

Betsy says HI!!!!

Announcements

The next LABQUEST meeting will be Wednesday, September 10 at 12:30 in the GSA Trailer.

Science Report Highlights

Betsy and Dan thought all the items in following science report from Charles were interesting but most liked the following:

- Scandal! Cover-up! - The super-premium French mineral water industry is in crisis
- Raising Your HDL (Good) Cholesterol
- Does Coffee Interfere With Vitamin/Mineral Uptake?
- Thinning Hair Or Hair Loss
- Lack Of Nutrition Instruction In US Medical Schools
- Limiting Cholesterol And Triglyceride Levels
- Greater Washington DC Traffic Rated Among 10 Worst Cities In US
- 11 Executives Of Major Corporation Sentenced To Total Of 141 Prison Years For PFAS Contamination
- Largest Solar+Storage Farm In US -

Science Report

Self-Protective Measures -

You should get your medical advice from official sources, your doctor, or your pharmacist ... not from this Report or the internet. Per recommendations by FDA and CDC, everyone should maintain current vaccinations for the three respiratory viruses: Covid, flu and RSV (for RSV, adults [over 60](#) and children [younger than 8 months](#)) - unless your doctor advises against it based on your medical record. Adults over 50 should have had the [Shingrix vaccine for shingles](#) (two doses 2 to 6 months apart, good indefinitely). Adults over 50 should have the [Pneumococcal Vaccine](#).

- [Recall Of Antiseptic Hand Soap](#) - because of the presence of bacterial contamination (*Burkholderia cepacia*). See the FDA announcement of the voluntary recall, with identifying details, [here](#). This is of special concern to immunocompromised persons. [Background](#). Thanks to the US Department of Agriculture Food Safety and Inspection Service.
- [Scandal! Cover-up!](#) - The super-premium French mineral water industry is in crisis ... rumors of illicit filtration, UV treatment, industrial and farm chemical contamination of aquifers, and more. [Exposé](#).
- [NIH BMI Calculator](#) - Use the [NIH](#) National Heart, Lung and Blood Institute [calculator](#) to find your Body Mass Index (BMI). Above 25 - overweight. Above 30, check with your doctor, consider better nutrition, and exercise.
- [Basal Metabolic Rate \(BMR\)](#) - Your BMR is how many calories you burn just sitting in your chair. Use the [calculator](#) to get your BMR. Then consult the exercise table to see how many calories you can consume daily with your current exercise plan and still maintain your current weight.

- Body Roundness Index (BRI) - is a new medical screening tool for estimating *visceral* fat, [details](#). Use a calculator to get your BRI [here](#). Additional background from Harvard, [here](#). Results to your doc.

Vaccine and Therapeutic News -

- Osteoarthritis (OA) - Is a condition that affects 32 million Americans annually, and low dose radiation therapy (LDRT) is coming into use as a low-intervention treatment for OA, before joint replacement is considered. Because of its antiinflammatory effects, [70% of patients report a reduction in pain](#). LDRT has not been reviewed by FDA for this indication. [Publication](#)
- Raising Your HDL (Good) Cholesterol - HDL binds to LDL, and transports it to the liver where it gets broken down and eliminated ... avoiding the buildup of plaque in the arteries. To increase HDL, [dietitians recommend eating more fatty fish](#) - salmon, mackerel, sardines - and [certain other foods](#) rich in Omega-3 fatty acids.

Other Health Science News -

- HPV And Skin Cancer - Beta-HPV is a strain of the Human Papillomavirus (HPV) commonly found on the skin. It doesn't usually cause problems. [Researchers at NIH](#) have recently discovered, however, that it can increase the risk of cutaneous squamous cell carcinoma (cSCC) in immunocompromised patients - they also developed a [successful stem-cell treatment](#). It was previously established that HPV can facilitate the accumulation of DNA skin damage done by UV exposure, which is the usual primary driver for developing cSCC. Have a plan to limit sun exposure during peak UV times. Great work! Thanks NIH.
- Unusual Sign Of Lung Cancer - Clubbed fingers. Details on what to look for, [here](#).
- Linkage Between Oral Health And Heart Disease - Less than a third floss on a regular basis. A recent UK [study](#) associated regular flossing with a reduced risk of [ischemic stroke](#) (interruption of blood flow to the heart) by 22%, [cardioembolic stroke](#) (blood clot to the brain) by 44%, and atrial fibrillation (irregular heart rhythm) by 12%. [Background](#) Do it for your gums, *and* your heart.
- Ethylene Oxide (EtO) - is widely used by manufacturers to sterilize medical products. It is also a known carcinogen, and the US Environmental Protection Agency (EPA) had [established regulatory standards for leakage](#) due to become effective next year. Recently EPA extended the effective date of these regulations by two years. See examples of uses of EtO in Georgia, [here](#). 20 billion devices are sterilized with EtO annually.
- Does Coffee Interfere With Vitamin/Mineral Uptake? - It can have a modest effect, [especially iron supplements](#) ... but firstly ... vitamins are best acquired from natural foods, supplements should only be used on a doctor's advice. For best absorption of supplements, take them about an hour *before starting* coffee, or 30 minutes to an hour *after ending* coffee - increase the time to 2 hours with Iron.
- Thinning Hair Or Hair Loss - has a variety of possible causes, and dermatologists suggest a variety of low-intervention ways to address the issue, [details](#). Tune-up: Where dermatologists suggest *gently* massaging the scalp during shampoos, consider using a soft-tipped massage shampoo brush that reaches through the hair to the scalp, putting less stress on the hair ... for example the [HEETA](#) hair/scalp massage shampoo brush - simple, inexpensive. And here are some [hair styles](#).
- Lack Of Nutrition Instruction In US Medical Schools - Nutrition education for medical students is often minimal. A recent survey showed that less than a third of medical students receive the

recommended minimum of 25 hours of nutrition education, and half reported none. This information gap can lead to a risk of misdiagnosis for underlying diseases masked by weight issues - example [here](#). Nearly three quarters of the US population is either overweight or obese. [Publication](#).

- [Poor Nutrition Can't Be Outrun](#) - [Uninformed nutritional choices are at the center of obesity](#), more so than lack of exercise. A recently published study gives the details, [here](#).
- [Be Good To Your Gut Microbiome](#) - and it will be good to you ... mostly. [As we age](#), some bad guys slowly begin to grow in, so it's good to [be intentional](#) about eating foods with more *pre*- and *pro*biotic content to give the good guys an edge. This and other details are explained [here](#). Your gut microbiome consists of over 100 Trillion microorganisms, distributed mouth to anus - bacteria, viruses and fungi. Researchers are currently doing animal experiments on [fecal transplants](#), with promising preliminary results. Stay tuned.
- [Lowering Blood Pressure Before Sleep](#) - [Here](#) are some simple things you can do.
- [What Happens When Stopping GLP-1 Medications](#) - They work, but a [new study](#) shows that weight reduction begins to be reversed within two months of discontinuance - unless the time has been used to make durable lifestyle changes. [Publication](#).
- [Lipoprotein \(a\) And Cardiovascular Disease \(CVD\)](#) - See a summary of the issue done by the American College of Cardiology, [here](#). High concentrations of Lp(a) are a risk factor for CVD in 20% of the global population, and 90% of Lp(a) concentrations are genetically determined. Although there is presently no treatment, several clinical trials are in progress. Get tested?
- [Limiting Cholesterol And Triglyceride Levels](#) - The [number one tool](#) is limiting foods with **saturated fats** - red meats, butter, baked goods, cheese, fried foods. Add more fiber, mono- and polyunsaturated fats such as fruit, berries, legumes, leafy greens, and other vegetables.
- [Are Your Stools Healthy?](#) - Check the Bristol Stool Chart [here](#). Ideally you should be a Type 3 or 4. This simple check, that you can routinely do yourself in a few seconds, may help catch a problem early, and could provide important information for your doctor. [Details](#).

Practical Nutrition -

- [Eat More Beans](#) - Plant **fiber** and **protein** powerhouse, potassium, folate, iron and other minerals, antioxidants/antiinflammatories in the form of phytochemicals, little or no saturated fat ... and they are cheap - canned or frozen OK. Details and a nutritional chart for 6 types of beans, [here](#).
- [Dates](#) - Fiber, protein, iron, potassium, calcium, biotin, magnesium, and various forms of anti-inflammatories and antioxidants. Their natural sugars are slower and easier for the body to digest, resulting in a lower glycemic index than refined sugar .. but they *do* have sugar, carbohydrates, and the [calories](#) that go with them, so portion control should be observed. Try them stuffed with walnuts. Other recipes [here](#). Enjoy!
- [Which Nut Has The Most Protein?](#) - Peanuts! Unsurprising, when you know that peanuts are actually legumes, *not* nuts. They also have good fiber. [Details](#)
- [Pistachios](#) - See a nutritional rundown of both macro and micronutrients, and the 7 reasons that two nutritionists give for recommending them, [here](#).
- [Kiwi Fruit \(Chinese Gooseberry\)](#) - According to a registered dietitian, kiwis have [vitamins C, E and K](#) ... also folate, copper, potassium, magnesium, fiber, antioxidants, [antiinflammatories](#), actinidin (helps digest protein) and serotonin (sleep). Healthy! Green and gold (sweeter/smoothier) varieties.

- Boost The Antioxidants In Tea - by adding fresh lemon juice. A registered dietitian [explains](#) that the Vitamin C in the lemon juice will increase and preserve the natural tea polyphenols (antioxidants).
- Peaches - Vitamins C and A, fiber, antioxidants ... and they are tasty. Go for it! [Details](#)
- Foods Associated With Longevity - See a list of 9 [here](#). Especially [walnuts](#).
- Chicken Is Generally Healthy - and is a good source of both macro and micronutrients, especially protein. See a comparative nutrient run-down of the nutrient value of breasts and thighs from a registered dietitian, [here](#). Tune-up: **Not fried**, take the skin off to shed considerable saturated fat.
- Is Apple Juice Healthy? - The complicated details are [here](#), but the short answer is - it's not worth the substantial sugar hit ... especially with much of the nutrient value filtered out with the pulp, and much of the antioxidant content reduced by pasteurization. Just eat an apple - very nutritious.
- Misleading Words For Sugar - High-fructose corn syrup, sucrose, barley malt, dextrose, maltose and rice syrup are all [forms of sugar](#). Certain blood alcohols sometimes used as sweeteners, such as Erythritol and Xylitol, are made by the body and occur naturally in certain foods - but in very small amounts. They have recently been [linked to heart disease and stroke by Cleveland Clinic researchers](#), and should be avoided as food additives. Chemical sugar substitutes to be avoided: acesulfame potassium, advantame, allulose, aspartame, brazzein, lactitol, maltitol, mannitol, neotame, rebaudioside A (reb-A), saccharin, sorbitol, thaumatin and trehalose.
- Is Your Favorite Food Ultra-Processed? - and if so, what's a good substitute. View the Northeastern University [TrueFood Dashboard](#).
- Most Nutritious Vegetables and Fruits Rank-Ordered by CDC - See the list [here](#). Chinese cabbage = bok choy.

Environmental Science News -

- Waste Heat From Copper Smelting Used To Heat Homes - It took some clever engineering, but excess heat from the copper refining process at the multi-metals company [Aurubis \(video\)](#), formerly wasted by being dumped into the Elbe River, is now being used to heat [up to 200,000 homes](#) in nearby Hamburg Germany. A win win. Well done! [Hugo, Sonja B.]
- Greater Washington DC Traffic Rated Among 10 Worst Cities In US - according to a recently released [survey](#) of commute times. [Details](#). But ... all is calm efficiency underground in the METRO (subway). Cool air conditioning in Summer, cozy in Winter, thoroughly filtered air, efficient, all electric (no air pollution), safe (cameras, security personnel), half price for Seniors, station ceilings inspired by cathedrals, handicapped accessibility excellent, no graffiti, no road rage. Give it a try. Note: [Virginia](#) was found to have some of the most confrontational drivers. {Elizabeth S.]
- NextGen Acela Trains - [The first 5 train sets will go into service](#) in the Northeast corridor on August 28 ... DC to New York 2.5 hours. Free 5G WiFi, power outlets, reading lights at every seat ([photos](#)). There will be a 27% increase in seats per departure, wider windows and seats, and when the full 28 train fleet runs in 2027 there will be an expanded weekday and weekend schedule. [Sonja B.]
- Aerosol Black Carbon (Soot) Microparticles [Causing Hospitalizations](#) - in Jackson Mississippi, according to a recently [published](#) study from the University of Mississippi. Black carbon pollution is caused by burning coal, wood, or other dirty energy sources, and by industrial and transportation pollution. Increasingly common wildfires also produce very large amounts of

soot. The smoke from wildfires even more than a thousand miles away can be hazardous. A UCLA pulmonologist has compared the risk of recent [wildfire related Air Quality Index \(AQI\) numbers in the upper midwest](#) to smoking cigarettes: "The exposure to the fine particulate matter, the air pollution, is similar to smoking a quarter to half a pack a day." See her advice (above link) on how to protect yourself.

- [World Record Level PFAS Contamination Found In New Mexico Lake](#) - A recently released study reported levels of the toxic 'forever' chemical up to [sixteen hundred times the EPA recommended level for drinking water](#) in Lake Holloman. Lake Holloman is directly adjacent to Holloman Air Force Base, and near the White Sands Missile Testing Range Hunting in the area is now prohibited. [Details](#) "Here we're talking about you hunt wild game, you prepare it, you eat a dime-size amount of meat, and you're exposed to a lifetime of PFAS." Thank you Environment Secretary James Kenney, New Mexico Environment Department! [Mack and Karen W.]
- [New Jersey Announces \\$2 Billion PFAS Settlement](#) - for PFAS contamination at 4 corporate sites in NJ. [Details](#).
- [Alabama Coal Ash Lagoon Leaking Toxic Materials Into Groundwater](#) - near Gadsden AL. It was closed with a cover-in-place system in 2018, but the bottom wasn't sealed from contact with groundwater ... 'levels of arsenic forty times the legal standard in groundwater' have been [reported](#).
- [Your Cats Should Eat More Catfish](#) - specifically blue catfish, an invasive species in Chesapeake Bay tributary rivers. A bipartisan group of [MD](#) and VA members of Congress have introduced a bill that would [incentivize establishing a new market for blue catfish](#) in the pet and animal food industry. NOAA would monitor the two year pilot project and report the results as a guide for similar projects. [Local restaurants](#) already doing their part. Mmm! [Harvey B. and Dyane P.]
- [11 Executives Of Major Corporation Sentenced To Total Of 141 Prison Years For PFAS Contamination](#) - The Miteni corporation, at its facility near Vicenza Italy, made products containing PFAS from the 1960s until its bankruptcy in 2018. The [allegation was that PFAS in the company's wastewater had contaminated ground water and soil](#) in a region affecting 350,000 people.
- [Largest Solar+Storage Farm In US](#) - The Los Angeles Department of Water and Power's Eland Solar and Storage Center (Mojave Desert in Kern County near California City, California) opened fully in August (both phases). Specs: 1.36 million solar panels, 172 lithium iron phosphate (LFP) batteries, \$2 billion, 3,900 acres, 758 megawatts MWdc of solar (power for 266,000 homes) paired with 300 MW/1,200 MWh of energy storage, ([7% of the entire power requirement for Los Angeles](#)), developed by Arevon Energy (Scottsdale AZ). With the completion of this project, Los Angeles now received 60% of its electrical power from renewable sources. The goal: 100% by 2035.
- [Amazon In Australia](#) - The company is planning to invest [\\$13 billion to build data centers](#) in Australia 2025-9, and as a part of that initiative will also construct three new solar farms with a combined capacity of 170 MW Amazon already operates eight solar and wind energy projects across Australia. All the projects together will generate 1.4 million MWh of energy annually, enough to power 290,000 homes.
- [Wisconsin Welcomes Nuclear Power Projects](#) - The legislature recently passed a [law](#) facilitating new nuclear projects, and appropriated \$1 million for a feasibility study to pave the way. [Details](#).
- [Land Of Sunshine And Honey](#) - in Halifax County Virginia near the North Carolina border. [Crystal Hill Solar](#), planned by [Urban Grid](#) (Houston TX) combines an apiary, solar power, and regenerative land use - 10 hives, 500,000 bees, 620 acres, 40 pounds of honey annually, 65 MW (power for 10,800 homes) and three acres of rotational crops on site to allow the study of how pollinators interact with crops. Offsets 61,700 tons of CO2 annually. [Harvey B.]

Other Science News -

- World's Longest Suspension Bridge - Italy has [approved](#) a \$15.6 billion, 2.05 mile suspension bridge to connect Sicily with mainland Italy [across the Straits of Messina into the Calabria region](#). Completion is projected for 2032. Specs: two railway lines in the center, plus 6 traffic lanes. Big!
- [Palantir](#) (Denver CO) - German police forces are increasing their use of the company's surveillance platform 'Gotham' for security purposes, most recently Baden-Württemberg. The advanced AI platform can pull together a **detailed personal profile in seconds** - name, age, address, fines, criminal history, cell phone data and scanned social media content. "The great eye sees all ...", Boromir, describing the [Palantiri](#) seeing stones from Lord of the Rings, J.R.R. Tolkein. [Sonja B]
- Solar Plane Altitude Record (31,237 Feet) - was set this month by a Swiss *pilot* flying a solar-electric plane from [SolarStratos](#) (Yverdon les Bains Switzerland). Details and a photo, [here](#).

Nice Thing - [full screen]

A Jazz Concert - with Oscar Peterson, Count Basie and Joe Pass, 1980 - [here](#).