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August 2017

Conquering
**Bone & Joint
Diseases**

Printed Matter

CONTENT

- 04 Message from CMD
- 05 Foreword by Dr S Prakash
- 06 Lumbar canal stenosis and microdiscectomy procedure
- 10 Jump, Hop and Bound to get into Kinetic Mode
- 14 Running without Injury
- 18 The Modern age disease: Back and Joint problems
- 20 Osteoporosis What should I Know
- 22 Healthy Ageing
- 26 Feedback
- 27 What Star Customers say

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Publisher:
Mr. V. Jayaprakash

Designed & Printed by:
Alaknanda Advertising Pvt. Ltd.
4/III Floor, City Centre Plaza
3, Mount Road, Chennai - 2.

Chief Editor:
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MESSAGE FROM CMD

My Dear Policyholder,

We are grateful to you for contributing to your Company's Growth. Your Company has adopted the philosophy 'Customer First, Everything else next' as the central theme for all its operations. True to this approach, your Company has taken a host of initiatives reaching out to the Customers not only at times of their need but even otherwise.

The regular Health Magazine brought out by our Company educating the Customers on Health Care Management as you are aware is one of these initiatives. I find that the current issue has been devoted to 'Conquering Bone & Joint Diseases'. I am sure that the articles contributed by Experts will be of immense value benefiting the readers.

If you have suggestions to offer for improvement in Company's operations, please feel free to write to us.

Always at your service
with kind regards,

V. JAGANNATHAN
Chairman-cum-Managing Director



FOREWORD

Greetings from your very own "Star Health"

It has been said that old age never comes alone... it is always accompanied by health issues. One of the most common health problems associated with old age is Bone and Joint problems. Musculoskeletal disorders such as low back pain, neck pain and arthritis rank among the top 10 greatest contributors to disability in every country between 1990 and now. However, Bone and Joint diseases are no longer pains plaguing just the Elderly. Young urban Indians have now become prime candidates for arthritis.

Disease doesn't discriminate, the solution shouldn't either. At Star Health we do not discriminate!! Health Insurance taken when healthy, will help in financially managing all our problems related to Bone and Joint.

This magazine is our continuing effort ensuring our customers are looked after and are empowered with knowledge to understand and prevent / deal with bone and joint related issues. Your health is our priority, Now and Always!

On this occasion I congratulate all the authors for their valuable inputs and members of the Editorial Board for their determination and efforts to bring out this magazine with customer-centric topics.

Dr. S. PRAKASH, MS., FRCS (Glasg) FAIS
Chief Operating Officer
STAR HEALTH AND ALLIED INSURANCE CO. LTD.

Lumbar canal stenosis and microdiscectomy procedure

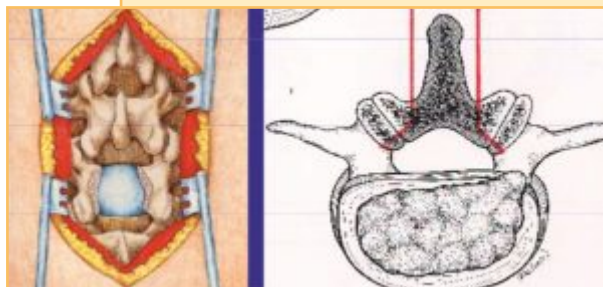
Dr Arvind G Kulkarni, Consultant Spine Surgeon
Mumbai Spine Scoliosis & Disc Replacement Centre
Bombay Hospital, Mumbai

Lumbar canal stenosis is the commonest diagnosis needing spinal surgery in elderly population >65 years of age. Although 100 % of cadavers above the age of 65 years have some degree of canal stenosis, about 5/1000 are symptomatic. The diagnosis is as common as osteoarthritis of the knees. In this condition, the lumbar spinal canal becomes narrow as a result of degenerative changes (wear & tear), as a result of which the nerves supplying the lower limbs as well as the ones supplying the urinary bladder and bowel will get affected. These patients get pain on walking and standing (because the spinal canal is narrowest in these positions) and get better on sitting and forward bending (because the spinal canal widens in these positions) - this phenomenon is called neurogenic claudication. In severe cases, the patients may even get neurological deficit in the forms of altered sensations, weakness, loss of balance on walking and even urinary and bowel incontinence.

The treatment for this condition is called decompression. This involves opening up the canal and making the nerves

Conventional Open Laminectomy

- Resection of posterior elements
- Wide muscular dissection and retraction
- Muscle injury
- Substantial blood loss
- Longer Stay



free. Open surgeries and Microlumbar decompression are the commonly done surgeries for this condition. Open surgery which is popularly known as laminectomy is associated with long incisions, unnecessary removal of supporting bone, scarring, formation of 'post-laminectomy membrane' due to adhesions, increased hospital stay and in some cases leading to instability becoming a part of 'failed back surgery' needing a second surgery to stabilize the spine.

There is a technique called 'Microendoscopic decompression' in which a specialised tubular retractor is used to perform the decompression. The diameter of the tube is 18mm and this is a key-hole surgery. Decompression of both the right as well as the left nerve roots as well as the entire dural sac is performed through a single key-hole without causing any significant soft tissue or bony collateral damage. The advantages are many.

- First of all the technique is elegant in expert hands.
- It has a cosmetic appeal.
- The scar is hardly 1.5-2cm long and appears like an ordinary scratch unlike a long ugly scar after laminectomy.
- Since there is no muscle or bony trauma, the contours of the back are well preserved.

The dependence of the patient on pain-killers for the wound site pain is absolutely minimal compared to an open surgery. In fact, patients do not express any experience of wound site pain after a few hours of surgery. Since the tissue trauma is so minimal, there is no stress on the patient's metabolic functions unlike after a bigger surgery with significant tissue trauma. Most of these patients are elderly with accompanying baggage of associated conditions such as diabetes, hypertension, heart issues, etc and a swift and painless procedure such as this makes a big difference with regards to their recovery. In obese patients, the surgery makes a big difference. Obese patients have wound healing problems and the spine is quite deep. A long incision is otherwise needed to reach depths of 6-7 cm. The entire procedure can be done using a keyhole in these patients (lots of patients with this condition are obese because they do not walk as a result of

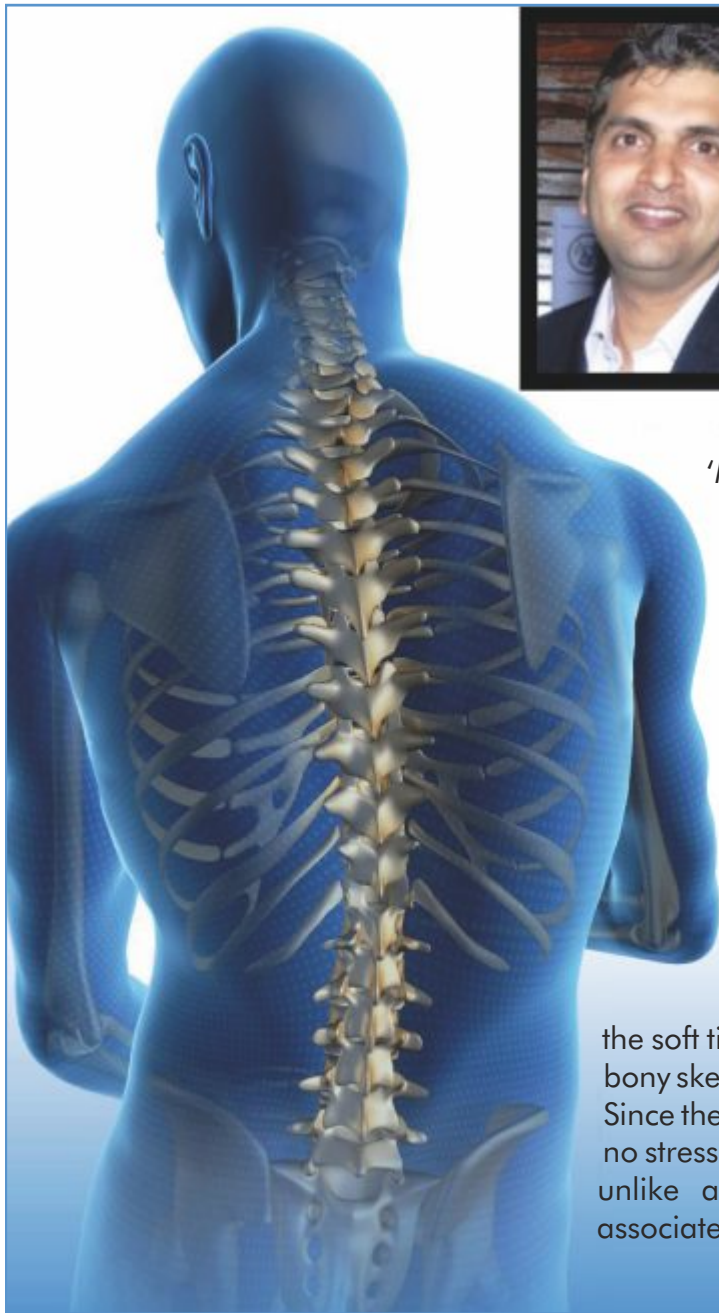


claudication pain and hence accumulate weight). The blood loss with this procedure is minimal. Only those structures that cause stenosis are excised and removed leaving the bony support as well as the muscles and ligamentous supporting structures intact. The patients are made to walk within a few hours after surgery and can go home the very next day. A water-proof dressing is applied such that the patient can take bath as early as he/she wishes to.

The technique is also used to perform 'Microendoscopic discectomies' for disc herniations (slipped disc). The benefits are the same as mentioned above as compared to the open technique.

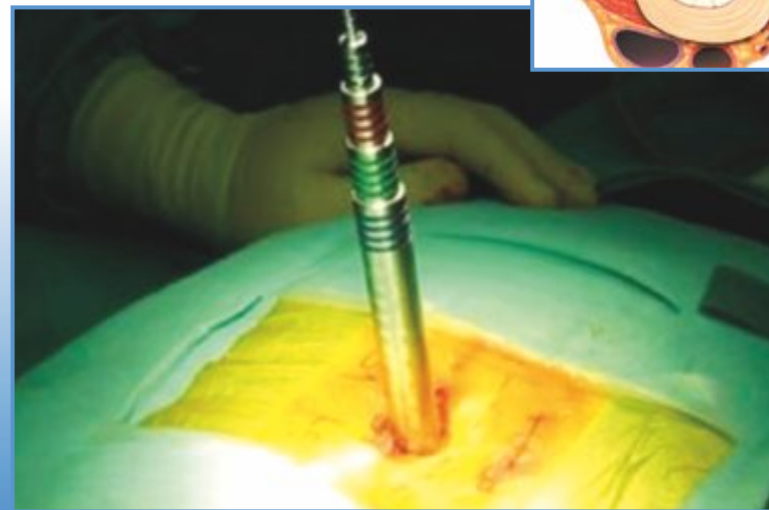
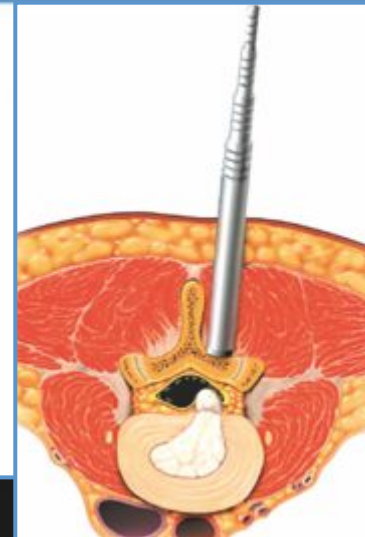
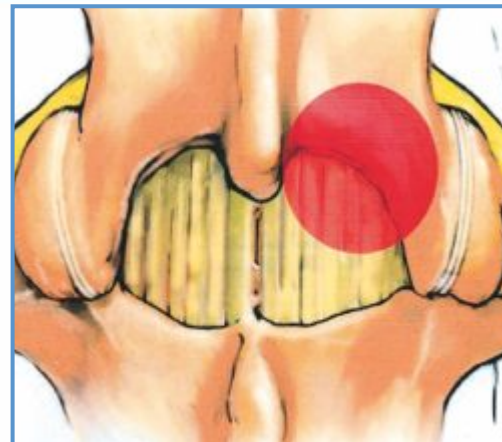
Can We Influence Our Bone Health?

“Many believe that bones are lifeless - and that the condition of their bones is down to genetics. In actual fact, that's not the case at all! Bones are made from living, growing tissue and throughout our lives we are constantly making new bones whilst losing old bone.”

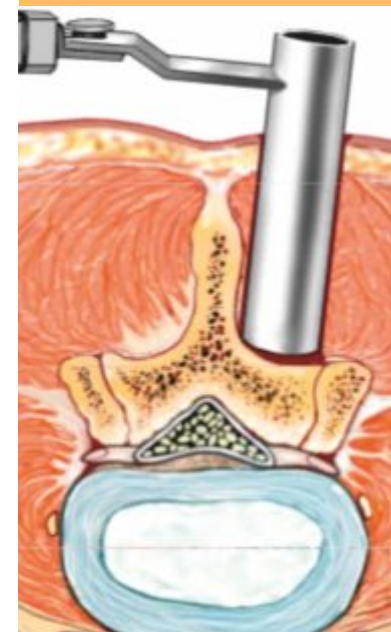


MICRO- SPINAL ENDOSCOPIC SURGERY

'Micro-Endoscopic spinal surgery' is a specialized revolutionary technique in which the routine spinal surgeries are performed using a key-hole. The most common spinal afflictions are disc herniations (slipped disc), lumbar canal stenosis and spinal instability. Generally, an open surgery is done to tackle most of these conditions. However, with the micro-endoscopic techniques, the objectives of the surgical procedure are achieved without any significant collateral damage to the soft tissue (muscles and ligaments) or the bony skeleton. Since the tissue trauma is so minimal, there is no stress on the patient's metabolic functions unlike after a big open surgery that is associated with significant tissue trauma.



Microendoscopic Decompression



Meet Your Calcium Needs

“ If we don't eat enough calcium in our diet, we're at serious risk of developing osteoporosis. Make sure you eat a wide variety of calcium-containing foods to keep your bones strong.

Adults and children over 4 years of age need between 1,000mg and 1,300mg of calcium every single day.

Even though milk is the poster-child for calcium content, it's by no means the only food containing calcium. Some may be surprised to hear it's not even the best source!

“ Ellipsoidal joints, such as the one at the base of the index finger, allow bending and extending. Gliding joints are found between flat bones that are held together by ligaments. Some bones in the wrists and ankles move by gliding against each other. ”

“ Hinge joints are those in the knee and elbow. They enable movement similar to the way a hinged door moves. The pivot joint in the neck allows it to turn from side to side. ”

Jump, Hop and Bound to get into Kinetic Mode

Dr. Kannan Pugazhendi, MBBS MSM Director
Sports Medicine, SPARCC Institute, Chennai

Dr Kannan says that sportspersons can immensely benefit by Plyometric training. It enhances the muscle spindle reflex and reduces the GTO reflex.

What is Plyometrics? asked my sister. "The coach is forcing us to do it to be fit for the zonal athletics selection meet, which is more than three months away."

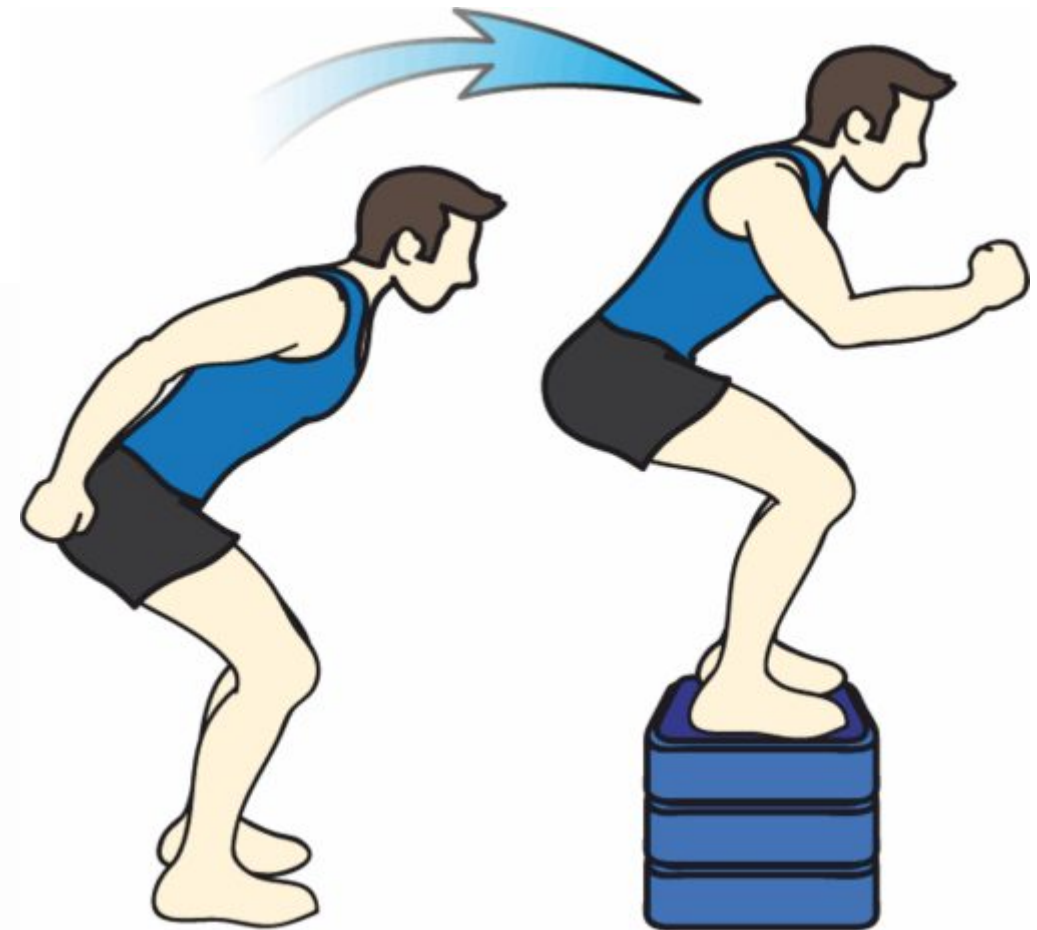
"I think he is using plyometrics in the end of the General Preparatory Phase (GPP) and the beginning of the Specific Preparator Phase (SPP). That is the safest period for the introduction of the plyometrics. And..." dad started.

"She asked what is plyometrics and not when or why it is included in the workout," my mother intervened.

"She would understand when a science background is given. The stretch reflex, proposed by Merton in 1953, says that whenever the length of the muscle was



“ Joints contain sensory nerves called “baro-receptors”. These receptors react to atmospheric changes in the barometric pressure. So, when a thunderstorm is approaching and the barometric pressure drops, some people with joint pain can actually tell a storm in on the horizon! ”



increased during posture maintenance or during a movement, the property of the muscle would force it to contract to protect its fibres from potentially dangerous tearing forces. This property of the muscle assists in maintaining posture and also in producing effective muscle contraction."

Elias Cyon from the Carl Ludwig's Physiological Institute, Munich, in 1866, described the increased force of contraction when the muscle was stretched. This observation was carried further by Otto Frank and Ernst Starling in their study, each individually, of course, and made the Law of the Heart."

So the use of jumping, hopping, bounding and deep jump exercises, apply concentric contraction with preceding eccentric load. It produces augmented contraction of a muscle improving the power output. This done in a regular training, as a weekly or biweekly programme, would increase the muscle capacity to convert stored potential energy into high kinetic energy," dad said.

"It is like stretching the rubber band. When the stretch is less, the force with which it contracts is less and when the stretch is more, the force of contraction is more. The muscle tissue is the only one that is able to contract and stretch and

“ It's not an old wives tale that babies don't have kneecaps. When babies are born they are born with a cartilage plate that turns to bone and into a kneecap somewhere between the ages of 3 and 5. ”

funnily, the only tissue that is under voluntary control. No other tissue is under the control of a human being. This sudden stretch is used in jumping exercises."

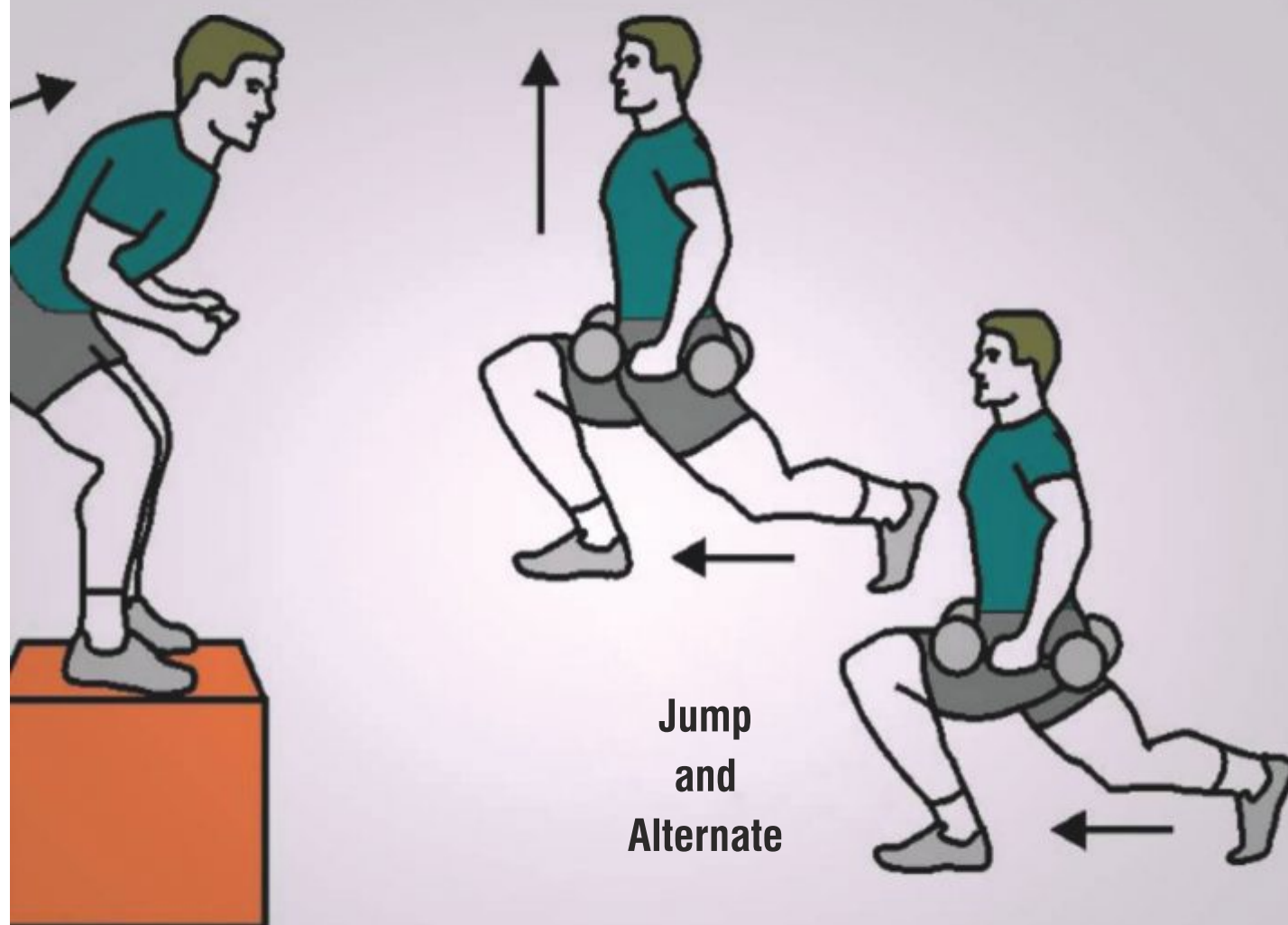
"The degree of elongation of the muscle fibre is dependent on the amount of stretching force applied, the absolute strength of the muscle fibre and the capacity of the muscle spindle to produce immediate contraction, inhibiting the GTO (Golgi Tendon Organs) reflex. This is the main idea of repeated training."

"It states that when the heart muscle is stretched at the end of the diastole (end diastolic volume), it would elicit a forceful contraction of the heart. This information was carried by Carl Wiggers to the US in 1911 and thereby the finding is attributed to Frank-Starling rather than to Elias Cyon.

"This principle of stretch shortening cycle was also worked on by Cavagna in 1965. It said that the concentric contraction alone wouldn't achieve the trick and it would require the eccentric load prior to the concentric contraction to augment the force production. This is what the word plyometric is supposed to mean."

The concentric phase is when the muscle shortens and the eccentric phase is when the muscle lengthens. For example, when an athlete bends his knee before a jump, it is an eccentric phase preceding a concentric contraction. If this is prolonged, it would not help the muscle to produce the contraction. The jump has to be done quickly in order to gain the advantages of the preceding eccentric phase.

This was taken seriously by the Eastern Bloc countries in the 1920's and they started training seriously but



Jump and Alternate

FACTS ABOUT BONES

HUMANS ARE BORN WITH 300 BONES IN THEIR BODY. HOWEVER, WHEN A PERSON REACHES ADULTHOOD THEY ONLY HAVE 206 BONES. THIS OCCURS BECAUSE MANY OF THEM JOIN TOGETHER TO MAKE A SINGLE BONE.

THE ONLY BONE FULLY GROWN AT BIRTH IS LOCATED IN THE EAR. THIS IS ALSO WHERE THE SMALLEST BONE IN THE HUMAN BODY IS- THE STAPES BONE.

A HUMAN BONE IS AS STRONG AS GRANITE IN SUPPORTING WEIGHT. A BLOCK OF BONE THE SIZE OF A MATCHBOX CAN SUPPORT 9 TONNES - THAT IS FOUR TIMES AS MUCH AS CONCRETE. THE STRONGEST BONE IN OUR BODY IS THE FEMUR (THIGHBONE), AND IT'S HOLLOW!

OVER HALF THE BODY'S BONES ARE IN THE HANDS AND FEET.

THE ONLY JOINTLESS BONE IN YOUR BODY IS THE HYOID BONE IN YOUR THROAT.

HUMANS AND GIRAFFES HAVE THE SAME NUMBER OF BONES IN THEIR NECKS.

ADULT HUMAN BONES ACCOUNT FOR 14% OF THE BODY'S TOTAL WEIGHT.

EVERY SECOND, OUR BONE MARROW PRODUCES TWO MILLION RED BLOOD CELLS.

OVER A PERIOD OF ABOUT SEVEN YEARS, EACH BONE IN OUR BODY IS SLOWLY REPLACED UNTIL IT IS A NEW BONE.

secretively. The only Soviet athlete ever to win the 100 m gold medal (Valery Borzov in the Munich Games, 1972) attributed his victory to his plyometric training.

The muscle spindles are specialised nerve-ends that run parallel to the muscle fibres that monitor the length of the muscle and the rate of applied stretch. When the muscle is stretched, the muscle spindle brings about a shortening of the muscle to protect it from a tear. "The GTOs are special nerve-ends near the muscle tendon junction, which decrease the firing of the alpha motor neurons in the motor cortex exactly opposite to what the muscle spindle does."

"The training in plyometrics enhances the muscle spindle reflex and reduces the GTO reflex. This increases the power output of the muscle. The coordination of the neuro muscular system was maximised by the Russian sprinter, Valery Barzov," mother said.

The Writer is The Director, SPARRC Institute

"By about age 30 we have reached our 'peak bone mass' – after which we tend to lose bone faster than we create new bone. But that's not to say that we can't influence our bone health well into old age. Dietary and lifestyle changes you can make to improve bone mass, and avoid osteoporosis and other bone conditions."

Running Without Injury

Mahesh Babu Bellam,
Physiotherapist, SPARCC Institute, Chennai

Running is considered king of cardio workouts. It makes your heart and lungs stronger and protects your joints. It slows the process of ageing. Not just this, running can also promote a state of wellbeing. So include running in your fitness activity, but take the necessary precaution to avoid injury.

In the recent times, we all have been observing a new trend. There seems to be an increased interest among the fitness enthusiasts on running, as a fitness activity. Many half and full marathons are being frequently organised throughout the year, and the number of participants is gradually increasing year after year. Corporate are coming forward and sponsoring many marathons across the country.

Running is one of the most popular sporting and physical activity around the world because of its health benefits and also, because it does not involve any cost and no special equipment are required, its popularity is increasing every day.

As increasing number of people are taking part in running, it is worthwhile to understand certain risks involved and how to tackle any injury that may arise due to running.

What are the possible injuries?

Running injuries belong to the category of multi-factorial aetiology, and are commonly related to overuse (repetitive micro trauma that overloads musculo skeletal structures). That apart, they can be classified as gradual onset injuries caused by repeated micro trauma without a single and identifiable event.

Running injuries can affect anyone who takes up the activity irrespective of age or gender. Beginners and recreational runners who train consistently but run occasionally and also participate in a long distance running have 37%-56% chance of sustaining injury while running. A population survey has estimated injury incidence of 3.6 injuries per 1000 hours of running.

Approximately 75% of running injuries happen from the knee downwards, to ankle and foot. Knee joint is the most common body part injured, accounting for almost 25% of running injuries. Other commonly injured body parts include the feet, ankles, lower leg and shin, upper leg, back and hip/pelvis/groin.

RUNNING INJURIES CAUSES & SYMPTOMS



“Joints are the place where two bones meet or connect.

Ligaments are short bands of tough fibrous connective tissue that function to connect one bone to another, forming the joint.

Tendons are made of elastic tissue and also play a key role in the functioning of joints. They connect muscle to bone.”

When it comes to running injuries, there are intrinsic and extrinsic risk factors that are associated with it. Age, gender, race, body composition, anatomical structural abnormalities and bio-mechanics, flexibility, muscle strength and endurance, history of past and present injuries, physical fitness of athlete, skill level of athlete and psychological factors come under the intrinsic risk factors. Extrinsic risk factors include external environment, running shoe, proper nutrition and hydration, training parameters and training surface. A good understanding of these risk factors goes a long way in prevention of running injuries.

“Some joints move and some don't. Joints in the skull don't move. Synovial joints are movable joints. They make up most of the joints in the body and are located mostly in the limbs, where mobility is critical. They contain synovial fluid, which helps them to move freely.”

Runners could pay attention to the following safety tips.

Preparation:

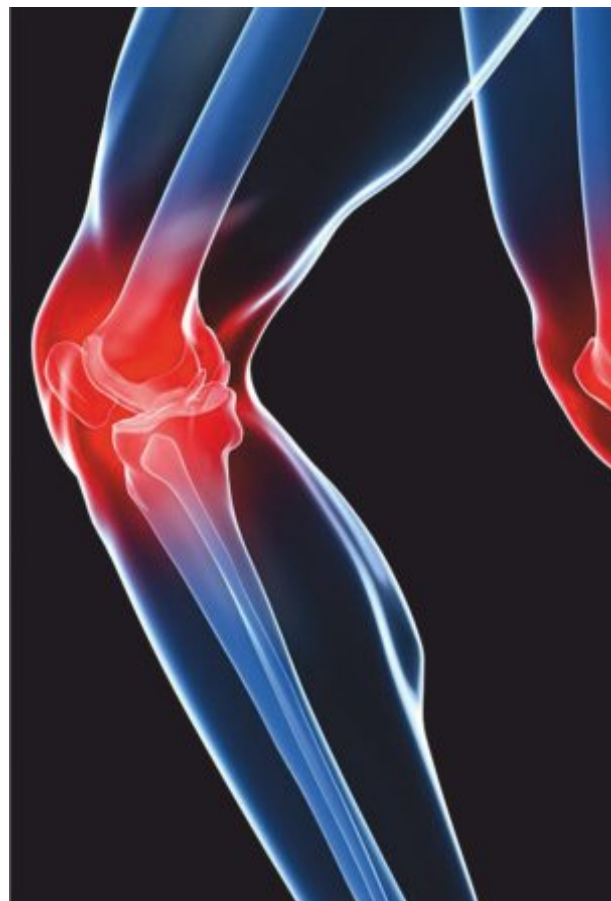
- Assessment of current health status, physical fitness and musculoskeletal examination by sports medicine physician helps to prevent running injuries.
- If you have sustained an injury in the past, consult a sports medicine physician for advice about appropriate exercises to follow.
- Training program should include proper warm-up and cool down.
- Proper strength and conditioning program should be followed at least 3 days per week along with running practice.
- Regular stretching exercise improves the performance and reduces risk of injury.
- Runners, particularly women across all age groups should ensure that their diet intake is nutritionally balanced.

History of past injuries:

- Evaluation of recent and any injury that has occurred during the past six months are essential. This ensures that the injury is completely healed and whether one can participate in running or not, can be determined. Necessary sports rehabilitation is crucial prior to taking up to running after any injury.

Training history and parameters:

- Beginners and recreational runners should restrict the distance they run per week. If fitness is your overall goal, intersperse running with other activities, such as cycling or swimming.
- The running speed and distances should be increased gradually, over training.
- Adequate recovery time should be given to athletes between the training sessions.



- Exercise or running increases a state of well being (physically and mentally) called as Euphoria but exercise addiction (training at extreme temperatures) or over training can also lead to injuries.
- Follow an individual training program prepared by a qualified coach or sports medicine specialist or physiotherapist which is prepared according to ones fitness levels.
- Training surface also plays an important role when it comes to injury prevention. Avoid running on hard cement floor or in sand as it could be slippery.

External environment:

- Never run in extreme weather conditions, be it extremely high or low temperatures.

- Ensure to drink sufficient water and take proper precautions in hot and humid climate.
- Proper clothing and protective measures should be taken in case of extreme cold temperatures.

Running shoe:

- Select appropriate running shoe according to your foot type and running bio-mechanics. Get it assessed by professional or sports medicine specialists.
- Frequent change of running shoes helps to prevent injuries.

Running bio-mechanics:

- Runner with potential bio-mechanical abnormalities like leg length discrepancies, pelvic control and stability, and so on can be assessed and corrected by sports medicine specialist or a medical professional.

Sports nutrition and hydration:

- Proper intake of balanced diet and water according to the individual requirement can prevent running injuries to a large extent.

The Writer is a Physiotherapist,
SPARRC - Hyderabad

“A coating of fibrous tissue called cartilage covers the bone surface and keeps the bones from rubbing directly against each other.

Ball and socket joints, such as hip and shoulder joints, are the most mobile type of joint. They allow you to move your arms and legs in many different directions.”

The Modern age disease: Back and Joint problems

*Dr Yathinder Kharbandha MS (Ortho) Dip NB
Consultant Orthopaedic Surgeon
Apollo Hospital Delhi*

Stress has become a part of life today. Stress along with obesity, lack of physical exercise, improper posture and nutritional deficiencies lead to orthopaedic related problems – directly or indirectly. Common disorders are as follows –

1. Low backache
2. Cervical spondylosis and cervico – lumbar syndrome
3. Osteoporosis or bone weakness
4. Arthritis

Low back pain – disc degeneration

There are different form of presentation of low back pain. A person may present as an Acute incapacitating backache, Recurrent chronic backache & Cervico – lumbar syndrome where pain is usually all over the body.

About 90 % of people during their first 50 years of life will experience an acute attack of backache. Treatment usually involves bed rest and analgesics. After getting well, patient is taught exercise in order to prevent such attacks.

Recurrent backache is characterised by intermittent episodes of back pain for long time with acute aggravation due to activities in daily life. This leads to depression and has considerable impact on psychological & social aspect. Treatment involves - Weight loss, Correction of posture during work and in daily acts of life & Strengthening trunk muscles.

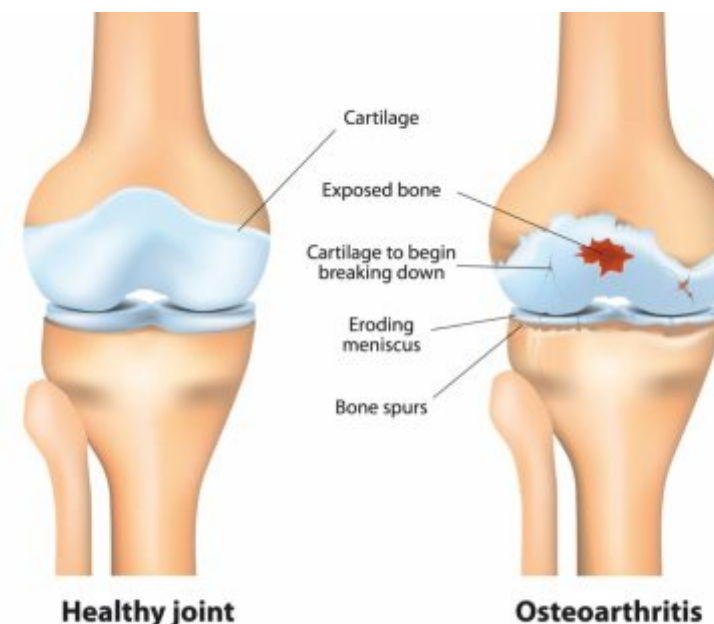
Osteoarthritis (OA)

This disease is a form of joint disease in which there is damage to the surface of the joint. It is due to combination of many factors – Age, Heredity, Obesity & Injury to joint.

It usually starts when a person is in 40s and affects women more than men. It causes most problems in 50s, 60s and 70s. Knee joint is most commonly affected. Pain & stiffness of the joint is the main symptoms.

Treatment generally involves ways to relieve. This included -

1. **Weight loss**
2. **Use of walking sticks**
3. **Avoid activities like prolonged sitting with cross legs, kneeling and squatting.**
4. **Physiotherapy helps to strengthen muscles around joints.**
5. **Hydrotherapy – suppressed exercises in warm water is sometimes useful.**



6. **Pain killer medicines like paracetamol help relieve pain and are best taken intermittently. Occasionally a cortisone injection in the joint helps.**
7. **Surgery – Total Knee Replacement is the final option in few patients when pain is severe and not relieved with above options. Knee replacement and Hip replacement surgery is a successful operation.**

Osteoporosis

It is a condition characterised by progressive loss of bone mass and thinning of bone hence thereby causing bone to break (fracture). It affects roughly 30 %of all women past menopause. It has reached worldwide epidemic proportions. Risk factors include –

1. **Gender (females 4 times more than man).**
2. **Age**
3. **Family history (mother or sister with history of osteoporosis).**
4. **Tobacco use.**
5. **Chronic alcoholism.**
6. **Lifetime exposure to oestrogen.**
7. **Sedentary lifestyle.**
8. **Low levels of calcium, phosphorous and other minerals.**

Osteoporosis is a silent disease. Symptoms occur late and are – Backache, Bone pain, Stooped posture, Fractures of wrist, hip, shoulder and vertebrae.

Early osteoporosis can be detected by a test called DEXA Scan.

Prevention can be achieved by following measures –

1. **Adequate calcium and vitamin D.**
2. **Exercises**
3. **Do not smoke**
4. **Avoid excessive alcohol**
5. **Limit caffeine.**

Put the Salt Shaker Down
“Salt isn't just bad for your heart, kidneys and waistline, it's terrible for your bones too. Having enough calcium in our bodies is vital for healthy bones and osteoporosis prevention.”

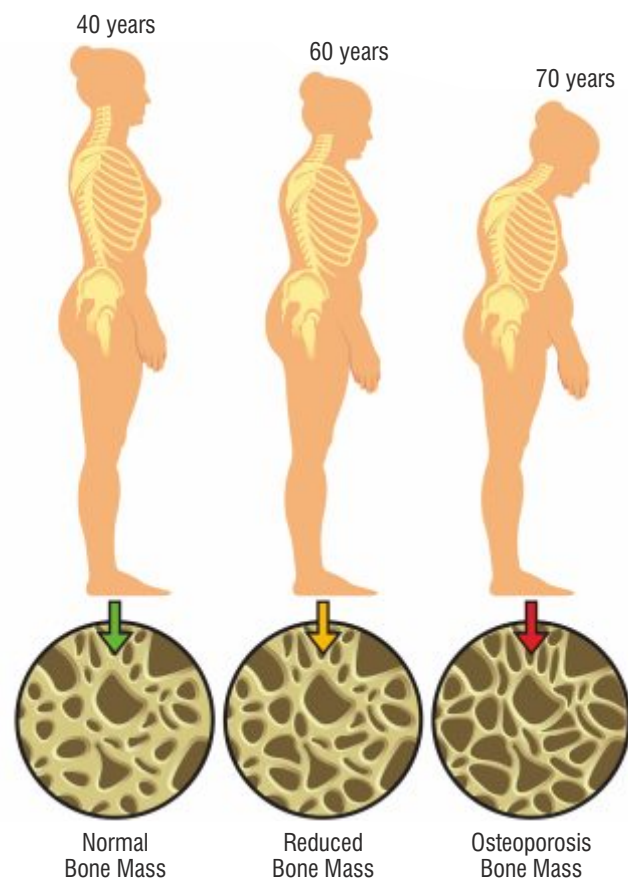
Osteoporosis

What should I Know

Dr Pasupathy MS (Ortho)
Consultant Orthopedic Surgeon, Chennai

Bone is the strongest connective organ of our body. Integrity of bone is important for locomotion, and maintenance of calcium metabolism. It is made up of collagen protein, mineral calcium and water. Water content is more in children. Reduction of minerals due to deficiency of Vitamin D in children is called as Rickets and the same in adult is Osteomalacia. If there are reduction in both protein and minerals then the condition is named as Osteopenia in the beginning and named as Osteoporosis in established stage.

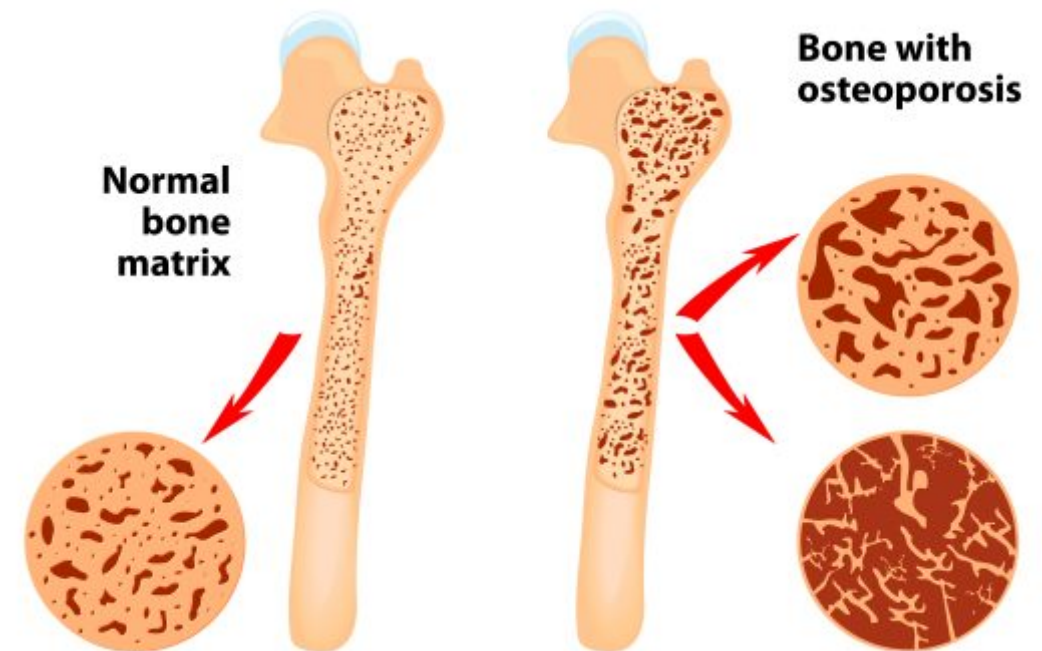
The bone in normal adult consist of long bones of limbs like femur and trunk bone like vertebrae of spine. Osteoporosis of bone is common in the spine bones during old age. This can occur in long bones also as the bone ends are spongy than the middle in these bones. Women are more commonly affected by osteoporosis due to the decrease in production of the bone protective hormone named Oestrogen. This is called as postmenopausal osteoporosis. The same thing can occur in older men and women due to restriction of physical activity and decrease in sex hormone



You can eat your way to stronger bones

“Bones lose strength over time. Keeping them strong requires eating calcium-rich foods like dairy products, broccoli, and some fish. Exercise, especially weight-bearing exercise, helps keep bones strong, too.

The skeletal system can support you for a lifetime of movement. Taking proper care of it ensures you can move longer, experience more, and have greater health. Knowing how to properly care for your bones can go a long way to a healthy, fulfilling life.”



production. This condition is called as senile osteoporosis. Osteoporosis can occur secondary to excessive use of alcohol, smoking, steroid intake and certain drugs. This condition can occur due to lack of activities and other drug induced problems in rheumatoid, diabetes and malignancies. This is called as juxta articular osteoporosis in rheumatoid and disuse osteoporosis in other conditions.

Osteoporosis is a silent thief. It will remain asymptomatic in the beginning and the first presentation will be in the form of fracture around the pelvis. Usually if this is not treated properly in elderly patient they will succumb to death due to various bed ridden complications like pressure sores. So, the other common fractures are found in the wrist, upper end of humerus. In the spine it can produce microfracture and finally end up in vertebral collapse.

How to identify the person is suffering from osteoporosis?

We can identify the vulnerable group with positive risk factor like smoking and peri menopausal woman. Apart from routine screening for serum calcium, Vitamin D3 level, thyroid, parathyroid hormones and alkaline phosphatase the BONE DEXA scan is the useful

investigation to identify the suffering person. According to WHO a T-score of < -2.5 is OSTEOPENIA and > -2.5 is OSTEOPOROSIS. Osteoporosis is a dynamic disease so serial measurement over a period may be required to establish the diagnosis. Always we have to rule out osteomalacia and other associated problems of thyroid, kidney and bowel diseases.

Management of Osteoporosis consists of avoiding the risk like smoking alcoholism. Prevention of diseases like rheumatoid by Vitamin D and calcium supplementation. Increasing physical activity, sun light exposure and weight reduction will maintain bone health. In children, adolescent and young adult the aim is to increase the peak bone mass. Treatment in the established cases are to give Calcium, Vitamin D, Calcitonin, Bisphosphonates, oestrogen and SERM (selective estrogen receptor modulation) therapy to reduce the process of bone loss. Osteoblastic bone formation can be stimulated by intermittent administration of PTH (Para Thyroid Hormone).

Life means nothing without movement. For long life with movement we need strong and stable bones. This is possible by attaining peak bone mass during early adult life by increased physical activity and healthy food in take.

“If you've ever hit your funny bone you know it can really hurt! But what you're feeling isn't actually a bone at all, but the ulnar nerve that sits on top of the elbow. When this gets hit it cause pain, numbness or tingling down the forearm and into the fingers – but you knew that already!”

Healthy Ageing

*J.Ravindran, Sr.General Manager,
Star Health and Allied Insurance co. Ltd*

Everyone is getting old. From the time a child is born, ageing commences and this process will continue from cradle to burial ground. In fact, ageing process is a cycle wherein the human life passes through many stages starting from childhood to youth and then to old age and finally it ends with death.

Old age is a complicated physical and psychological state which most people normally fear. A vast majority of us are conditioned to believe that old age is symbolic of a state associated with helplessness, loneliness, immobility, pain and diseases. It also brings up the frightening image of death fast approaching making everyone insecure. Traditional thinking that all of us are bound to become a victim of this process has been proved wrong by research providing some interesting insights.

Results of studies done by Dr. Deepak Chopra in his book on 'Ageless Body and Timeless Mind confirm that people have been trained throughout the human history to believe that old age is a routine affair and mechanical process that occurs by default on which none can have control whatsoever. This according to him seem to emanate from popular and mistaken impressions of peoples' conditioning. In his research and he attempts to disprove each of them the essentials of which are given below:

- 1. Ageing is natural:** This notion that all organisms grow old and die is only a myth because there are one-celled animals like Amoeba, algae that never age. Within the human body there is a constant regenerating exercise replacing the old cells, water and minerals, which constitute 70% of the body.
- 2. Ageing is inevitable:** People think that Ageing is unavoidable. Scientific studies on the life of Honey bee reveals that it is able to reverse age at certain times of the year by shifting the hormones in its body.
- 3. Ageing is normal:** There does not appear to be any normal curve to indicate how and when people normally age. In fact for some, the process seems to be crawling like a snail and others is racing like a deer running for survival from a tiger.



4. Ageing is genetic: It is not yet proved that the ageing process is driven by any genetic component. If it were to be so, a mechanism could be found out to predict the longevity of lives of the current generation by analyzing the data from their ancestors. But many children are found to die sooner while their parents while their grandparents are still alive. No recorded evidence is available to prove that the father or mother of a centenarian has lived up to 100 years or more.

5. Ageing is painful: Pain is not the result of ageing itself. It is due to many dreadful diseases that afflict the elderly. Medical history has demonstrated that many such illnesses can not only be prevented but also cured.

6. Ageing is universal: All orderly systems may break down ultimately. But the human body is unique and when free from negative influences it will survive for long. Wear and tear that distorts the other systems can be resisted by the body to a large extent.

7. Ageing is fatal: It is normal for people to think all those who become old will have to die. But it will be surprising to note that people never die of old age but perish only due to diseases such as cancer, heart failure, stroke etc.,

On Ageing

“ When you see me sitting
quietly, like a sack upon a
shelf, Don't think I need your
chattering.
I'm listening to myself.
Hold! Stop! Don't pity me!
Hold! Stop your sympathy!
Understanding
if you got it, otherwise I'll do
without it!
When my bones are stiff
and aching and my feet won't
climb the stair,
I will only ask one favor:
Don't bring me no rocking
chair.
When you see me walking,
stumbling, don't study and get
it wrong.
'Cause tired don't mean lazy
and every goodbye
ain't gone.
I'm the same person
I was back then,
a little less hair,
a little less chin,
A lot less lungs and
much less wind.
But ain't I lucky I can still
breathe in. ”

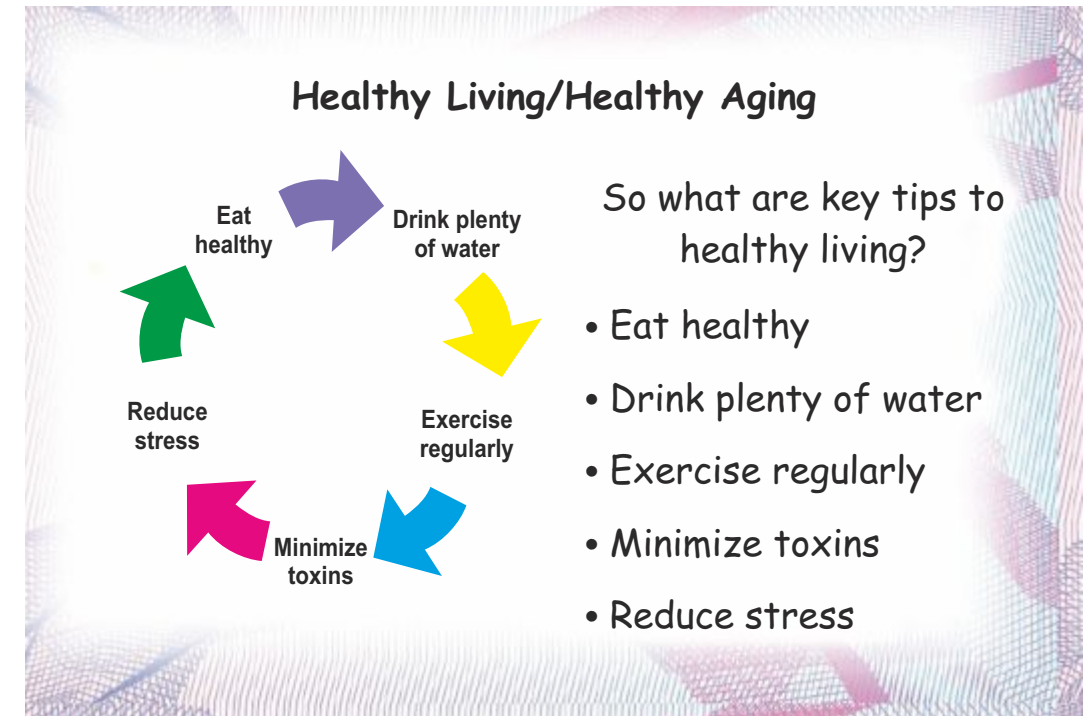
- Maya Anbgelou -

Chronological age is the age of a person as measured by the calendar. The movement in this category is always in one direction. If a person is 44 years this year, he or she will become 45 in the following year. This process moves

Biological age is the reflection of how the body was used or abused. When used appropriately, a person who has the chronological age of 65 years may have the biology of just 30 years old. On the contrary, a person as young as 25, may have the body of 65 year old person because of improper use or abuse.



Gerontologists who carried out on extensive research on Healthy Ageing suggest that people should become proactive in eliminating factors which accelerate the ageing process and adopt factors which reverse it. In a notable experiment conducted at Tufts University, they selected some old people from a nursing home who were frail and put them on weight



Neuro Linguistic Programming the science of human excellence which has done study on modeling healthy people conclude that while Chronological age cannot be reversed, it is possible not only to slow down the other two processes, but reverse them as well. There is enough support to this stand point from the statement of Adhi Sankara the greatest of Indian sages who declared thousands of years ago, "People grow old and die not because they have to but because they see others grow old and die". Similarly it has been found in a study that persons practicing Transcendental Meditation for

NLP research highlightst that certain factors such as Stress, Worry, Hostility, Anger, Greed and smoking accelerate the Ageing process with associated illnesses. They also point out that people who have been ageing healthily have been found to do regular exercise, eat balanced diet, enjoy social support, live a relaxed life and work for a purpose as an integral part of their day to day life have Healthy Ageing. Thus it is apparent that ageing by default is fraught with usual pain and anguish. But there is enough scope to break the pattern of social conditioning by becoming an active participant in the process. Obviously, prevention is better than cure and it is everyone's bounden duty to accept responsibility for their healthy ageing.

“ Know that you are the perfect age. Each year is special and precious, for you shall only live it once. Be comfortable with growing older. ”

- Louise Hay -

FEEDBACK

To: crc.corp
 Subject: Re: Feedback Mail_CLI/2017/151111/0338662
 Dear Sahira,
 I appreciate cooperation and timely response of Star Healthcare. I give 10/10 for quality of service.
 Best regards,
 Mudit, Delhi.

Dear,
 As mention above the claim no. 0410916
 The service by star health is very good. The claim relation cell is very helpful to us.
 and I'm very thankful to star health.
 once again thanks.
 Arpan Mehta, Ahmedabad.

To: crc.corp
 Subject: Re: Feedback - CLI/2017/141126/0481451
 Dear team
 You are one of best team. Used my policy first time after 6 years. Will recommend to most.
 Keep growing and make healthy and happy India.
 Susheel, Chennai.

Gowda Raj
 Hi,
 Thanks a lot for easy and fast support for medical emergency of my daughter Vidya .
 I am really happy with your service.
 Thanks and Regards,
 Gowdaraj DM, Hyderabad.

What Star Customers say...

Policy Number:-P/231117/01/2017/000140

Complaint Number:-CR2000323921

Description:-The insured have been mentally harassed by agent due to mislead, he want to remove the agent from the policy. Kindly refer the trail mail.

From:amitsingh
 To:varanasi; Ashutosh Singh - Sr.BM (Marketing)
 Cc: support
 Subject: Complaint against Star Health Insurance agent

To,
 Branch Manager,
 Star Health Insurance
 Varanasi.

This is to bring you in your kind notice that I have been mis-led by Mr. Pramod Sharma (Agent) and have been mentally harassed by the way the agent has treated me.

I am happy with star insurance scheme but wont be able to continue with Mr. Pramod because of the reason mentioned above or else i will have to opt out from star insurance as well.

Kindly suggest the procedure to opt out from my current agent as soon as possible before I take any step against the company.

Looking forward for full customer support from your side

Policy No. :- P/231117/01/2017/000140

Thanks & Regards,
 Amit Kumar Singh
 Varanasi

Dear Sir,
 We are sorry to hear about your inconvenience. We will resolve the issue at the earliest.

Regards,
 CRC Team

Cut Out Cola Drinks

“If you regularly drink colas, you're doing your bones no favors. The phosphoric acid in these sugar-laden drinks is thought to be to blame for their bone-eroding abilities.

A US study found that women who regularly drink cola (three or more a day) had a 4% lower bone mineral density in their hips than women who didn't drink any.

While the study didn't find the same bone loss in women who drank other types of soft drinks, there are a lot more reasons why you should be cutting out sodas for your health!”