

## News and Views

### **Most Black Adults have High Blood Pressure Before Age 55**

Approximately 75% of black men and women are likely to develop high blood pressure (BP) by the age of 55, compared to 55% of white men and 40% of white women in the same age range, according to new research published July 11, 2018 in *Journal of the American Heart Association*. Higher body weight was associated with an increased risk for high BP, regardless of race or gender, and those who adhered to the Dietary Approaches to Stop Hypertension (DASH)-style diet, both blacks and whites, were at lower risk for hypertension.

### **US FDA Approves Emergency Use of Freeze-dried Plasma for the Military**

The US Food and Drug Administration (FDA) has granted authorization for emergency use of pathogen-reduced leukocyte-depleted freeze-dried plasma to help treat military members in the battlefield.

### **Higher BP may be Linked to Brain Disease and Alzheimer's**

Older people who have higher BP may have more signs of brain disease, specifically brain lesions, according to a study published in the July 11, 2018, online issue of the journal *Neurology*. An association between higher BP and more markers of Alzheimer's disease, tangles in the brain.

### **New Zealand Scientists Perform the First-ever 3D Color X-ray on a Human**

Scientists from New Zealand have performed the first-ever 3-D color X-ray on a human, using a color medical scanner using the particle-based Medipix3 technology provided by the CERN physics lab. Medipix works like a camera detecting and counting individual subatomic particles as they collide with pixels while its shutter is open. The small pixels and accurate energy resolution allow high-resolution and high-contrast pictures that no other imaging tool can achieve, according to Phil Butler, who developed this technique. According to the CERN, the images very clearly show the difference between bone, muscle and cartilage, but also the position and size of cancerous tumors, for example. The colors represent different energy levels of the X-ray photons

as recorded by the detector and so identify different components of body parts such as fat, water, calcium and disease markers ... (*ET Healthworld/CERN*)

### **Risk of Transmission of HIV Through Breastmilk is Low in Women on Effective ART**

The risk of human immunodeficiency virus (HIV) transmission through breastfeeding by mothers on effective antiretroviral treatment (ART) is not non-existent, but is very low in high-income settings. The study is reported June 27, 2018 in *The Lancet HIV* online.

### **Athletes More Prone to Depression and Anxiety Post-concussion**

Athletes who have attention-deficit hyperactivity disorder (ADHD) may be at greater risk for experiencing persistent anxiety and depression after a concussion versus people who do not have ADHD, according to findings of a study presented at the American Academy of Neurology's Sports Concussion Conference in Indianapolis.

### **A New CDC Website on ME/CFS for Healthcare Providers**

The Centers for Disease Control and Prevention (CDC) has released an updated website "<https://www.cdc.gov/me-cfs/index.html>" about myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) specifically for healthcare providers. The website includes information on diagnosis, clinical course and management of people who have been diagnosed with ME/CFS.

### **FDA Approves Tecovirimat as Treatment of Smallpox**

The US FDA has approved tecovirimat, the first drug with an indication for treatment of smallpox. Although, small pox was declared as eradicated in 1980 by the World Health Organization (WHO), there have been long-standing concerns that smallpox could be used as a bioweapon.

### **Direct Oral Anticoagulants Linked with Higher Bleeding Risk in CKD Patients**

Compared with warfarin use, direct oral anticoagulant use was linked with a 23% higher risk of bleeding in patients with chronic kidney disease (CKD), according to the results of a study published July 12, 2018 in the

*Clinical Journal of the American Society of Nephrology (CJASN)*. But, no difference was observed between the two treatment groups in terms of benefits from prevention of ischemic stroke.

### **Asian Indians Increase their Risk of Developing Diabetes by Adopting Poor Lifestyle Habits**

Adopting American habits by Asian Indians who had been living in the United States was found to be bad for cardiometabolic health, suggests a study presented June 22, 2018 at the recent American Diabetes Association 2018 Scientific Sessions in Orlando, Florida. The study subjects with an unhealthy diet had poor A1c levels and those who led a sedentary lifestyle had poor high-density lipoprotein cholesterol (HDL-C) levels.

### **Once-weekly Ciprofloxacin Comparable to Daily Norfloxacin for Preventing Spontaneous Bacterial Peritonitis**

Once-weekly ciprofloxacin was as effective as norfloxacin 400 mg daily for the prevention of spontaneous bacterial peritonitis in patients with cirrhosis and ascites suggesting its benefits as a more convenient and cost-effective treatment option. Systolic BP (SBP) developed in 4 patients (4/55) and in 3 patients (3/57) in each group, respectively.

### **Portugal on Fast Track to Achieve HIV Targets Ahead of 2020 Deadline**

The Portuguese Minister of Health has announced that Portugal has achieved 2 of the 3 '90-90-90' HIV targets set by the Joint United Nations Programme on HIV/AIDS (UNAIDS) for 2020. Portuguese Minister of Health Dr Adalberto Campos Fernandes announced on 5 July 2018 that Portugal has achieved 2 of the 3 HIV targets set the UNAIDS, known as the 90-90-90 targets. This puts the country on track to reach all 3 targets ahead of the 2020 deadline. This announcement is based on data from 2016:

- 91.7% of people living with HIV are diagnosed
- 86.8% of people diagnosed are on treatment
- 90.3% of people on treatment achieve HIV viral load suppression.

"Portugal has become one of the pioneer countries in the WHO European Region in moving towards ending AIDS by 2030," says Dr Masoud Dara, Coordinator for Communicable Diseases at WHO/Europe. "Its success is built on a thorough implementation of evidence-based measures, high-level commitment and a true whole-of-government and whole-of-society approach in line with

the Sustainable Development Goals." (Source: WHO Europe, July 11, 2018).

### **Early Introduction of Solids Improves Sleep Quality in Infants**

A secondary analysis of the Enquiring About Tolerance study shows that the early introduction of solids into the diet at 5 months was associated with longer sleep duration, less frequent waking at night in infants. Also, parents of these babies also reported fewer serious sleep problems. The study is published online July 9, 2018 in *JAMA Pediatrics*.

### **FDA Warns of Imposters Sending Consumers Fake Warning Letters**

The US FDA is warning consumers about criminals forging FDA warning letters to target individuals who tried to purchase medicines online or over the phone. Based on the agency's experience with criminals posing as FDA employees, the FDA is concerned that these fake warning letters are linked to an international extortion scam. The FDA generally does not issue warning letters to individuals who purchase medicines online.

### **Hemodynamic Valve Deterioration of Surgically Implanted Aortic Valve Increases Mortality Risk**

Hemodynamic valve deterioration (HVD) of surgically implanted aortic bioprostheses on Doppler echocardiography is independently associated with a marked increase in the risk of valve reintervention or mortality, according to a study published online July 9, 2018 in the *Journal of the American College of Cardiology*. Leaflet calcification, insulin resistance and dysmetabolic profile were predictors of HVD.

### **Enzalutamide FDA-approved for Nonmetastatic Prostate Cancer**

The US FDA has approved enzalutamide for the treatment of men with castration-resistant prostate cancer.

### **Down Syndrome Patients may have Corneal Features Similar to Keratoconus**

In a multicenter observational study published online June 21, 2018 in *JAMA Ophthalmology*, around 71% of patients with Down syndrome showed characteristics compatible with keratoconus. They were found to have steeper and thinner corneas and more corneal aberrations than those without genetic alterations and normal corneas.

## 17 Picked Nipah Virus from 1st Victim: Kerala Govt. Report

Thiruvananthapuram, July 15 (PTI): A detailed study by the Kerala government in the recent outbreak of Nipah virus has suggested that 17 of the 19 infected people might have contracted the deadly virus from the first victim, a 26-year-old Mohammed Sabith, who died on May 5. He was among the 17 people who lost their lives after they contracted the virus. Two people had recovered.

As per available records, it has been found that Sabith contracted the Nipah virus from fruit bats and 17 others—including three from his family i.e., father, younger brother and a paternal aunt - got infected from him, government sources said.

Besides, the virus from him is also suspected to have infected four other people at the Perambra Taluk Hospital, Kohzikode, where he was first brought, the sources in the state surveillance department of the Kerala Health Services said, adding that 10 others in the Kozhikode Medical College Hospital, where he was taken for a CT scan in the radiology department, also picked the virus from him.

One patient was infected by another man at the Perambra Hospital, they said. It is suspected that Sabith, an electrician, had contracted the virus from fruit bats, however, it is not clear the circumstances under which he got infected. Sabith had returned from the gulf 8 months before he died.

Sabith first took treatment as an 'outpatient' at the Perambra Hospital for high fever and body pain on May 2. On May 3, he was admitted at the hospital, and it is suspected that four people on night duty including Sister Lini Puthussery, who attended to him, picked the virus from him. As his condition worsened on May 4, Sabith was shifted to the Medical College Hospital for a CT scan, where he died on May 5. Ten people got infected at the medical college on the single day he was there, the sources said.

Though Sabith's blood samples were not tested for Nipah, as per records, it has been concluded that he had contracted Nipah virus, the sources said. His younger brother was admitted to the hospital with similar symptoms and tests revealed that he was Nipah positive. He died shortly after, followed by their 60-year-old father and a paternal aunt who had come to help them. It was suspected that the brothers might have contracted the virus when they got into a bat-infested well in their newly bought property. However,

the bats in the well were found to be insect-eating ones, the sources said.

As a precautionary measure, a contact list of nearly 3,000 people with whom the infected persons had been in touch was prepared and they were put under quarantine. Nipah test was also conducted on them, the sources said.

The exhaustive report on the Nipah outbreak has been sent to the central surveillance department, the sources said.... (PTI)

## C. difficile Infection Rates Higher in Intermediate Levels of Hospital Occupancy

A study published online first June 27, 2018 in the *Journal of Hospital Medicine* has found an inverse association of *Clostridium difficile* infection with hospital occupancy. Higher hospital occupancy rates were not related to higher risk of acquiring hospital-acquired *C. difficile* infection. Unexpectedly, *C. difficile* infection rates were 3-folds higher for intermediate hospital occupancy.

## Prevalence of Depression is Higher in Pregnant Women Today

In the Avon Longitudinal Study of Parents and Children examining the prevalence of prenatal depression among two generations of pregnant mothers, 25% of the current generation of mothers included in the study, whose pregnancies occurred between 2012 and 2016 suffered high levels of depressive symptoms versus only 17% in the generation of their mothers in the study, whose pregnancies occurred between 1990 and 1992. These findings are published July 13, 2018 in *JAMA Network Open*.

## Healthy Diet Associated with Fewer Asthma Symptoms and Better Asthma Control

According to a study published online in the *European Respiratory Journal*, eating a healthy diet rich in vegetables, fruits and whole grains reduced asthma symptoms by 30% in men and 20% in women, compared to a diet high in red meat, salt and sugar.

## Exposure to Environmental Tobacco Smoke Increases Risk of Habitual Snoring in Children

Exposure to environmental tobacco smoke, in particularly prenatal tobacco smoke exposure and maternal smoking, is associated with an increased risk of habitual snoring, suggests a meta-analysis of 24 studies involving more than 80,000 children published online June 15 in the *Journal of Epidemiology & Community Health*.

### **Classic MS is Preceded by a Prodrome, says Study**

A study published in *Multiple Sclerosis Journal* says that multiple sclerosis (MS) can be preceded by a prodrome comprising of symptoms like blurred vision or numbness or weakness in the limbs, pain or sleep problems which are not the classic manifestations of the disease. They are therefore more likely to consult a neurologist or a psychiatrist for these symptoms.

### **WMA Condemns Complicity of Doctors in Iranian Executions**

The complicity of state-affiliated doctors in Iran in facilitating the execution of young prisoners in the country has been condemned by the World Medical Association (WMA).

This follows the execution last month of a 19-year-old Abolfazl Chezani Sharahi who was sentenced to death in 2014. The WMA says his sentence was issued based on an official medical opinion by the Legal Medicine Organization in Iran, stating that he was mentally "mature" at the age of 14 when the crime of which he was convicted took place.

In a letter jointly addressed to the Office of the Supreme Leader, Ayatollah Sayed 'Ali Khamenei, to President Hassan Rouhani and to the Head of the Judiciary Ayatollah Sadegh Larijani, the WMA President Dr Yoshitake Yokokura and WMA Chair Dr Ardis Hoven say this involvement of physicians is in direct violation of international law and their duties as physicians, and is both unethical and illegal.

The WMA leaders write: "Further, physicians have a clear duty to avoid any involvement in torture and other cruel, inhuman or degrading punishment, including the death penalty. This is specified in the World Medical Association's policies and the International Code of Medical Ethics. Doctors who provide "maturity" assessments that are then used by courts to issue death sentences, as do physicians affiliated with the Legal Medicine Organization, are facilitating the execution of individuals."

In their letter, the WMA leaders say that according to Amnesty International, Abolfazl Chezani Sharahi was the fourth individual since the beginning of 2018 to be executed after being convicted of crime committed when under the age of 18 and that there are at least 85 other juvenile offenders who currently remain on death row based on medical maturity assessments.

"Iran has ratified the Convention on the Rights of the Child, which absolutely prohibits the use of the death

penalty against people who were below the age of 18 at the time of the crime they are convicted of committing. We urge Iran's authorities to amend the Islamic Penal Code so as to comply with international human rights laws by abolishing the use of the death penalty for crimes committed by people below the age of 18 in all circumstances." "Further, physicians have a clear duty to avoid any involvement in torture and other cruel, inhuman or degrading punishment, including the death penalty."

The letter concludes: "The WMA calls for Iranian authorities to acknowledge a physician's duty to do no harm and to guarantee that physicians are complying with the fundamental principles of medical ethics by prohibiting physician involvement in sentencing individuals to the death penalty or in the preparation, facilitation or participation in executions."

In a further letter to Dr Iradj Fazel, President of the Iranian Medical Council, the WMA calls on the Council to publicly acknowledge a physician's duty to do no harm and to condemn firmly the medical maturity assessments provided by the Legal Medicine Organization.

"The WMA urges the Iranian Medical Council to speak out in support of the fundamental principles of medical ethics, and to investigate and sanction any breach of these principles by association members." (WMA, July 16, 2018)

### **A Positive Fecal Occult Blood Test Associated with Increased Risk of All-cause Mortality**

A study published online in the journal *Gut* suggests that fecal hemoglobin is not just associated with death from colorectal cancer, it is also associated with greater all-cause mortality. A positive fecal occult blood test was also associated with a 58% increased risk of death from all causes other than bowel cancer.

### **Mobile Apps may Overdiagnose Mental Health Conditions**

Mobile apps that offer advice on managing mental health may overdiagnose mental health conditions by "medicalizing" normal ups and downs of life, suggests a study published in the July/August 2018 issue of the *Annals of Family Medicine*.

### **Childhood Infections may Adversely Affect Long-term School Performance**

Severe infections leading to hospitalizations during childhood are associated with lower school achievement

in adolescence, as per a study published in the July 2018 issue of *The Pediatric Infectious Disease Journal*. Analysis of data of 598,553 children born in Denmark between 1987 and 1997 showed that children with five or more infections requiring hospitalization had a 38% reduction in the odds of completing ninth grade.

### **Periconception Glycemic Control in Women with Type 1 Diabetes Increases Risk of Birth Defects**

Among live-born infants of mothers with type 1 diabetes, increasingly worse glycemic control in the 3 months before or after estimated conception was associated with a progressively increased risk of major cardiac defects, says a study published July 5, 2018 in the *BMJ*.

### **US FDA Recalls Several Medicines Containing Valsartan Following Detection of an Impurity**

The US FDA is alerting healthcare professionals and patients of a voluntary recall of several drug products containing the active ingredient valsartan, used to treat high BP and heart failure. This recall is due to an impurity, N-nitrosodimethylamine (NDMA), which was found in the recalled products. However, not all products containing valsartan are being recalled.

### **CDC is Investigating a Multistate Cyclosporiasis Outbreak in the US Linked to McDonald's Salads**

CDC, the US FDA and state and local public health partners are investigating a multistate outbreak of *Cyclospora* infections associated with consumption of McDonald's salads. Reported cases come from 7 states: Illinois (29), Iowa (16), Minnesota (3), Missouri (7), Nebraska (2), South Dakota (2) and Wisconsin (2). The Wisconsin case-patient dined at a McDonald's in Illinois. The first illness was reported May 20, 2018 and the most recent illness was reported July 10, 2018. This investigation is ongoing, says the CDC.

CDC laboratory testing identified the strain as *Cyclospora cayentanensis*, a single-celled parasite that causes cyclosporiasis, an intestinal infection.

- Unlike other foodborne pathogens, *Cyclospora* is not transmitted directly from one person to another (e.g., by ill food handlers). Infection is acquired by consuming food or water contaminated with the parasite.
- The incubation period is 7 days (2 days to  $\geq 2$  weeks).
- Symptoms include diarrhea (most common), weight loss, loss of appetite, bloating, increased gas, nausea, fatigue, vomiting, fever and abdominal cramps.

(CDC, July 13, 2018)

### **Soccer Headers may be Linked to Balance Problems**

Greater exposure to repetitive subconcussive head impacts is associated with vestibular dysfunction and balance impairments during walking. These findings from a study of soccer players presented at the American Academy of Neurology's Sports Concussion Conference in Indianapolis therefore suggest that soccer players who head the ball more often may be more likely to have balance problems than players who do not head the ball as often.

### **AAP Releases Choosing Wisely List of Appropriate Nephrology Tests for Children**

As part of the Choosing Wisely campaign, the American Academy of Pediatrics (AAP) Section on Nephrology and the American Society of Pediatric Nephrology (ASPN) have jointly released a list of specific nephrology tests and procedures that are commonly ordered but not always necessary when treating children for kidney-related conditions. These recommendations include:

- Do not order routine screening urine analyses in healthy, asymptomatic pediatric patients as part of routine well child care.
- Do not initiate a work-up for hematuria or proteinuria before repeating an abnormal urine dipstick analysis.
- Avoid ordering follow-up urine cultures after treatment for an uncomplicated urinary tract infection in patients that show evidence of clinical resolution of infection.
- Do not initiate an outpatient hypertension work-up in asymptomatic pediatric patients prior to repeating the BP measurement.
- Do not place central lines or peripherally inserted central lines in pediatric patients with advanced (Stage 3-5) chronic kidney disease (CKD)/end-stage renal disease (ESRD) without consultation with pediatric nephrology due to goals to avoid adverse events, preserve long-term vascular access and avoid unnecessary and costly procedures.

### **Broadly Acting Antibodies Identified in Patients Who Survived the Lethal Ebola Virus Disease**

Researchers have identified broadly neutralizing antibodies in the blood of patients who have survived the lethal Ebola virus disease. In animal studies, two of these antibodies provided substantial protection against disease caused by *Zaire ebolavirus*, *Bundibugyo*

*ebolavirus* and *Sudan ebolavirus*, the three species known to cause fatal human illness.

These antibodies bind to an essential virus protein, called glycoprotein or GP, from *Zaire*, *Bundibugyo* and *Sudan ebolavirus* species, and prevented the viruses from entering host cells.

### Study Links Nitrate-cured Meats Linked to Manic Episodes

Among those with a history of psychiatric disorders, people who reported a history of eating of dried meats cured with nitrates was strongly and independently associated with current mania, a major symptom of bipolar disorder, according to a prospective cohort study published July 18, 2018 in *Molecular Psychiatry*. This association was not seen for other meat or fish products.

### High Trough Levels of Infliximab Improve IBD Control

Maintaining higher trough levels of infliximab, more than 7 µg/mL provide better control of inflammation in hard-to-treat patients of inflammatory bowel disease (IBD) without increasing infection risk, according to a new research published online July 10, 2018 in the *Scandinavian Journal of Gastroenterology*. The median fecal calprotectin and median C-reactive protein (CRP) levels were lower in patients with high trough levels.

### Record Number of Infants Vaccinated in 2017

A record 123 million infants were immunized globally in 2017 with at least one dose of the diphtheria-tetanus-pertussis (DTP) vaccine, according to data released by the WHO and UNICEF. The data shows that:

- Nine out of every 10 infants received at least one dose of DTP vaccine in 2017.
- An additional 4.6 million infants were vaccinated globally in 2017 with three doses of the DTP vaccine compared to 2010.
- One hundred sixty-seven countries included a second dose of measles vaccine as part of their routine vaccination schedule.
- One hundred sixty-two countries now use rubella vaccines and global coverage against rubella has increased from 35% in 2010 to 52%.
- Human papillomavirus (HPV) vaccine was introduced in 80 countries to help protect women against cervical cancer.

- Additional vaccines are being included into the immunization schedule, such as new formulations of meningitis and polio vaccines.

Despite these successes, almost 20 million infants did not receive the benefits of full immunization in 2017, as they were not vaccinated with three doses of the DTP vaccine... (Source: UNICEF, July 16, 2018)

### Being Physically Active Reduces Risk of Heart Attack Even in Presence of Pollution

According to new research published in the *Journal of the American Heart Association*, physical activity reduced the risk of first and recurrent heart attack even in areas with moderate-to-high levels of traffic pollution. Higher levels of nitrogen dioxide (NO<sub>2</sub>) were associated with more heart attacks, but the risk was lower among those who were physically active.

### Urgent Care Clinics Prescribe the Most Antibiotics

Patients treated in urgent care clinics are far more likely than those treated in other ambulatory care settings to be prescribed antibiotics for conditions that do not require them, as per a study published July 16, 2018 in *JAMA Internal Medicine*. Around 46% of urgent care patients with an antibiotic-inappropriate respiratory diagnosis such as allergies, influenza or the common cold received an antibiotic prescription versus 24.6% of those treated in emergency room, 17.0% in medical offices and 14.4% in retail clinics.

### Immunotherapy Improves Survival in Melanoma Patients with Brain Metastasis

Use of checkpoint inhibitors in melanoma patients with brain metastases was associated with a 1.4-fold increase in median overall survival and an increase in the rate of 4-year survival from 11.1% to 28.1%. These findings were published online July 12, 2018 in *Cancer Immunology Research*.

### Avoid Acid-suppression for Extraesophageal Symptoms in the Absence of Typical Reflux Symptoms

As per new guideline on pediatric gastroesophageal reflux, acid-suppression therapy in patients with typical reflux symptoms should be limited to 4-8 weeks. Acid suppression should be avoided for cough, wheezing or asthma in the absence of typical reflux symptoms. In infants, a trial of hypoallergenic formula or maternal elimination for breast fed infants is recommended before use of acid suppression. The guideline is published online June 28, 2018 in *JAMA Otolaryngology-Head and Neck Surgery*.