

# Medi Times

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

The **In focus** highlights on the Environment in the backdrop of World Environment Day.

**Need to Know** section features on Benefits of Yoga as the world celebrates International Yoga Day on 21<sup>st</sup> of June

The trending news comprises articles on Handheld device detects heart attacks with one drop of blood, Triggers for migraine attacks determined for individual patients and many more...

Hope this June issue of Meditimes would be an informative reading  
Happy Reading!!!

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## Handheld device detects heart attacks with one drop of blood



A new handheld blood test device is able to rapidly diagnosis heart attacks at the point of care. The new Minicare I-20 handheld device, developed by Philips, is designed for use in emergency departments to dramatically reduce the time physicians take to diagnose heart attacks.

Using just a single droplet of blood, the device detects proteins present in the blood stream following a heart attack and provides a result in 10 minutes instead of the usual 60-minute wait for lab results.

For patients presenting at emergency departments with chest pains, the device can be used to administer an immediate test, with results delivered while the patient is being assessed and a medical history taken. This reduces the time for the physician to decide on treatment.

Using the device simplifies the patient-doctor interaction and improves the way in which physicians are

able to deliver care. The system works by measuring the level of cardiac troponin I (cTnI), a protein that is excreted by the heart muscle into the blood following a heart attack.

The company has demonstrated that it delivers on-the-spot test results comparable with those obtained in a laboratory,



enabling the physician to decide on treatment without delay.

Physicians often have to wait up to 6 hours before it can be decided if they can safely discharge the patients or if they need to admit them into the hospital for further tests. The use of Minicare cTnI supports a reduction of the diagnostic protocol by up to 3 hours.

The clinical and analytical performance of the device has been validated during multicenter clinical studies and tested in real life acute care settings within the European project Lab2Go. The study showed the potential of the Philips Minicare cTnI to accurately measure cTnI values, near the patient in the emergency department, with a turnaround time of less than 10 minutes.

Philips has developed the Minicare I-20 as a multi-purpose point-of-care device, allowing it to perform different blood tests.

Each blood test has dedicated software and a single use, disposable cartridge containing the application-specific test. The technology has been designed to detect multiple target molecules at low concentrations within the same blood sample and to show the results on the device's display within minutes.



# Electro acupuncture may help relieve pain from carpal tunnel syndrome

Electroacupuncture combined with nighttime splinting may help alleviate pain from chronic carpal tunnel syndrome, according to a randomized controlled trial published in Canadian Medical Association Journal.

"We found that treatment using electroacupuncture provided small improvements in symptoms, disability, function, dexterity and pinch strength among patients with chronic mild to moderate symptoms of primary carpal tunnel syndrome when

of Integrative Medicine, The Chinese University of Hong Kong, with coauthors.

Carpal tunnel syndrome affects about 3% of the general population and can limit daily activities in people, causing substantial work-related issues and resulting in disability claims. Night splinting and local steroid injection are two commonly recommended treatments for mild to moderate carpal tunnel syndrome.

The study, conducted by researchers in Hong Kong, compared the use of electroacupuncture and night splinting to splinting alone in relieving mild to moderate pain from carpal tunnel syndrome over 17 weeks. Patients were randomly assigned to the two groups, and of the 181 who started, 174 completed the study. They reported pain based on a

symptom scale commonly used to assess pain from carpal



tunnel syndrome.

Patients who received electroacupuncture combined with nighttime splinting reported better symptom relief at 5 and 17 weeks than the control group. The study also showed that splinting alone did not alleviate pain or improve function.

The researchers concluded that electroacupuncture combined with nocturnal splinting has the potential to provide some relief to patients with chronic mild to



combined with nocturnal splinting," writes Dr. Vincent Chung, of Hong Kong Institute of Integrative Medicine, The Chinese University of Hong Kong, with coauthors. The study also showed that splinting alone did not alleviate pain or improve function. The researchers concluded that electroacupuncture combined with nocturnal splinting has the potential to provide some relief to patients with chronic mild to



## Triggers for migraine attacks determined for individual patients

Migraine is the third commonest disorder in the world and ranks sixth amongst more than 300 diseases when it comes to the burden it represents.

"Determining the factors that trigger migraine attacks is an important, albeit difficult, step in managing migraine," explains Christian Wöber, head of the section specializing in headaches at MedUni Vienna's Department of Neurology. Reliable indications cannot be obtained merely by asking sufferers but rather they need to keep detailed records in a diary and this data must then undergo complex statistical analysis in order to be able to treat migraine on an individual basis. The Headache Working Group at MedUni Vienna is one of the world leaders in researching migraine trigger factors and has aroused the interest of the US start-up "Curelator", which is helping to develop an app for identifying migraine triggers. The collaboration between MedUni Vienna and this company has given rise to a study recently published in

the leading journal Cephalalgia.

The study used data from MedUni Vienna to investigate a completely new approach for analyzing migraine trigger factors. For the first time, the trigger



factors responsible for a migraine attack were not determined for a collective but rather separately for each individual patient. Wöber: "By analyzing cases on an individual basis, we are able to provide medicine that is tailored to the individual circumstances of each patient. The need for this approach, hitherto uncommon in medical studies, was recently emphasized in the leading journal Nature."

The current study published in Cephalalgia therefore compared the individual case

analyses with the overall analysis for the entire study population. The surprising, but at the same time practical, finding: from the population of 326 patients who kept a detailed diary for 90 days, it was possible to identify possible migraine triggers in 87% of sufferers by performing personalized analyses. According to the MedUni Vienna experts, "What was unexpected was that the individual profile of possible trigger factors was extremely variable and was unique in 85% of patients. Each of the 33 migraine trigger factors investigated correlated with migraine attacks, in at least some of the patients". However, in the overall analysis of all 326 volunteers, this was only the case for eight of the factors.

Wöber explains: "For the very first time, this new analysis therefore provides information about the correlation between migraine attacks and a broad spectrum of possible trigger factors for each individual patient and is therefore a step towards personalized migraine management."





**NEED TO KNOW**

# YOGA BENEFITS

YOGA IS NOT FOR THE FLEXIBLE.  
IT'S FOR THE WILLING.

GROUNDING  
&  
BETTER FOCUS

• Peace  
of Mind •

INCREASES  
**ARM  
STRENGTH**  
BY 12% AFTER 16 CLASSES

HELPS  
DIGESTION

INCREASED  
LUNG CAPACITY

INCREASES  
METABOLISM



Increases Libido

Slower Breathing  
Less Stress



LESS CHANCE  
OF **HEART DISEASE**

**35%**

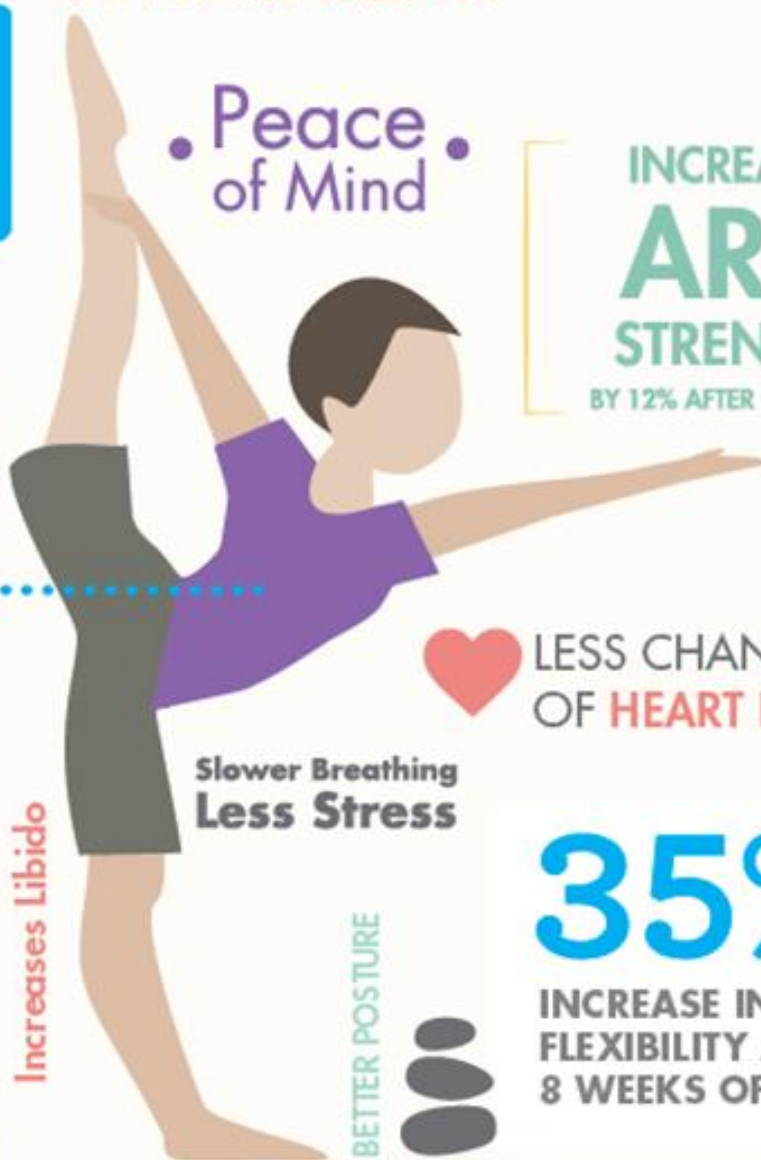
INCREASE IN  
FLEXIBILITY AFTER  
8 WEEKS OF PRACTICE

BETTER POSTURE



OXYGEN TO  
THE BRAIN

DECREASES LACTIC ACID IN MUSCLE  
& DECREASES JOINT PAIN





# World Environment Day



Chemical science has done much in the previous century to benefit humans - from creating new drugs, creating exciting new materials and discovering the basis of life. But as Spiderman says, with great power comes great responsibility. And the biggest responsibility is to protect the environment.

World environment day is also known as the



Environment Day, Eco Day or short form WED. It has been one of the great

annual events for years which is being celebrated worldwide by the people aiming to protect the unique and life nurturing Nature on every 5<sup>th</sup> June. It is an important day in the calendar of the United Nations.

It is celebrated to raise the global awareness about the importance of the healthy and green environment in the human lives, to solve the environmental issues by implementing some positive environmental actions as well as to make aware common public worldwide that everyone is responsible for saving his environment and not only

somebody, government or organizations working for it.

## Background

The World Environment Day was established by the UN general assembly. This day is held all over the world, and it is commemorated on June 5th every year. Expositions are held throughout the week leading up to June 5th.

World environment day annual celebration campaign was started to address the huge environmental issues like wastage and losses of food, deforestation, increasing global warming and so many. Every year celebration is planned according to the particular theme and slogan of the year to bring effectiveness in the campaign all through the world.

It is celebrated to successfully get carbon neutrality, focusing on the forest management, reducing greenhouse effects, promoting bio-fuels production by planting on degraded lands, use of hydro-power to enhance electricity production, encourage common public to use solar water heaters, energy production through solar sources, developing new drainage systems, promoting coral reefs and mangroves restoration in



order to get prevented from flooding and erosion including other ways of environmental preservation.

Some of the objectives of the world environment day campaign are mentioned below:

- It is celebrated to make aware the common public about the environmental issues.
- Encourage common people from different society and communities to actively participate in the celebration as well as become an active agent in developing environmental safety measures.
- Let them know that community people are very essential to inhibit negative changes towards the environmental issues.



**Symbols Associated With UN World Environment Day**

The main symbols of this celebration are natural colors. These colors depict nature, the earth, and the natural resources that are found therein. More often, some of these colors are blue, green, and natural brown. Images that depict natural earth is unpolluted rivers, clean beaches, snowy mountains, natural flora and fauna and many more. One or several of these images can be used to promote campaigns that support the day.



IMPORTANT HEALTH DAYS IN JUNE	
Date	Observed as
5	World Environment Day
8	World Brain Tumor Day
14	World Blood Donation Day
21	International Yoga Day
26	International Day against Drug Abuse and Illicit Trafficking





## **National Pharmaceutical Pricing Authority**

The **National Pharmaceutical Pricing Authority (NPPA)** is a government regulatory agency that controls the prices of pharmaceutical drugs in India.

The Government of India needs to balance its core responsibility to protect the health and welfare of the Indian people and the Nation's interest in sustaining the continued development of an excellent Indian life sciences capability. It is vital that the citizens of India, particularly the common man, have access to affordable medicines for treating the most common and important disease conditions. This is a core mission for any government. Our pharmaceutical industry is a world leader in international generics markets and has begun making serious inroads in innovative drug discovery.

The emergency ended in 1966 and since then the Government has issued following Orders under the Essential Commodities Act. Under section 3 of the Essential Commodities Act, the government has power to control production, supply, distribution and pricing of essential commodities. Under section 2 (a), drugs are considered to be an essential commodity.

Under the latest DPCO 2013, the prices of 348 drugs appearing in the National List of Essential Medicines-2011 covering around 654 formulations have been brought under the purview of price control.

Drug prices are monitored and controlled by the National Pharmaceutical Pricing Authority (NPPA). All the powers of Government of pricing according to Essential Commodities Act have been delegated to it. Under DPCO,

2013 the powers to review are vested with the Government. Hence, the Department of Pharmaceuticals is the reviewing authority whenever pharmaceutical companies file review petitions against any price fixation done by NPPA.

The latest DPCO 2013 only uses the word "Scheduled formulation" to refer to medicines in its first schedule since some of the bulk drugs when used as a single ingredient also act as a formulation. Hence, these medicines are referred as "scheduled drugs"

### **Regulation of drug prices is on the basis of:**

- Essentiality of drugs as specified under National List of Essential Medicines (NLEM)-2011: Price of medicines is fixed because they are considered essential. This was done to abide by the Supreme Court's ruling which, had directed the Government to consider and formulate appropriate criteria for ensuring essential and life saving drugs not to fall out of price control.
- Regulating the prices of formulations only, as opposed to regulation of both bulk drugs and their formulations under DPCO-1995. Thus, even though the NLEM-2011 list contains 348 drugs with various dosages/ strength, any formulations based on combination of any one of these drugs can be subject to price fixation.
- Fixing the ceiling price of formulations through Market Based Pricing (MBP) as opposed to cost based pricing in DPCO-1995 as it is easy to obtain price data than cost data.

**IMPACT:** Significant reduction in prices have been effected on the medicines notified under DPCO, 2013 as compared to the highest price prevailed prior to the announcement of DPCO, 2013. Ceiling prices have been formulated for more than 84% of the medicines enlisted in the Schedule I of DPCO-2013. Prices of 127 drugs have reduced over 40% after the enforcement of DPCO, 2013 as per the Annual report of Department of pharmaceuticals 2014-15. Around 509 medicines in total have benefitted from price decrease.





# Cherry

## Healthy Living & Wellness

Sweet or sour, cherries are bursting with nutrition. Wonderfully delicious, cherry fruit is packed with full of health-benefiting nutrients

and unique antioxidants. Cherries are native to Eastern Europe and Asia Minor regions.

### HEALTH BENEFITS OF CHERRY

- Cherries are one of the very low calorie fruits. Nonetheless, they are rich source of phytonutrients, vitamins, and minerals. Both sweet as well as tart cherries are packed with numerous health benefiting compounds that are essential for wellness.
- Cherries are pigment rich fruits. These pigments, in fact, are polyphenolic flavonoid compounds known as **anthocyanin glycosides**. Anthocyanins are red, purple or blue pigments found in many fruits and vegetables, especially concentrated in their skin, known to have powerful anti-oxidant properties.
- Scientific studies have shown that anthocyanins in the cherries are found to act like anti-inflammatory drugs by blocking the actions of enzymes cyclooxygenase-1 and 2. Thus, consumption of cherries may offer



potential health effects against chronic painful episodes such as gout arthritis, fibromyalgia (painful muscle condition) and sports injuries.

- Research studies also suggest that anti-oxidant compounds in tart cherries can help the human body to fight against cancers, aging and neurological diseases, and pre-diabetes condition.
- Cherries compose of **melatonin** anti-oxidant. Melatonin can cross the blood-brain barrier easily and has soothing effects on the brain neurons, calming down nervous system irritability. It, thus, can help relieve neurosis, insomnia and headache problems
- Further, they are also small source of zinc; and moderate sources of iron, potassium, and manganese; and good source of copper. Potassium is a heart-healthy mineral; an important



component of cell and body fluids that regulate heart rate and blood pressure.

The fruits, especially tart cherries are exceptionally rich in health promoting flavonoid poly phenolic **anti-oxidants** such as *lutein*, *zea-xanthin* and *beta carotene*. These compounds act as protective scavengers against harmful free radicals and reactive oxygen species (ROS) that play a role in aging, cancers and various disease processes.

- Anti-inflammatory property of cherries has been found effective in reducing heart-disease risk factors through scavenging action against free radicals.

## Cherry!

Cherries compose of melatonin anti-oxidant. Melatonin can cross the blood-brain barrier easily and has soothing effects on the brain neurons, calming down nervous system irritability. It, thus, can help relieve neurosis, insomnia and headache problems.



Principle	Nutrient Value		Percentage of RDA	
	Sweet	Tart	Sweet	Tart
Cherry type	Sweet	Tart	Sweet	Tart
Energy	63 cal	50 cal	3%	2.5%
Carbohydrates	16.1 g	12.18 g	12%	9%
Protein	1.06 g	1.00 g	2%	2%
Total Fat	0.20 g	0.30 g	2%	3%
Cholesterol	0 mg	0 mg	0%	0%
Dietary Fiber	2.1 g	1.6 g	5.5%	4%
<b>Vitamins</b>				
Folates	4 µg	8 µg	1%	2%
Niacin	0.154 mg	0.400 mg	1%	2.5%
Pyridoxine	0.049 mg	0.044 mg	4%	3.5%
Riboflavin	0.033 mg	0.040 mg	2.5%	3%
Thiamin	0.027 mg	0.030 mg	2%	2.5%
Vitamin A	640 IU	1283 IU	2%	2.5%
Vitamin C	21 mg	43 mg	21%	43%
<b>Electrolytes</b>				
Sodium	0 mg	3 mg	0%	0.2%
Potassium	222 mg	179 mg	5%	4%
<b>Minerals</b>				
Calcium	13 mg	16 mg	1.3%	1.6%
Copper	0.060 mg	0.104 mg	7%	11.5%
Iron	0.36 mg	0.32 mg	4.5%	4%
Magnesium	11 mg	9 mg	3%	2%
Manganese	0.070 mg	0.112mg	3%	5%
Phosphorus	21 mg	15 mg	3%	2%
Zinc	0.07 mg	0.10 mg	0.5%	0.1%
<b>Phyto-nutrients</b>				
Carotene-β	38 µg	770 µg	--	--
Carotene-a	0 µg	0 µg	--	--
Lutein-Zeaxanthin	85 µg	85 µg	--	--



**JUST  
FOR  
LAUGH  
GAGS  
CORNER**



**DIMAG KI BATTI JALAO**

1. What are the two commonly recommended treatments for mild to moderate Carpal Tunnel Syndrome?
2. What are the symbols associated with UN World Environment Day?
3. Florentine and her friend were walking by the side of a bridge. They saw a ship crowded with people but there wasn't any single person on ship. How was that possible?



Please send your quiz answers to [medicalservices@microlabs.in](mailto:medicalservices@microlabs.in) and winner will get a surprise gift