News and Views

Cognitive and Heart Benefits of Blueberries

Eating a handful of blueberries daily lowers blood pressure (BP) and improves vascular and cerebral blood flow leading to better cardiovascular and cognitive health, according to a recent study published in the *American Journal of Clinical Nutrition*.[1]

Researchers from the UK, Germany and Portugal collaborated in this randomized, double-blind, placebo-controlled trial to evaluate the beneficial effects of blueberries. For this, they enrolled 61 healthy older adults aged 65 to 80 years, who were randomly assigned to receive a drink constituted from 26 g of freeze-dried wild blueberry powder (equivalent of 178 g of whole blueberries containing 302 mg anthocyanins) or a matched placebo but with no anthocyanins for a duration of 12 weeks.

After 12 weeks, there was a substantial increase in the flow-mediated dilation (FMD), a measure to evaluate endothelial function, in the participants in the blueberry group compared to the placebo group (0.86%). The 24-hour ambulatory systolic BP also decreased by 3.59 mmHg. No difference was noted for arterial stiffness and blood lipids between the two groups. Participants who consumed blueberries showed enhanced "immediate recall on the auditory verbal learning task, alongside better accuracy on a task-switch task". But no improvement was seen in delayed recall. Subjects in the blueberries group also exhibited higher total 24-hour urinary polyphenol levels compared to placebo after 12 weeks.

These findings demonstrate the cardio- and neuroprotective effects of blueberries. The daily intake of 178 g of fresh blueberries in this study lowered BP and improved blood vessel function, which also boosted cognitive function in older adults in the form of improved executive function and better short-term memory.

The beneficial effects of blueberries have been attributed to their anthocyanin content. Anthocyanins are red, blue or purple pigments found in fruits and vegetables and are potent antioxidants. Additionally, they have antidiabetic, anticancer, anti-inflammatory, antiangiogenesis, antimicrobial and antiobesity properties. They also play an important role in maintaining good vision.[2] Other sources of anthocyanins are purple vegetables, raspberries, strawberries and red grapes.

References

1. Wood E, et al. Wild blueberry (poly)phenols can improve vascular function and cognitive performance in healthy older males and females: a double-blind randomized controlled trial. Am J Clin Nutr. 2023;S0002-9165(23)46300-9.
2. Khoo HE, et al. Anthocyanidins and anthocyanins: colored pigments as food, pharmaceutical ingredients, and the potential health benefits. Food Nutr Res. 2017;61(1):1361779.

CGHS Package Rates Revised by Government

The Union Health Ministry has agreed to update the Central Government Health System (CGHS) package pricing for all beneficiaries and to simplify the referral procedure for the benefit of employees. Officials stated that the change was carried out for the first time since 2014 to keep hospitals supplying the services. Many private hospitals requested to withdraw from the CGHS panel since the prices had not been revised since 2014.

According to an official release, outpatient department (OPD) charges have been raised from Rs. 150 to Rs. 350, while inpatient department (IPD) consultation fees have been raised from Rs. 300 to Rs. 350. The daily tariff for intensive care unit (ICU) services has been set at Rs. 5,400, which includes all ward entitlements. Rents for hospital rooms have also been reduced. The cost for a common room has been increased from Rs. 1,000 to Rs. 1,500, the rent for a semi-private ward has been raised from Rs. 2,000 to Rs. 3,000, and the rate for a private room has been raised from Rs. 3,000 to Rs. 4,500. The government would incur additional costs ranging from Rs. 240 crore to Rs. 300 crore due to the action.

A senior ministry official, the government has suggested initially altering the CGHS package prices of consultation fees, ICU charges and room rent following an analysis of stakeholder concerns and considering the growth in expenses of various components of health care. The CGHS referral procedure has also been streamlined. Previously, CGHS beneficiaries had to physically visit the CGHS Wellness Centre to be sent to a hospital. A CGHS beneficiary can now send a representative to the wellness center with the necessary documentation to be sent to a hospital.

(*Source: https://timesofindia.indiatimes.com/india/government-revises-cghs-package-rates-to-retain-hospital-services/articleshow/99445258.cms*)

Delhi, Civic Hospitals Prepare to Fight Virus with Strict Focus on Vaccines

Both the Municipal Corporation of Delhi (MCD) and New Delhi Municipal Council (NDMC) are expanding COVID provisions at their hospitals, including the establishment of flu clinics, testing facilities, the use of mobile vans for testing in congested regions, and the maintenance of appropriate stockpiles of needed drugs and equipment. They also favor booster doses of vaccinations for both health care personnel and patients.

Satish Upadhyay, the Vice-Chairman of the NDMC, revealed that specific recommendations had been published at Charak Palika Hospital to carefully observe COVID regulations, such as keeping social distance and wearing masks. Reverse transcription-polymerase chain reaction (RT-PCR) testing for the public has begun at the hospital. Mobile testing facilities have been established in response to requests from government offices, ministries and government lodgings.

He further stated that, despite the low number of instances, they have directed hospital personnel to link COVID-positive patients to nearby dispensaries for medical consultation, pulse readings, etc. They had also allied with LNJP Hospital, and patients might be transferred there if necessary.

Officials of the MCD stated that medical oxygen-producing pressure swing adsorption (PSA) plant, oxygen cylinders, medical equipment, flu clinics and other amenities were already in place. They started RT-PCR testing for up to 50 patients daily at Hindu Rao Hospital and want to increase it to 200. The testing facility may operate in two shifts. The medical superintendent has requested the kits in writing to the Delhi government.

MCD directed hospitals and health care facilities to adhere to COVID-appropriate criteria at the end of March rigorously. According to the recommendation, all health facilities should evaluate individuals with fever and send those suspected of having COVID-19 tested. Aside from appointing a nodal officer to oversee arrangements and ensure sanitization, the units were also instructed to keep adequate stocks of essential medicines, items such as PPE kits, masks, gloves, sanitizers and pulse oximeters, make arrangements for oxygen supply, and keep the PSA oxygen plant operational.

(*Source: https://health.economictimes.indiatimes.com/news/hospitals/in-delhi-civic-hospitals-boost-steps-to-fight-virus-focus-on-vaccine-too/99449427*)

Higher Risk of Cardiovascular Events Observed among Women with Endometriosis

In a new study published in the journal, *Maturitas* researchers conducted a systematic review and meta-analysis to examine the risk of cardiovascular events in women with and without endometriosis.

The researchers looked at all retrospective and prospective studies that looked at cardiovascular events like cerebrovascular disease, ischemic heart disease, myocardial infarction and other outcomes related to coronary heart diseases, as well as mortality from cardiovascular events in women with and without endometriosis. The meta-analysis includes six trials and 2,54,929 individuals. Three of the studies found that women with endometriosis had a higher risk of ischemic heart disease than women who did not have Endometriosis. Studies demonstrated that endometriosis in premenopausal women was linked to increased arterial stiffness, hypercholesterolemia and hypertension. The length of oral contraceptive use in women with endometriosis was likewise linked to a higher risk of cardiovascular disease (CVD).

Surgical treatments for endometriosis also raised the incidence of stroke and coronary heart disease in women.

Moreover, the use of analgesic drugs to alleviate pelvic pain and the psychological and emotional stress associated with endometriosis are likely to contribute to an elevated risk of cardiovascular events in endometriotic women. Overall, the findings showed that endometriosis considerably raised women's risk of CVD. Psychological stress and analgesic drugs used to treat persistent pelvic discomfort may potentially raise the risk of CVD. Additionally, endometriosis surgical treatment methods increase the risk of stroke and other cardiovascular problems.

(*Source: https://www.news-medical.net/news/20230412/Endometriosis-linked-to-increased-risk-of-cardiovascular-disease-in-women.aspx*)

Study Reveals Beneficial Effects of Changing the Existing Medication among Hypertensive Patients

According to recent research published in the *Journal of the American Medical Association (JAMA),* the effect of changing medications can be twice as powerful as increasing the patient's existing medication dose.

The study involved 280 patients. During the course of a year, each of these patients tested four different BP medications, one after the other. The researchers discovered that the treatment's efficacy varied greatly from person to person and that certain people attained

reduced BP with one medicine rather than another. A change in medication can help BP-lowering therapy patients far more than raising the amount of their existing medication.

The study found that if a patient is given the proper BP medication, they can drop their BP and, in turn could provide better protection against potential cardiovascular illnesses sooner. The study's findings call into question the present treatment paradigm, which recommends four medication groups equally warmly for all individuals with high BP.

(*Source: https://www.hindustantimes.com/lifestyle/health/changing-medication-more-effective-for-blood-pressure-treatment-study-101681279971951.html*)

Optimal Timing of Induction of Labor in Women with PROM at Term

Women with prelabor rupture of membranes at term are best managed by immediate induction of labor, according to a secondary analysis of data from the multicenter Term Prelabor Rupture of the Membranes (TermPROM) study published in the *American Journal of Obstetrics and Gynecology*.[1]

The TermPROM study had compared immediate delivery by induction of labor against expectant management, i.e., waiting for spontaneous onset of labor in the absence of feto-maternal compromise in women with prelabor rupture of membranes at term (≥37 weeks of gestation). The present study evaluated the outcomes of labor induction and expectant management after term prelabor rupture of membranes within the first 36 hours to determine the optimal timing of labor induction. Out of the 4,742 study participants enrolled, 2,622 underwent labor induction, while the remaining 2,120 had a spontaneous onset of labor.

An increasing incidence of neonates requiring admissions to ICUs and neonatal infections including maternal infections (clinical chorioamnionitis or postpartum fever) were observed with time after PROM at term. Women who underwent labor induction were less prone to these adverse outcomes compared to those who underwent expectant management within the first 15 to 20 hours after PROM without affecting the risk for cesarean delivery. Compared to the expectant management group, women in whom labor was induced within the first 30 to 36 hours had a shorter time to delivery following PROM; they also had a shorter duration of hospitalization. Out of the 2,120 women in the expectant management group, 1,365 (64%) had spontaneous onset of labor within the first 24 hours after PROM.

This study has established the optimal timing of induction of labor. Given the low incidence of adverse maternal and neonatal outcomes, it shows immediate induction of labor as the best management option in women with PROM at term. However, if immediate induction of labor is not feasible, then it should still be the preferred option and done within the first 15 to 20 hours after PROM.

Reference

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Ozone Exposure in Early Pregnancy Increases Risk of Gestational Hypertension

Adding to the growing evidence about harmful effects of air pollution on health, a new study from China published online April 3, 2023 in the journal *JAMA Network Open* has demonstrated an association between risk of gestational hypertension and exposure to high ozone levels during the first trimester of pregnancy.[1] However, ozone exposure was not associated with risk of pre-eclampsia. The study enrolled 7,841 pregnant women, mean age 30.4 years, from a hospital in Shanghai in China between March 2017 and December 2018. The objective was to investigate if the exposure to ozone during pregnancy influenced the risk of gestational hypertension and pre-eclampsia. None of the participants had any noncommunicable disease prior to becoming pregnant. The mean ozone exposure levels were 97.66 $\mu g/m^3$ in the first trimester and 106.13 $\mu g/m^3$ in the second trimester.

Out of the 7,841 women included in the study, 661 developed a hypertensive disorder; 406 (5.2%) had pre-eclampsia and 255 (3.2%) had gestational hypertension. The pre-pregnancy body mass index (BMI) was significantly higher among the women with hypertensive disorders in pregnancy. These women were also not well-educated. The risk of gestational hypertension increased by 28% with every 10 $\mu g/m^3$ rise of ozone exposure during early pregnancy with a relative risk of 1.28. But no such association was noted for pre-eclampsia. Weeks 1 to 9 were identified as a highly susceptible period for exposure to ozone and high risk of gestational hypertension. "Sustainable ozone control is needed to reduce the disease burden of gestational hypertension", conclude the authors.

Reference

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