

Health Prevention

Billions of dollars have been spent in the attempt to eradicate polio, but a virulent strain of polio virus produced in the corporate pharmaceutical vaccine distributed in Central Asia and Africa has sown destruction. The United Nations has been forced to admit that a major international polio-vaccine initiative has actually caused outbreaks of polio in Central Asia and Africa in 2019 and 2020. On August 9, 2020, the Federal Ministry of Health, Sudan notified the World Health Organization (WHO) of the detection of a circulating vaccine-derived poliovirus type 2. Neighboring Ethiopia, the Central African Republic, and Chad (along with Republic of the Congo, bordering South Sudan) also reported cases, which increased the risk to Sudan, especially in the Darfur region due to border movements. International health bodies also accidentally reintroduced the disease in Pakistan, Afghanistan, and Iran in 2019. Also, in 2019, the government of Ethiopia ordered the destruction of 57,000 vials of type 2 oral polio vaccine (mOPV2) following a similar outbreak of vaccine-induced polio. There have even been attacks on vaccinators and their bodyguards.

WHO, "Circulating vaccine-derived poliovirus type 2 – Sudan," Disease Outbreak News, Sep 1, 2020, at https://www.who.int/csr/don/01-september-2020-polio-sudan/en/; OCHA, "Sudan: Vaccine-derived polio outbreak - Flash Update No. 1," OCHA, Situation Report, Aug 13, 2020, at https://reliefweb.int/report/sudan/sudan-vac-

cine-derived-polio-outbreak-flash-update-no-1; Mbaeyi C, Alleman M, et al., "Update on Vaccine-Derived Poliovirus Outbreaks Democratic Republic of the Congo and Horn of Africa, 2017-2018," CDC, Mar 8, 2019; 68(9); 225-230, at https:// www.cdc.gov/mmwr/ volumes/68/wr/ mm6809a2.htm; WHO, "Circulating vaccine-derived poliovirus type 2 – Pakistan," Disease Outbreak News, Nov 28, 2019, at https://www.who.int/ csr/don/28-november-2019-polio-pakistan/en/.



Smoke Gets in Your Brain

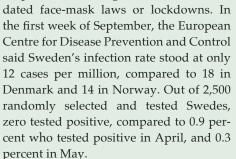
With the Western United States covered in smoke from recent wildfires, there is great concern about the effects of air pollution on health. Omega-3 fatty acids are crucial for maintaining healthy brain cells, and they are also likely to protect them from the neurodegenerative effects of air pollution. Researchers at Columbia University Irving Medical Center looked at data from the Women's Health Initiative Memory Study-Magnetic Resonance Imaging (WHIMS-MRI), conducted between 1996 and 2006, which included over 1,300 healthy women between the ages of 65 and 80. The subjects agreed to MRI scans of their brains, and answered questions about their lifestyles, diets, and more. The researchers also collected blood samples to measure levels of two important Omega-3 fatty acids, EPA and DHA. Women who were exposed to more air pollution had lost greater amounts of white matter in their brains, as well as brain volume in the hippocampus. The women with a diet rich in seafood - therefore with abundant Omega-3s – suffered no brain tissue loss, even when they were exposed to air pollution.

Chen C, Xun P, Kaufman J, et al., "Erythrocyte omega-3 index, ambient fine particle exposure, and brain aging," Neurology 2020; 95(8): e995-e1007; doi:10.1212/wnl.00000000000010074.



Have You Herd?

Sweden's senior epidemiologist, Dr. Anders Tegnell, told an Italian newspaper, "Sweden has gone from being the country with the most infections in Europe to the safest one." The Scandinavian country now has one of the lowest infection rates in the World despite never having man-



Karin Tegmark, deputy head of the Public Health Agency of Sweden, said, "We interpret this as meaning there is not currently a widespread infection among people who do not have symptoms." Dr. Tegnell added, "With numbers diminishing very quickly in Sweden, we see no point



more stable."

Staff writer, "In Svezia pochi casi di coronavirus «La nostra strategia ha funzionato»," Corriere Della Sera, September 5, 2020, at https://www.corriere.it/esteri/20_settembre_05/svezia-pochi-casi-coronavirus-lanostra-strategia-ha-funzionato-5d030394-ef63-11ea-94cc-1f80cc642b17.shtml; ECDC, "Covid-19 pandemic," ECDC, at https://www.ecdc.europa.eu/en/covid-19-pandemic; Daly C & Bloomberg, "'We see no point in wearing a face mask,' Sweden's top virus expert says as he touts the country's improving COVID numbers," Fortune, Jul 29, 2020; at https://fortune.com/2020/07/29/no-point-in-wearing-mask-sweden-covid.

in wearing a face mask

in Sweden, not even

on public transport,"

according to Fortune.

"What we see now is

that the sustainable

policy might be slower

in getting results, but

it will get results even-

tually," Tegnell said,

"and then we also hope

that the result will be

that NAC could be an effective treatment, especially because it dissolves mucus, prevents blood clot formation, and can potentially prevent a deadly "cytokine storm." In May 2020, the Memorial Sloan Kettering Cancer Center announced a one-year trial involving the intravenous administration of NAC in COVID-19 patients with severe disease. NAC could be a therapeutic agent in the treatment of COVID-19 through a variety of potential mechanisms, including increasing glutathione, improving T cell response, and

modulating inflammation.

De Flora S, Grassi C, Carati L, "Attenuation of influenza-like symptomatology and improvement of cell-mediated immunity with long-term N-acetylcysteine treatment," European Respiratory Journal, 1997; 10: 1535-1541; Polonikov A, "Endogenous Deficiency of Glutathione as the Most Likely Cause of Serious Manifestations and Death in COVID-19 Patients," ACS Infect. Dis, May 28, 2020, 6, 7, 1558-1562, at https://doi.org/10.1021/acsinfecdis.0c00288; NIH, "A Study of N-acetylcysteine in Patients With COVID-19 Infection," U.S. National Library of Medicine, May 5, 2020, ClinicalTrials.gov Identifier: NCT04374461, at https://clinicaltrials.gov/ct2/show/NCT04374461.

Resisting Insulin Resistance

Cardiovascular disease (CVD) is the leading cause of death in the U.S., accounting for one in three deaths. Diabetes is officially the seventh leading cause of death, but deaths from the condition may be underreported, according to the American Diabetes Association. The most significant health disorder, underlying both of these and other conditions, is insulin resistance, according to Robert Lustig, M.D., a member of the Institute for Health Policy Studies at the University of California, San Francisco, and Dr. Aseem Malhotra, Honorary Consultant Cardiologist of Frimley Park Hospital, NHS Foundation Trust, UK. They propose that insulin resistance is the most important predictor of CVD and type 2 diabetes and summarize several studies to explain its significance. One study examined a group of people who were insulin-sensitive, healthy people who require smaller amounts of insulin to lower their blood glucose - the opposite of insulin resistant. After five years, they found that none of the people who remained insulin sensitive developed heart disease, whereas 14 percent of people in the highest 20 percent of insulin resistance developed heart disease in the same period. In another study, up to 69 percent of patients who were hospitalized with acute heart attacks were found to have metabolic syndrome, a diabetes precursor. They also critique blood cholesterol as a risk factor: "There are 44 randomized controlled trials of drug or dietary interventions to lower LDL-C in the primary and secondary prevention literature, which show no benefit on mortality." There is no single test that can directly diagnose insulin resistance, but medical history, physical examination, and blood testing of Hemoglobin A1c, fasting blood glucose, and a lipid panel can indicate a person's level of risk.

Lustig R & Malhotra A, "The cholesterol and calorie hypotheses are both dead — it is time to focus on the real culprit: insulin resistance," Clinical Pharmacist, Jul 14, 2017, doi:10.1211/cp.2017.20203046.



ACETYLCYSTEINE H₃C N OH OH

N-acetylcysteine for COVID-19

The amino acid n-acetylcysteine (NAC) helps the body synthesize and use protective antioxidants, especially the "master antioxidant" glutathione. A randomized, double-blind, clinical trial in 1997 involving 262 participants of both sexes at 20 Italian centers showed that NAC brought about a significant reduction of influenza and influenza-like episodes, especially in elderly, high-risk individuals. More recently, a Russian scientist proposed that deficiency of glutathione is the most likely cause of serious manifestations and death in patients with the novel coronavirus infection, and