

March tidings—the latest in health news



New, more powerful weight loss drugs: Drugs like Wegovy, Rybelsus, Ozempic and Mounjaro/Zepbound are revolutionizing obesity and diabetes treatment and garnering enormous profits for their manufacturers. Early drugs worked on GLP-1 alone; subsequent meds paired GLP-1 with another gastric peptide, GIP, to produce even more spectacular weight loss.

Now a plethora of new weight loss drugs looms: **novel amylin analogues**, which are said to deliver weight loss with reduced side effects of vomiting, nausea, and constipation; **triple action drugs** that team a new hormone, glucagon, with tried and true GLP-1 and GIP; and an oral version of the potent injectable drug Ozempic.

Meanwhile, concerns are being raised over how sustainable these drugs can be. When weight loss inevitably plateaus, side effects become intolerable, or insurance coverage lapses, dieters will have to go off the meds and experience rebound weight gain. “There’s No Easy Way to Stop Taking Ozempic: Those who go off weight-loss drugs risk regaining weight, but staying on them forever isn’t always a realistic option” laments a recent *Wall Street Journal* article. Some experts believe that prescribing of weight loss drugs should be limited to 12-18 months, and conditioned on compliance with a structured program of intensive lifestyle modification, prioritizing better eating habits and exercise.

Highlighting the problem is a new TV ad rolled out for Oscar night by Eli Lilly,

maker of Mounjaro and Zepbound, admonishing consumers to *not use these drugs merely for cosmetic purposes*.

Hypervaccinated man: A story has emerged about a German man, who, for “personal reasons”, skirted medical recommendations and had himself vaccinated against Covid 217 times! Researchers recognized an opportunity and began studying the man to see if he is experiencing any untoward effects. They gleefully report that he’s fine, with the exception of extraordinarily high antibodies to Covid. Look for this report to be leveraged against vaccine skeptics. *What could possibly go wrong?*

CGMs go OTC: I recently did a podcast episode with Dr. Paul Kolodzik, author of “The Continuous Glucose Monitor Revolution For Nondiabetics”, about the benefits of continuous glucose monitors, not just for diabetics, but also for otherwise healthy persons desirous of learning how their bodies respond to various foods, exercise, sleep and stress. I also reviewed CGMs in an earlier article.

The problem has been finding a doctor willing to prescribe a CGM for you if you don’t have diabetes. Online sites have sprung up where, via telemedicine, you can pay a fee to get a prescription for one of the devices. If a case can’t be made that you need it for diabetes, you’ll be out-of-pocket; nevertheless, many consider it a worthwhile investment.

Now the FDA has removed this impediment and cleared a CGM for over-counter purchase. The caveat is that the The Stelo Glucose Biosensor System is not intended for diabetics using insulin or oral medications that can cause hypoglycemia because it’s limited in its ability to detect blood sugars in the low range.

The FDA states: *“Giving more individuals valuable information about their health, regardless of their access to a doctor or health insurance, is an important step forward in advancing health equity for [US] patients.”*

Diet drinks and atrial fibrillation: Rates of atrial fibrillation are skyrocketing; it’s estimated that 12 million Americans will have it by 2030. Even President Biden has it. The result is that many seniors are consigned to a lifetime on blood thinners, which increase the hazards of bleeding.

A recent study is the first to link atrial fibrillation with sweetened beverage consumption. The curious thing is that the magnitude of the effect was greater (20% increase) for artificially-sweetened drinks than for beverages containing real sugar (10% increase).

Mechanistically, it’s not clear what’s going on; it may be that sugar and its ersatz substitutes exert their harmful effects via alterations of the microbiome.

Vitamin D for prevention of juvenile diabetes: Insulin-dependent diabetes (T1D) typically develops in childhood or adolescence. The presence of antibodies against islet cells in the pancreas is an early herald of deteriorating blood sugar control. What if there were a way to forestall progression to diabetes in kids determined to be at risk?

Early trials of high-dose vitamin B3 as a preventive didn’t pan out; powerful immunosuppressive drugs caused more side effects than benefits. But a new study reveals the promise of high-dose vitamin D:

“A 12-month, randomized, double-blind, placebo-controlled trial was conducted of 50 000 IU of ergocalciferol [vitamin D2] per week for 2 months, and then once every 2 weeks for 10 months, vs placebo in 36 individuals aged 10 to 21 years, with T1D of

less than 3 months . . . Ergocalciferol statistically significantly reduced serum TNF- α concentration and the rates of increase both in A1c and IDAA1c [insulin dose] suggesting a protection of RBCF [beta cell function] and PR [partial clinical remission] in youth with newly diagnosed T1D."

Yogurt vs. diabetes: The FDA is stingy about permitting "qualified health claims"; only a handful have been authorized for no-brainers like, for example, fruits and vegetables vs. cancer, fiber vs. heart disease, and low-sodium diets vs. hypertension.

A surprise addition has been approval of a qualified health claim for yogurt as a hedge against diabetes. The FDA ruling states that *"there is some credible evidence supporting a relationship between yogurt intake and reduced risk of type 2 diabetes."*

A 2014 study in *BMC Medicine* showed a 14% protective effect against Type 2 diabetes for each serving of yogurt consumed per day; no effect was seen for an equivalent amount of non-yogurt dairy products. Why isn't precisely understood, but the researchers note *"Probiotic bacteria have been shown to improve lipid profile and antioxidant status in T2D patients."*

Diet and hearing loss: It's acknowledged that diet plays a role in vision preservation. But what if progressive age-related hearing loss (presbycusis) were not just a matter of how many rock concerts you attended in your errant youth?

Researchers investigated the association between diet and hearing loss in a recent study. The worse the diet scores of participants, the more likely they were to have experienced hearing loss, especially in the higher frequencies, typical of presbycusis. The authors conclude: *"Adherence to healthy dietary patterns was associated with better hearing status, with stronger associations at high frequencies."*

Microplastics and heart disease: Increasingly, concerns have been raised over the ubiquity of minute plastic fragments in food, water and the environment. This is different from worries over the leaching of harmful chemicals like phthalates, BPA, and PFAs from plastic containers and wrappers; since plastic doesn't degrade like organic matter, it persists as tiny, even microscopic particles.

Recently, Columbia University researchers used a new sensitive methodology to detect micro-particles in beverages from plastic bottles. They found hitherto unmeasured infinitesimal nanoplastics at levels hundreds of times higher than previously acknowledged.

The potential health hazards posed by these micro-particles are unknown. But a new study ("**Microplastics and Nanoplastics in Atheromas and Cardiovascular Events**") in the *New England Journal of Medicine* has alarming implications:

"In this study, patients with carotid artery plaque in which MNPs [micro- and nanoplastics] were detected had a higher risk of a composite of myocardial infarction, stroke, or death from any cause at 34 months of follow-up than those in whom MNPs were not detected."

A previous study has theorized:

"Microparticles influence vital physiological functions such as inflammation, coagulation, apoptosis and cell differentiation and may trigger pathophysiological mechanisms which contribute to the genesis of atherosclerosis and thrombosis, the

cornerstones for the development of cardiovascular disorders.”

Aging and entropy: “Entropy” is defined as “a process of degradation or running down or a trend to disorder.” In cosmology it implies that after billions of years, the universe will devolve into chaos, and a cold, dark, featureless void will reign.

Many theories have been propounded about ways to forestall human aging; antioxidants, mitochondrial boosters, youthful blood transfusions, caloric restriction and intermittent fasting, hormones, senolytic drugs and many other nostrums have been proposed. It’s been suggested that, with advances in medicine and with an improved understanding of the drivers of aging, human life can be extended indefinitely.

Not so fast, say some researchers. They sound a pessimistic note in a study that found “*linearly increasing configuration entropy, likely an irreversible process*” in aging animals. “ . . . we found that neither caloric restriction (CR) nor parabiosis [surgically connecting an older animal to a younger animal] significantly impacts the entropic feature, reinforcing its link to irreversible damage.”

Mortality—it’s a matter of the immutable laws of physics. So it’s increased *health span*, not unlimited life span, that should be prioritized as the attainable goal of anti-aging efforts.