

Betsy says HI!!!!

Announcements

The next LABQUEST meeting will be this 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:

- Interstate Highway I-24 Near Chattanooga TN, due to record breaking rain
- Microplastic Contamination Coverup In Luxury Water Brands
- Pancreatic Cancer
- The Great Unbalding?
- LP.8.1-Adapted COVID-19 Vaccine
- Shrimp And Cholesterol
- Florida Orange Production Down 92% In 20 Years
- Animal Populations Important To Tropical Forest Growth/Regrowth
- \$5 Billion High Speed EV Charger Federal Grant Program Resumes
- Europe Is Getting Hotter
- Flamingos In Ukraine

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](#).

- [Interstate Highway I-24 Near Chattanooga TN](#) - was closed in both directions for several hours during a record breaking rain event on August 12. Some cars were almost totally submerged, and three people were killed. Intense rain events are becoming more common across the US. [More attention](#) should be given to peak rain-event/flooding infrastructure near critical facilities.
- [Sunscreen Products In Mousse Form May Not Protect Against UV](#) - The US Food And Drug Administration (FDA) has issued a warning letter to several manufacturers on this subject, [here](#).
- [Wildfires Are Turning Up In Unusual Places](#) - with corresponding health impacts due to air pollution. Note the August fire event 11 miles North of Payson Arizona, called the [Washington Fire](#). Three communities were evacuated. [John McK.]
- [Radioactive Shrimp](#) - FDA has issued a public [advisory](#) warning the public not to eat certain types of frozen, imported shrimp (sourced from Asia, marketed in the US through Walmart) because they may be contaminated with radioactive Cesium 137. [Details](#) Additional recall [here](#), with corresponding FDA advisory warning and packaging photos [here](#). List of states affected, [here](#)

- Blood Pressure Medication Recalls - There have been [several](#) lately. See an example of the FDA recall announcement for a prescription blood pressure medication [here](#).
- Microplastic Contamination Coverup In Luxury Water Brands - in Switzerland and France, [details](#). Expensive does *not* guarantee healthy. FDA does not routinely review bottled water.
- 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 -

- Pancreatic Cancer - The 5 year survival rate is 13% because, after standard of care surgery/chemotherapy, stray cells bring it back. To fix that, the immune system needs to be engaged to hunt down the missed cancer cell-by-cell. A gene mutation called KRAS is behind about 25% of all cancers, including 90% of pancreatic cancers and 40% of colorectal cancers. Now researchers at UCLA have a [pancreatic/colon cancer candidate vaccine in Phase 1 human trials](#) that targets cells carrying this mutation. [Early results](#) are encouraging. [Mike, Jacqui, Greg K.]
- Metabolic-Associated Steatohepatitis (MASH, or Fatty Liver Disease) - FDA has [approved](#) the [Novo Nordisk](#) medication [Wegovy for this indication](#), in addition to the Agency's previous 2017 approval for its use with obese and medically overweight patients. [Details](#).
- Recurrent Respiratory Papillomatosis (RRP) - is a rare disease caused by the Human Papilloma Virus (HPV), characterized by the growth of benign tumors in the respiratory tract, most commonly the larynx. FDA has approved Papzimeos (zopapogene imadenovec-drba) from [Precigen](#) (Germantown MD) as the **first medication** for this indication.
- The Great Unbalding? - Researchers at UCLA, in collaboration with [Pelage Pharmaceuticals](#) (Los Angeles CA), have reported encouraging [preliminary results](#) in their study of transport protein PP-405, a topical drug designed to activate stem cells in dormant hair follicles ... reactivating hair growth. Phase 2 trials are underway. Stay tuned.
- LP.8.1-Adapted COVID-19 Vaccine - The mRNA vaccine candidate for this indication (rising variant of the Covid virus), originally developed by [BioNTech](#) (Mainz Germany) and jointly marketed with Pfizer, has been [approved in Canada](#) (where it will also be produced), and formally recommended for [approval in the EU](#) for those 6 months of age or older. Update (8/25): The corresponding [Moderna mRNA vaccine](#) is also now approved in the EU, Switzerland, Japan, and several other countries. Further Update (8/27): FDA has now authorized the updated Covid booster vaccines from all three main suppliers for those >65 years. They are also authorized for those under 65, with 'higher risk' conditions, for the following age ranges - Moderna (> 6 months), BioNTech/Pfizer (> 5 years), NovaVax (>12 years). In reality, your doc decides. [Details](#).
- BioNTech And CureVac Merge - BioNTech (Mainz Germany) will acquire CureVac (Tübingen Germany) to join and deepen their research and development programs for messenger ribonucleic acid (mRNA) vaccine technology, and its application to oncology and infectious disease. [Sonja B.]

- Flu Vaccine - The time to get vaxxed is coming up, and the vaccine has been updated - again a [trivalent](#) vaccine. [Details](#).
- American Academy For Pediatrics (AAP) Recommendation On Child Covid Vaccination - diverges from CDC advice on the subject for the first time. Background video [here](#). Recommendation Summary: "... universal COVID-19 vaccination for children aged 6 to 23 months and risk-based vaccination for children 2 to 18, such as those medically vulnerable or living with high-risk individuals. Vaccination for other children should be left to parental discretion."
- Proposed New Shingles Vaccine - [Dynavax Technologies](#) (Emeryville CA) has a *candidate* vaccine, [Z-1018](#), for this condition in Phase 1/2 human trials ... includes a head-to-head comparison with the currently FDA-approved vaccine Shingrix. Preliminary indications are that Z-1018 may be about as effective as Shingrix, with fewer local and systemic post-injection reactions (PIRs). Stay tuned.
- Lipoprotein(a) - is a fatty particle like low density cholesterol (LDL) High levels of Lp(a) can greatly increase the risk of heart attacks at a young age, and since the condition is inherited (genetic) there hasn't been a treatment. There are now 5 promising treatments under test, so the condition should get more attention during health screenings for young people. Advice from Harvard Health [here](#).

Other Health Science News -

- Easy Hip Flexor Stretching Exercise - [Bridge Pose](#) (*setu bandhasana*). Recommended by a physical therapist especially as you age, [here](#) - slowly and carefully at first ... and 6 more stretches from an orthopedic surgeon. If experiencing sharp pain, stop immediately.
- Apple Watch Blood Oxygen Update - [Details](#). An automatic update will provide or reactivate this feature for certain models of Apple Watch. Blood oxygen percentage is a useful health biomarker.
- Alzheimer's Disease (AD) Associated With Lithium Deficit - Researchers at Harvard have recently [published](#) the results of their study (in mice) showing that amyloid material in their brain binds to the brain's lithium, critically reducing its availability to brain cells and resulting in loss of memory (in mice). Adding lithium in a chemical form that avoids amyloid capture restored memory! This suggests both an inexpensive, non-invasive screening method for early detection of AD, *and* a treatment! AD affects 400 million people worldwide. **Human studies needed pronto!**
- Quality Sleep - is very important for good health. First, set aside the cares of the day, and relax. Here are some natural food suggestions from a registered dietitian for what to seek out and what to avoid for late snacks, [here](#). **Avoids:** anything with caffeine or alcohol, anything with added sugar, refined foods including [refined carbs](#), too much late hydration, heavy snacks, eating within 1-2 hours of bedtime.
- Screening For Prostate Cancer - Prostate cancer is the second leading cause of cancer death among men in the US - 1 in 8 will be diagnosed with it, 1 in 44 will die from it. There are often no signs or symptoms until the disease is well advanced, so screening is important. [Details](#)
- PFAS And Other Contaminants Turning Up In Municipal Drinking Water Systems (839) Across The US - Examples in PA and NC small towns, [here](#). Find your town on the map, [here](#). Example: The water system for Winchester Tennessee meets the federal legal limits (not updated for 20 years) for several detected contaminants, but is over modern limits considered safe for a few ... according to the Environmental Working Group, [here](#). See also home filter advice. [Mack and Karen W.]

- States Act On PFAS In Drinking Water - In the absence of more decisive federal action, [several states are moving forward](#) to deal with the issue for their residents. Bravo: Maine, Delaware, and New Mexico. "A journey of a thousand miles begins with a single step." [Lao Tzu](#), circa 600 BCE.
- 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 -

- Shrimp And Cholesterol - [Dietary cholesterol doesn't translate to LDL cholesterol in your blood](#). Your body senses the intake of dietary cholesterol, and instructs your liver to *make less*, your digestive system to *absorb less*, and to increase its *breakdown*. The LDL cholesterol generator is **saturated fat**, which shrimp has little of (boiled, roasted, not fried). Shrimp has good protein and other nutrients, and is healthy to eat in moderation. Exceptions: those with allergies to crustaceans, and those with a genetic condition called [familial hypercholesterolemia](#) (talk to doc).
- 10 Healthy Breakfasts - See a registered dietitian's recommendations with nutrition breakdown, and her 10 recipe suggestions, [here](#). Recipe health tune-up: Wherever fried eggs or sausage are specified, substitute hard boiled eggs or smoked salmon
- Better Oatmeal - starts with the right oats. Get the rundown on the various types of oats available, and some tips on how to prepare and store them, [here](#). Great fiber, and other healthy nutrients.
- Onions Are Healthy - antioxidants, vitamins, minerals, fiber. See a nutritional rundown from a registered dietitian, [here](#).
- Frozen Foods To Reduce Stroke Risk - See 6 types of frozen foods for this purpose from a registered dietitian, [here](#). Also included: shopping tips to reduce sodium and saturated fat.
- Best Fruit For Gut Health - according to a registered dietitian, is papaya. Details, and suggestions for incorporating into other foods, [here](#). Great fiber!
- How To Ripen Peaches - [details](#). Summary: put them in a ripening bowl that provides air circulation all around, in a dry location out of direct sunlight. Turn daily, and check with gentle pressure for even softness. Do not wash or refrigerate until then. All stone fruit: nectarines, apricots, plums, etc.
- Getting Enough Fiber Is Important - Beans are rich in fiber, but may not be to your liking. See a registered dietitian's recommendation for 6 natural foods with *more* fiber than beans, [here](#).
- 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 -

- [Shrimp Farmed Indoors](#) - 5,000 pounds of Pacific White Shrimp annually, at [Triple J Farms](#) in *Missouri*, and at [RDM Aquaculture](#) in Indiana! Advantages:
 - Indoor farming allows for year-round production
 - Unaffected by weather conditions
 - Reduces risk of overfishing and helps sustain wild fish populations
 - Controlled environments minimize the use of antibiotics and pesticides
 - Indoor systems can recycle water, leading to more efficient resource use
 - Fish raised indoors often have a lower carbon footprint compared to traditional farming
 - Consumers benefit from fresher fish with fewer contaminants and better quality
- [Florida Orange Production Down 92% In 20 Years](#) - according to the US Department of Agriculture: freezes, hurricanes, fruit cancer, greening disease. Not a good trend. FDA has recently [announced](#) a reduction in the standard of required sweetness to accommodate the reduced quality of the crop.
- [Animal Populations Important To Tropical Forest Growth/Regrowth](#) - according to a recent [study](#) from the Massachusetts Institute of Technology, forests do much better with a healthy population of [seed dispersing animals](#), and absorb 4 times the carbon than comparable forests without animals.
- [First Merlin Falcon Nest In DC](#) - Merlins have been around more since DDT was banned, but they usually nest further North. The new family seems to have found everything it needed. Welcome!
- [Old EV Batteries Find New Life In Texas](#) - [stabilizing the grid](#) in Bexar County, East of San Antonio TX. [B2U Storage Solutions](#) (Los Angeles CA) will re-employ 500 old Lithium/Nickel/Cobalt EV batteries in 21 shipping container-sized [smart](#) cabinets ... energy storage capacity of 24 MWh. They will charge when there is excess renewable energy in the grid. The company has three more such energy storage projects lined up across the state, with a total capacity of 100 MWh. Ace!
- [\\$1 Trillion Supercycle Of Grid Scale Battery Investment](#) - Battery Energy Storage Systems (BESS) are now an integral part of achieving global energy sustainability and reliability targets. In the US, [BESS capacity is expected to grow from 26 GW in 2024 to 150 GW in 2030](#), and current tax credit incentives for that remain in place. Thank you Senator Murkowski of Alaska. [Phil J.]
- [Ford's New Midsize EV Truck](#) - Ford, and Kentucky authorities, have [announced](#) that the new midsize 4-door EV pickup truck will be produced in the company's Louisville KY facility, which will undergo a \$1.9 billion transformation for the purpose - completion target 2Q27. Low cost batteries made at a Ford factory (\$3 billion investment) in Michigan will be used. Serious EV money!
- [\\$5 Billion High Speed EV Charger Federal Grant Program Resumes](#) - The US Department of Transportation has [restarted grants](#) under the National Electric Vehicle Infrastructure ([NEVI](#)) program ... after a 6 month delay (and after losing a [lawsuit](#) led by CA). The grants will go to the states (fed share 80%) to install high-speed EV chargers along highway corridors ... to serve the needs of long-distance EV drivers Relief for [range anxiety](#). Ride on! [Phil J., Harvey B., Dyane P.]
- [Chinook Salmon In California's McCloud River](#) - Adult '[winter-run](#)' chinooks were spotted for the first time in 100 years, spawning in the cold, snow fed river water ... the result of an earlier release above the Shasta Dam in Northern California. Details, two videos, [here](#). Shasta fish ladder needed.
- [Europe Is Getting Hotter](#) - 90% of US homes and work spaces are air conditioned, in [Europe 20%](#), [in the UK 5%](#), and in [Germany 3%](#). [More severe and prolonged heat waves are on the way](#), with both economic and health consequences, and there's more to dealing with it than putting an A/C unit in the window, of course: insulation in the walls and ceiling, thermopane windows, highly reflective roofs, architectural features such as extended eaves to shade windows, urban

green spaces, planted green roofs, and more. Time to get started; clever architects needed. [Sonja B.]

- Seville - is sometimes called the frying pan of Spain. By 2050, peak Summer temperatures there are projected to reach 122° F (50° C). The city has a number of plans to adapt to the heat, including reinventing the [3000 year old Persian cooling technology called the 'qanat'](#), based on underground canals (60-600 feet underground) that carry water to areas that need cooling. Qanats are very durable: 37,000 of the original 120,000 in Iran are still in use! See a description of the first segments of Seville's qanat, [here](#). [Hugo] "Everything old is new again." Jonathan Swift 1740 CE.

Other Science News -

- First eVTOL Air Taxi Flight Between US Airports - An important step toward FAA Type Certification by Joby Aviation last month in California. [Details](#).
- TSA Allows Star Wars [LightSabers](#) In Carry-Ons At Airports - also live lobsters, cowboy spurs, and antlers (must fit in overhead bins). More details on your new freedoms [here](#), and a few new no-nos.
- Flamingos In Ukraine - The Ukrainian company Fire Point (Kyiv Ukraine) is now mass producing Ukraine's own long range cruise missile, the [FP-5 Flamingo](#) [video, closed captions on], capable of reaching 90% of Russian defense/[energy](#) industry. Specs: range 1,864 miles, 2,500 pound warhead, max speed 590 mph, cruising speed 528-559 mph, wingspan 13 feet, flight endurance over 4 hours, guidance satellite/inertial, low altitude terrain following, non-stealth, current production rate 30 units/month with target of [210 units/month by October 2025](#). Photos [here](#), and [here](#).

Nice Thing - [skip ads, full screen, turn on closed captions]

Pop-Jazz Crossover - Chuck Mangione ([in memoriam July 2025](#)), flügelhorn and fedora, 'smooth' jazz at the intersection of jazz, rock and soul.

- Feels So Good - 1978, Cannes, [here](#).
- Children Of Sanchez - 1995, Warsaw, [here](#). (**spectacular** guitar solo intro)
- Land Of Make Believe - 1979, New York, [here](#).