Medi Times

MediTimes from the desk of Medical Services brings the latest trending healthcare news

Vol. 3 | Issue 28 | January, 2017

This issue focuses on Varicose Vein, medicinal value of Tulsi and a Fun Corner with Dimag Ki Batti Jalao in addition to latest medical news.

Happy Reading !!!

Weekend exercise is as good as being active every day

Regular physical activity improves overall health in a number of ways. As per The United States Department of Health and Human Services at least 2 hours and 30 minutes is recommended of weekly moderate exercise to control body weight, lower cholesterol, and maintain blood pressure.

People who exercise regularly are at a lower risk of cardiovascular disease (CVD) and stroke, and they have lower blood pressure, better cardiorespiratory health, and overall fitness.

But beyond the recommended 150 weekly minutes, do the frequency and duration of the exercise sessions matter? A new study investigates different patterns of physical activity alongside the risk of mortality and various illnesses.

Researchers led by Gary O'Donovan, Ph.D., of Loughborough University in the United Kingdom analyzed several existing household surveillance studies and mortality records.

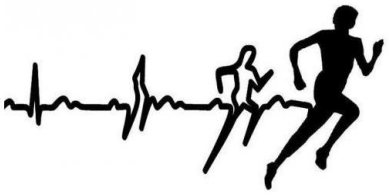
The pooled analysis included 63,591 participants, aged 40 and older, from 11 cohorts of respondents to the Health Survey for England and the Scottish Health Survey.

Researchers collected data from 1994 to 2008 and examined the link between mortality rates and so called weekend warrior exercise habits and other patterns of

physical activity. They also investigated the risk of all cause mortality, CVD, and cancer.

Over 90 percent of the participants were white, and weekend warriors tended to be male.

The inactive respondents were more likely to smoke and report longstanding illness.



Overall, the study showed that weekend warrior, insufficient, and regular physical activity may all reduce the risk of mortality, regardless of the exercising frequency.

More specifically, the all cause mortality risk was 30 percent lower in active individuals, compared with inactive respondents.

This included weekend warrior participants, who crammed their physical activity into one or two weekly sessions of moderate or vigorous exercise, as well as both regularly and insufficiently active respondents.

Some of the evidence gathered by the present study as well as other research referenced by O'Donovan and team suggests that the risk of death is the lowest among those who are regularly active.

Some of the limitations of the study include the fact that 90 percent of respondents were white, meaning that the results may not be generalizable to all racial and ethnic groups.

Additionally, the observational nature of the study means that it cannot establish causality between the correlated data. Finally, the fact that respondents self reported makes the results more vulnerable to inaccuracies.

"Source: Gary O'Donovan et al. Association of "weekend warrior" and other leisure time physical activity patterns with risks for all cause, cardiovascular disease, and cancer mortality, JAMA Internal Medicine, published online 9 January,2017

Diet drinks: A false claim for 'diet'

There are currently numerous campaigns trying to raise awareness of the negative health effects of sugar, particularly on weight gain and obesity.

Sugar is highly pervasive in our diet.

Approximately 75 percent of processed foods and drinks contain added sugar.

Additionally, the consumption of sugar sweetened beverages (SSBs) has increased fivefold since the 1950s.

Numerous studies have pointed to a link between SSBs and cardiovascular disease, metabolic syndrome, and diabetes.

The alternative to SSBs promoted by soft drink companies is the sugarfree, "diet" drink. These artificially sweetened beverages (ASBs) are said to be healthful and prevent weight gain.

But researchers from Imperial College London in the United Kingdom argue otherwise.

Full sugar versus 'diet' drinks

A new commentary on existing ASB research and policy published in the journal PLOS Medicine argues that ASBs are just as ineffective in preventing weight loss as their full sugar counterparts.

According to the authors, in the U.K., SSBs make up a third of the total sugar intake among teenagers. In Brazil, they are the second largest source of dietary sugar, and in the United States, SSBs account for almost half of the added sugar in Americans' diet.

The researchers led by Prof. Christopher Millett argue that although SSBs are very high in calories, they contain almost no essential nutrients. Additionally, "convincing epidemiological evidence" has suggested that

consuming SSBs increases the risk of being overweight or obese, as well as developing diabetes.

ASBs are becoming more and more popular as an alternative to harmful sugary drinks. By 2008, the number of American children consuming ASBs had doubled, compared with 1999.

Soft drinks, fruit juices, flavored water, and ready to drink coffee and tea are all artificially sweetened.

Additionally, "taxes and regulation on SBS and not ASBs will ultimately promote the consumption of diet drinks rather than plain water the desirable source of hydration for everyone," mentions Prof. Carlos

Monteiro, one of the authors of the review.

Diet drinks a 'potential risk factor for chronic diseases'

However, researchers explain why the common perception of diet drinks might be wrong.

ASBs can still cause a compensatory mechanism by stimulating sweet taste receptors. This can, in turn, increase appetite and stimulate the secretion of gut hormones. Knowing that ASBs are low in calories might amplify these effects and lead to excessive consumption of other foods.

This chain reaction could lead to weight gain, obesity, and obesityrelated complications.

Even so, randomized controlled trials of ASBs have shown either no effect at all on weight loss, or only minor reductions in weight.

The authors conclude that The absence of evidence to support the role of ASBs in preventing weight gain and the lack of studies on other longterm effects on health strengthen the position that ASBs should not be promoted as part of a healthy diet.

Source: Borges MC et al. Artificially Sweetened Beverages and the Response to the Global Obesity Crisis, 2017, PLoS Med 14(1):e1002195.

20 minutes of exercise is good to reduce inflammation

The long-term health benefits of physical exercise are numerous; they include reducing the risk of cardiovascular disease, improving metabolism and weight control, as well as generally strengthening the heart, muscles, and bones.

According to the United States Department of Health and Human Services, a regular dose of physical activity also lowers blood pressure, and reduces the risk of type 2 diabetes and some forms of cancer.

New research, published in the journal Brain, Behavior and Immunity, investigates the benefits of 20-minute exercise sessions on the body's immune system.

Researchers from the University of California-San Diego School of Medicine - led by Suzi Hong, Ph.D., from the Department of Psychiatry and the Department of Family Medicine and Public Health - hypothesized that exercise would improve the body's anti-inflammatory response by activating the sympathetic nervous system.

The sympathetic nervous system helps to increase heart rate, blood pressure, and breathing rate. Physical exercise activates this system to help the body keep up.

During this time, the body releases hormones such as epinephrine and norepinephrine into the bloodstream, which activate the adrenergic receptors of immune cells.

Analyzing the body's immune response to exercise

More specifically, the researchers tested the hypothesis that a single 20-minute session of exercise would be enough to trigger sympathoadrenergic activation, which, in turn, would suppress the production of monocytic cytokines.

Monocytes are a type of white blood cell, or immune cell, that help to fight off bacteria and infections. Cytokines are a type of protein that help other cells to become so-called effector cells, which, in turn, kill off cancerous or infected cells.

TNF is one of these cytokines. TNF can induce cell differentiation and proliferation, but also cell death, including cancerous ones. TNF also has pro-inflammatory properties, which help the body to bring its inflammatory cells to the site of the injury, creating an immunological response.

Inflammation is a necessary part of the body's immune response, but too much inflammation can lead to disease. Chronic inflammation may contribute to diabetes, obesity, celiac disease, arthritis, fibromyalgia, or bowel diseases such as Crohn's disease or ulcerative colitis.

To test their hypothesis, the researchers asked 47 participants to walk on a treadmill for 20 minutes at an intensity rate adjusted to suit each individual's fitness level. Hong and team took blood samples from the participants both before and immediately after the exercise sessions.

As little as 20 minutes of exercise reduces inflammation

The results revealed that a 20-minute session of moderate exercise can have anti-inflammatory effects.

The study confirmed the researchers' hypothesis. Exercise did seem to produce an anti-inflammatory cellular response, which could be seen in the reduction of the cytokine TNF.

"Study found one session of about 20 minutes of moderate treadmill exercise resulted in a 5 percent decrease in the number of stimulated immune cells producing TNF," says Hong.

Although the anti-inflammatory benefits of physical activity are already known to researchers, Hong explains, this study explains the process in more detail.

"Knowing what sets regulatory mechanisms of inflammatory

proteins in motion may contribute to developing new therapies for the overwhelming number of individuals with chronic inflammatory conditions, including nearly 25 million Americans who suffer from autoimmune diseases," Hong adds.

The lead author also highlights the importance of this study for people with reduced strength or mobility who are under the impression that physical exercise needs to be extremely intense in order to be effective.

Source: Donovan GO et al. Association of "Weekend Warrior" and Other Leisure Time Physical Activity Patterns With Risks for All-Cause, Cardiovascular Disease, and Cancer Mortality. JAMA Intern Med. Published online January9,2017.

Varicose Vein

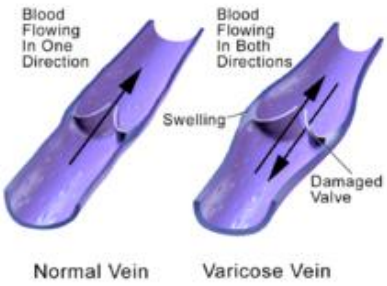
Varicose veins are enlarged, swollen, and twisting veins (blood vessel containing impure blood). They are generally blue or dark purple. People with bulging and/or lumpy varicose veins on their legs may experience cramping pain and heavy limbs. Occasionally, in very severe cases, the varicose veins may rupture, or varicose ulcers form on the skin. In healthy veins, the valves within them stop the blood from remaining stagnant or flowing back - they only allow blood to flow in one direction. More than 30 percent of all adults are estimated to be affected by varicose veins.

Symptoms of varicose veins

- In the majority of cases, there is no pain
- Veins look twisted, swollen, and lumpy (bulging)
- The veins are blue or dark purple
- Some patients may also experience: Aching legs, Legs feel heavy, especially at night
- A minor injury to the affected area may result in longer bleeding than normal

- Swollen ankles
- There may be a shiny skin discoloration near the varicose veins, usually brownish or blue in color
- When suddenly standing up, some individuals experience leg cramps
- A high percentage of people with varicose veins also have restless legs syndrome

Causes of varicose veins



The veins have one-way valves that allow blood through, but not back, so that the blood travels in only one direction. If the walls of the vein become stretched and less flexible (elastic), the valves may get weaker.

A weakened valve may allow blood to leak backward, and eventually flow in the opposite direction. When this occurs, blood can accumulate in the vein(s), which becomes enlarged and swollen.

Risk factors for varicose veins

The following risk factors are linked to a higher risk of having varicose veins:

Sex - females are much more likely to have varicose veins on their legs than males.

Genetics - varicose veins often run in families.

Overweight/obesity - overweight or obese people have a significantly higher risk of developing varicose veins.

Age - the older we get, the more likely we are to develop varicose veins due to general wear and tear on vein valves.

Pregnancy and varicose veins: Women are much more likely to develop varicose veins during their pregnancy than at any other time in their lives.

Diagnosing varicose veins

Diagnosis is usually by physical examination

The following diagnostic tests are sometimes ordered:

- **Doppler test**
- **Color duplex ultrasound scan**

Complications of varicose veins

Bleeding - varicose veins near the skin might bleed if the patient's skin is cut or bumped. The bleeding may go on for much longer than normal. If this occurs, the patient should lie down, raise their leg and apply pressure directly onto the bleeding area.

Thrombophlebitis - blood clots form in the vein of the leg, causing inflammation of the vein.

Venous ulcers - this is when the skin does not exchange oxygen, nutrients, and waste products with the blood properly because the blood flow is weak.

Deep vein thrombosis- blood clot develop in deep veins of leg, later may dislodge and block blood vessels supplying heart, brain, lungs or intestine leading to life threatening complications.

Treatments for varicose veins

Self-Care: Exercising, losing weight, elevating the legs, and avoiding long periods of standing or sitting

Compression stockings: Compression stockings squeeze the patient's legs and improve circulation. They are generally very tight around the ankles and gradually get looser higher up the leg. Compression stockings encourage proper blood flow upwards - against gravity - back towards the heart.

Surgery: If varicose veins are large, they may need to be removed surgically. Laser treatments are often used to close off smaller veins and also spider veins.

Prevention

- Avoid standing or sitting for long periods without taking a break. When sitting, avoid crossing the legs. Keep the legs raised when sitting, resting, or sleeping.
- Do physical activities to get the legs moving and improve muscle tone. This helps blood move through the veins.
- If overweight or obese, try to lose weight. This will improve blood flow and ease the pressure on veins.
- Avoid wearing tight clothes, especially those that are tight around the waist and legs. Tight clothes can make varicose veins worse.
- Avoid wearing high heels for long periods. Lower heeled shoes can help tone the calf muscles. Toned muscles help blood move through the veins.

MEDICINAL VALUE

Tulsi

In India, the herb Tulsi also called holy basil (Also spelled "Tulasi") has been widely known for its health promoting and medicinal value for thousands of years. Commonly called sacred or holy basil, it is a principal herb of **Ayurveda**, the ancient traditional holistic health system of India. Holy basil is also known as "The Incomparable One", **"The Mother Medicine of Nature"**, and "The Queen of Herbs".

Scientifically it is called as **Ocimum sanctum**.

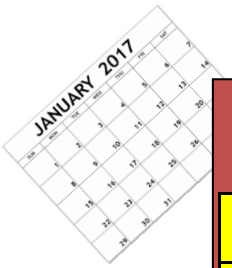
Beneficial effects of Tulsi as per Ayurvedic books:

- Tulsi is perhaps one of the best examples of Ayurveda's holistic lifestyle approach to health.
- Tulsi's unique combination of antibacterial antioxidant, anti-inflammatory and analgesic activities also makes it useful in wound healing.
- Tulsi has anti-anxiety and anti-depressant properties. Tulsi significantly improves general stress scores, sexual and sleep problems and symptoms such as forgetfulness and exhaustion.
- Tulsi's broad-spectrum antimicrobial activity, which includes activity against a range of human and animal pathogens, suggests it can be used as a hand sanitizer,

mouthwash and water purifier.

- Tulsi has been found to protect organs and tissues from industrial pollutants and heavy metals.
- Tulsi has also been found to protect organs and tissues against physical stress from prolonged physical exertion, ischemia, physical restraint and exposure to cold and excessive noise.
- Tulsi can reduce blood glucose, correct abnormal lipid profiles and protect the liver and kidneys from the metabolic damage caused by high glucose levels.
- Tulsi has also been shown to improve lipid profiles, prevent weight gain, hyperglycemia, hyperinsulinemia, hypertriglyceridemia and insulin resistance and protect the organs and blood vessels from atherosclerosis.
- It can also be used in animal rearing, wound healing, the preservation of food stuffs and herbal raw materials and traveler's health.
- Regular consumption of tulsi tea may be compared with the regular practice of yoga, which can nurture and nourish the body -- mind -- spirit while fostering a sense of relaxation and wellbeing.

1. *Accessed from https://www.organicfacts.net/health-benefits/herbs-and-spices/health-benefits-of-holy-basil-tulsi.html*
2. *Cohen MM. Tulsi - Ocimum sanctum: A herb for all reasons. J Ayurveda Integr Med. 2014 Oct-Dec; 5(4): 251–259.*



IMPORTANT HEALTH DAYS IN JANUARY

Date	Observed as
30	World Leprosy Eradication Day

JUST FOR LAUGH GAGS CORNER

DIMAG KI BATTI JALAO…

1. What time duration is recommended for weekly moderate exercise?
2. What are the 2 diagnostic tests for Varicose Veins?
3. I am a mathematical symbol put between 3 and 8. I make a number that is bigger than 3 and smaller than 8. What symbol I am?