPAEDIC & SPINE TRUST

**KOST at Airtel Delhi Half Marathon, "Great Delhi Run"
on 15th Dec., 2013**



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