

Betsy says HI!!!!

Announcements

The next LABQUEST meeting will be this Wednesday, October 8 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:

- Covid Vaccination Policy
- Global Estimate Of Lives Saved By Covid Vaccine 2020-2024 - 2.5 million lives saved, 15 million life-years saved
- BioNTech/Pfizer Covid Vaccine
- Chronic Inflammation - affects about one third of US adults
- Link Between Breast Cancer, Covid And Flu
- Health Effect Of Wildfire Smoke
- 6 Breakfast Cereals To Help With High Blood Pressure

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](#).

- [Covid Vaccination Policy](#) - In the absence of clear CDC direction, US states are beginning to set their own policies: Massachusetts by [legislation](#) and [regulation](#), New York State by [executive order](#) and legislation. More to come. DMV? *Sic Semper Tyrannis* 44 BCE.
- [Global Estimate Of Lives Saved By Covid Vaccine 2020-2024](#) - 2.5 million lives saved, 15 million life-years saved. Publication in the Journal of the American Medical Association (JAMA), [here](#).
- [BioNTech/Pfizer Covid Vaccine](#)- the companies expect that [their FDA approved 25/26 vaccine](#) will be available in pharmacies soon.
- [FDA Warning On Lead Leaching Into Food From Certain Cookware](#) - See the FDA [announcement](#) identifying the cookware, photos.
- [FDA/CDC Investigation Of Eggs Contaminated With Salmonella](#) - FDA announcement [here](#). 95 infected, 18 hospitalized (8/28/25).
- [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 -

- Reduction In Relapse Rate For Certain Cancers - UCLA researchers have [reported](#) encouraging early results for a candidate cancer vaccine ([ELI-002 2P](#)) that may help prevent or delay cancer recurrence (after standard-of-care treatment) in high-risk patients whose tumors are driven by KRAS mutations - 25% of solid tumors, 90% of pancreatic cancers, and 50% of colorectal cancers. A Phase 2 human study is currently underway. [Details](#) Yes!
- Extensive-Stage Small Cell Lung Cancer - [BioNTech](#) (Mainz Germany), working with [Bristol Myers Squibb](#) (Princeton NJ), has [announced](#) favorable results from the [Phase 2 clinical trial](#) of their medication 'pumitamid' (BNT327) for treatment of this condition. Volunteers are now being recruited for a world-wide Phase 3 study. Small cell lung cancer is the most aggressive type - rapid growth, poor prognosis, 5-year survival rate of 5% in advanced stages. Go! [CC]
- Vasomotor Symptoms Of Menopause (VMS) - more generally known as *hot flashes*. [AbCellera Biologics](#) (Vancouver BC Canada) has a non-hormonal candidate medication, ABCL635, for this indication in Phase 1 clinical trials. [Details](#)
- Atopic Dermatitis (AD) - More generally known as *eczema*. [AbCellera Biologics](#) (Vancouver BC Canada) has a candidate monoclonal antibody treatment for this indication, ABCL 575, in Phase 1 clinical trials. There are potential applications to other **inflammatory and autoimmune conditions**. Interesting possibilities, go!
- Urogenital Gonorrhea - The [GSK](#) (London UK) orally administered candidate antibiotic for this indication, gepotidacin (Blujepa), has been [accepted for priority review](#) by the US Food and Drug Administration (FDA) for priority review.

Other Health Science News -

- Chronic Inflammation - affects about [one third of US adults](#), but often goes undiagnosed. When [untreated](#) it can lead to [cancer](#), cardiovascular disease, arthritis and metabolic conditions like Type 2 diabetes. Highly processed foods increase the risk. *Natural* foods high in [anti-inflammatory](#) and [antioxidant](#) compounds, fermented foods, and fiber-rich foods, lower the risk. [Barbara R.]
- How To Fight Inflammation With Natural Foods - Eat in color. Dark/colorful fruits/berries/vegetables are the ones rich in anti-inflammatory compounds like anthocyanins. Fresh or frozen. [Details](#)
- Who Are The Ones Eating Ultraprocessed Foods - and which foods do they eat? CDC spills the demographic ~~beans~~ bacon, [here](#).
- Link Between Breast Cancer, Covid And Flu - For those with a history of breast cancer, recent studies have shown an increased risk of metastasis presenting as lung cancer, triggered by respiratory disease such as Covid or flu. Researchers say this may be caused by [dormant cancer cells in the lungs being reawakened by inflammation](#). Vaccinate for Covid and flu! [Details](#).
- Health Effect Of Wildfire Smoke - is much [greater than previously estimated](#), and can affect populations thousands of miles away from the fire due to toxic aerosol particles. EPA background statement [here](#). During [bad air alerts](#), good home air filtration can help - both higher level replaceable filters (MERV 11 and up) in home central air handlers operating in air *circulation* mode, and portable room units for the bedroom. Be prepared.

- Major Risk Factor For Alzheimer's Disease (AD) - 7 million Americans have AD, and by 2050 it is expected to be 13 million. Having one copy of the APOE4 gene increases the risk of AD by a factor of 3 or 4. With [two copies the risk rises by 8-12 times](#). A new study indicates that the risk can be reduced 35% by adopting a Mediterranean diet, and the researchers suggest that other lifestyle changes could result in further risk reduction.
- Vitamin D And Aging - A new [study](#) indicates that a nutritional plan with sufficient Vitamin D helps reduce [telomere](#) senescence and loss. Telomeres are the caps at the ends of chromosomes that maintain genetic stability and protect against cell death. Background details [here](#). Those receiving a supplement of [2,000 IU of Vitamin D3 daily showed slowing telomere loss](#) - 3 to 4 years less aging than the control group. Telomere loss is one of the biomarkers for aging, and age-related chronic diseases. Certain natural foods can help: fatty fish (salmon, mackerel, sardines), crustaceans (shrimp), shellfish (oysters, scallops, mussels), fortified dairy. If the blood work from your annual physical doesn't show **more** than enough Vitamin D, [ask about supplements](#). Especially those over 50.
- 8 Common Medications With Potential To Harm Kidneys (Nephrotoxic) - that your doctor should be aware of, [here](#). Not you? How often do you take: Advil, Motrin (ibuprofen), Aleve, Aspirin, Mobic?
- AARP Advice On Sleep - The American Association of Retired Persons ([AARP](#), Washington DC) lists 14 causes of poor quality sleep, and what to do about each, [here](#).
- Walk This Way - Your posture when walking matters. See advice from a physiotherapist, [here](#).
- 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 -

- 6 Breakfast Cereals To Help With High Blood Pressure - [here](#).
- 7 Things To Avoid When Buying Bread - and some brands to look for, [here](#).
- Eggs Can Help Lower LDL Cholesterol - [Saturated fat is the enemy, not dietary cholesterol](#). Researchers at the University of South Australia drew that conclusion in a recently published study. [Publication](#). Tune-up: because of bird flu and potential bacterial infection, eggs should be thoroughly cooked. [No bacon or similar fatty, highly processed side dishes](#).
- Should Tomatoes Be Refrigerated - No, the flavor and texture will be affected. [Details](#).
- Grapes - have good antioxidants, including polyphenols such as flavonoids, anthocyanidins, catechins and more ... especially red, purple and black grapes (but not just the juice). [Details](#)
- Are Grape Nuts Healthy? - Yes, according to a registered dietitian: whole wheat and barley for excellent fiber, good protein, and no added sugar ... but watch the sodium and calories. [Details](#). **Grape Nuts have neither grapes or nuts.** See the history [here](#).
- Most Magnesium-Rich Nuts - Magnesium helps regulate blood pressure, glucose levels, and nerve and muscle function. It also lowers the risk of inflammation, muscle spasms, migraines, osteoporosis, and irregular heartbeat. See a registered dietitian's advice on which 10 nuts are best, [here](#). Top 5: brazil nuts, cashews, almonds, pine nuts, and peanuts. Nuts are very [nutritious](#).
- Sweet Potato Skin - is very [nutritious](#), and should be eaten with the rest of the potato, according to a registered dietitian. See a side-by-side nutrition work-up [here](#). Scrub/cook/eat. [Arlene G.]
- Chia Seeds - are healthy, and rich with fiber, but should be soaked or [incorporated into foods with plenty of liquid](#) before being eaten. [Details](#). Tune-up: briefly grinding them in a spice mill will speed up the process, and make the nutrients more available for digestion.

- Healthiest Vegetables - They're all healthy, of course, but see a rank-ordered list of 11, [here](#). Summary: Broccoli, spinach and avocado are the top 3, while lettuce, cucumber and celery tie for 11th place.
- 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 -

- Minnesota's First *Stand-Alone*, Grid-Scale Battery Energy Storage Plant - was approved last month, details [here](#). Snowshoe Energy Storage Project, Byron MN, 150 MW, Lithium-Ion battery tech, 18 acres, built by [Spearmint Energy](#) (Miami FL). The plant will store energy generated by nearby wind and solar projects, reducing the need for expensive/intrusive extensions of the grid.
- There's Hydrogen, And Then There's Hydrogen - Most of the 10 million tons of *Conventional Hydrogen* produced annually in the US is from fossil fuels. *White Hydrogen* is produced by electrolysis from water, with Oxygen as a side product (electrical energy intensive). Now [Green Hydrogen is being mined from the Mid-Continental Rift](#), a 1,200 mile strip running deep under the midWest (Ontario to Kansas), where *elemental* Hydrogen is being generated by continuous rock/water interactions in a process called [serpentinization](#). US Geological Survey scientists estimate enough Hydrogen to satisfy US demand for the next 200 years, little refining needed.
- Hybrid Energy Power Plant To Be Built In Barbados - The \$350 solarp-plus-Hydrogen-plus-battery sustainable energy plant will provide steady power, day and night. [Details](#) Put the sun to work day *and* night!
- New Drilling Technologies - No drill bit. No drill. Can be used in geothermal rock strata hot enough to destroy conventional drill bits. Massachusetts Institute of Technology ([MIT](#)) start-up [Quaise Energy](#) (Cambridge MA) has devised a [millimeter wave \(microwave\) drilling method](#) where the microwave energy itself is the drill, opening up new possibilities for geothermal energy sources. The goal: down to 20 km (12.5 miles), at temperatures up to 500° C (932° F). Stay tuned.
- Tampa Bay Water PFAS Win - [Tampa Bay Water](#), Florida's largest wholesale water provider serving 2.6 million residents, has been awarded \$21 million as its part of a \$13 billion nationwide class action agreement regarding PFAS contamination. [Details](#). Well planned Tampa. [Gerry C.]
- Offshore Aquaculture - [North Sea Farm #1](#) is the world's first mid-ocean agriculture pilot, raising seaweed and mollusks in clean waters far from inshore sources of pollution - a 12 acre area of nets anchored between the pylons of a wind farm. The seaweed can be used for sustainable food supplements, plastic alternatives, plant-based fertilisers, and more. See two videos, [here](#).
- The *Haboob* That Swallowed Phoenix - See the intense dust cloud roll in, disappear the interstate, and then the airport, [video](#). In arid areas that contain toxic surface material, like the

dried-up borders of the Great Salt Lake, the sharp sand carried by the Haboob winds can grind the surface into fine particles that create respiratory problems. [John McC.]

- Lead Pipes In Chicago - 412,000 of the city's roughly 491,000 water service lines contain lead and must be replaced, more than any other city in the US. [At this link](#) see three maps showing their location by census tract, by poverty level, and by ethnicity. There is also a link to interactively look-up particular addresses. Present plans for dealing with this are *unacceptable*.

Other Science News -

- Space Launch Center In Portugal - The Portuguese Space Agency has announced the award of a license to the Atlantic Spaceport Consortium for the operation of a spaceport in Malbusca on Santa Maria island in the Azores. This paves the way for the installation of operational infrastructure, with the first suborbital flights possible as soon as late 2026. [Details](#) *Ola!*
- Space Launch Center In New Zealand - US company [Rocket Lab Corporation](#) (Long Beach CA) launches from Florida, two launch pads it owns in Virginia, and two private launch pads it owns on the Mahia Peninsula (East side of New Zealand). See a very **UP** countdown video made on the occasion of the company's [70th launch](#) of its carbon fiber composite [Electron](#) rocket, [here](#).
- Rocket Lab Announces Completion Of Its Dedicated Launch Complex 3 - located within the Virginia Spaceport Authority's (VSA) Mid-Atlantic Regional Spaceport (MARS), [Wallops Island VA](#). Video [here](#). The company is known for its *vertical* supply chain, and end-to-end services. Rocket science in the DMV.

Nice Thing - [wait out ads, full screen]

Leonard Bernstein Introduces Igor Stravinsky - who conducts the New York Philharmonic Orchestra performing his own work, *in person* - New York, 1960.

- Return Of The Firebird (Segment from the ballet) - Igor Stravinsky, *full* staging performed by the **Bolshoi Ballet** - video, [here](#).
- Firebird Suite (final three scenes) - Igor Stravinsky, composed in 1919, instrumental only, **conducted by the composer**, 1960, [here](#)
- Firebird Suite (just the Finale!) - Igor Stravinsky, instrumental only, performed in 2000 at the Salzburg Festival, Vienna Philharmonic Orchestra conducted by **Valery Gergiev**, [here](#). **Wow! Glorious!! Passionate!!!**