

Betsy says HI!!!!

Announcements

The next LABQUEST meeting will be Wednesday, March 12 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:

- Outbreak Of Measles In West Texas
- Bird-Flu-Exposed Bovine Veterinarians
- 8 Lifestyle *Don'ts* To Avoid Cognitive Decline
- FDA Review Of Food, Medical Device And Tobacco Products – staff reactions
- Green Jet Fuel And Diesel From Food Waste
- Real World EV Battery Life Better Than Expected

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](#).

- [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 -

- [Outbreak Of Measles In West Texas](#) - The Texas Department of State Health Services has [reported](#) an outbreak (58 cases as of 2/18/25 and increasing, mostly children) of Measles in [Gaines County TX](#) (county seat Seminole TX), with additional cases in Lynn, Terry, and Yoakum counties - and nearby [Lee County New Mexico](#). The nearest hub city is Lubbock TX. Texas health

authorities believe that there are several hundred more infected persons, but because they haven't been tested they are not included in the official *infected* statistic. **None of the tested/reported infected individuals are known to have been fully vaccinated**, and the area has a very low vaccination rate compared to the 95% required for *herd-immunity* ([many decline vaccination](#)). **Measles is one of the most infectious diseases known**. There has been a safe, highly effective, **two-dose** vaccine since 1971, usually given as a combination vaccine for measles, mumps and rubella (MMR vaccine) in childhood (first dose at age 1, second at age 5). [Chad C., Michael and Jacqui K.]

- **First Rapid-Acting Insulin Biosimilar** - FDA has [approved](#) Merilog (insulin-aspart-szjj) from [Sanofi-Aventis](#) (Paris France) for this indication, having previously approved two *long-acting* biosimilar insulin products. Competing products could help control cost. [Kamal S., Sam J.]

Other Health Science News -

- **Bird-Flu-Exposed Bovine Veterinarians** - 150 bovine veterinarians attending a conference were recruited for blood tests to see if they had been exposed to bird flu. The results suggest that there are [unreported bird flu infections in cattle](#) (delayed release CDC report). Not good in several ways
- **8 Lifestyle Don'ts To Avoid Cognitive Decline** - *Disrecommended* by registered dietician/nutritionists, [here](#). Summary: 1) no [artificial sweeteners](#), 2) don't skip 30 minutes of daily [exercise](#), 3) don't avoid being [social](#), 4) don't disregard sleep problems, 5) [no fad diets](#) or superfoods, 6) take dealing with [stress](#) seriously, 7) don't discard [egg yolks](#), 8) very little alcohol.
- **6 Nutrients Important To Eye Health** - See the details [here](#), and the natural foods that can supply them. Summary: [beta carotene](#), [vitamin C](#), [vitamin E](#), [zinc](#), [omega 3s](#), [lutein](#) and [zeaxanthin](#).
- **Skin Moisturizers** - See a review of 13 moisturizers based on interviews with dermatologists, [here](#), and note the 3 or 4 ingredients they say to look for. There's not much science here, so start at the cheap, widely available end with CeraVe 'Daily Moisturizing *Lotion*' (not cream), and work your way up as needed. Best used on the body, rather than the face (keep out of eyes). This should first be about health for both men and women, and helping mature skin resist infection, not appearance.
- **FDA Review Of Food, Medical Device And Tobacco Products** - could be affected by the staff reductions in those areas reported this week, [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 -

- **Snacks With More Protein Than An Egg** - Protein helps satisfy appetite, and therefore helps with weight control ... provided that saturated fat and sugar aren't included. [Here](#) are some ideas for protein-rich snacks, without most of the negatives.
- **30 Day Anti-inflammatory Meal Plan** - no added sugar, protein rich, [here](#). Chronic inflammation has been linked to a growing number of health issues ... including diabetes, heart disease, some types of cancers, and dementia.
- **50 Quick Healthy Dinners Based On Rotisserie Chicken** - Buy the whole, rotisserie-roasted chicken, debone (easy) and shred to use in [these tasty recipes](#). You're busy, it's quick.

- 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 -

- A UK County Doubles Down On Solar - The West Sussex County Council (West Sussex, UK) is planning to install [battery storage and solar power at 60 more locations](#) across the county ... libraries, fire stations, schools. This will add to the power the County is already generating at 74 schools and nine council buildings - 17,000 MWh of clean energy annually, power for 6,300 homes.
- Large New Solar Farm Planned For Buckinghamshire UK - The global renewable energy company [Qair Energy](#) (Paris France) is planning to build the [Straws Hadley Solar Farm](#) near Aylesbury: 50 MW, 138 acres, power for 14,000 homes, biodiversity plus, grid connection approved. [Jules M.]
- More Grid-Scale Battery Storage For Scotland - Former [coal mine to be transformed](#) into a revolutionary new energy source. Copenhagen Infrastructure Partners will invest \$1 billion on the [largest energy storage project in Europe](#) - two locations, South Lanarkshire and Fife. The 2 GWhr of energy storage will help stabilize the Scottish energy grid by storing energy for release during periods of high demand. [90% of Scotland's electricity is generated from wind, sun, and nuclear](#).
- UK Grid Connection Reform To Speed Bringing Renewable Energy On-Line - Radical reform of regulator [OFGEM](#), expected to be in place by this Spring, will replace the first-come-first-served process in favor of the renewable energy projects that can become operational most quickly. Yes!
- Project Prometheus - is the British Army project for increasing the supply of renewable energy at UK Army sites. Work has now begun on installing more than 1,000 [solar panels at an Army barracks in Lancashire](#). The 1,638 panels, covering nearly an acre of unused land at Weeton Barracks, will generate 35% of the site's energy needs. A fine beginning. Greek hero [Prometheus](#).
- World's Highest Solar Farm - The [Huadian Tibet Caipeng PV-Storage Project](#), at 17,152 feet above sea level in Tibet, has begun operations - 150 MW, 170,000 bifacial solar panels, low temperature and high altitude (above 40% of Earth's atmosphere) improve panel efficiency.
- Solar Panel Manufacturing In Romania - The [government will advance \\$34 million](#) in aid toward the construction of a 1.5 GW factory near the town of [Bârlad](#) in northeastern Romania. This is one of three projects that will together produce 1.7 GW of solar cells and panels annually. Grid scale storage is also in the works - 2.5 GW by late 2025, 5 GW by 2026, and 8 GW by 2030. [Details](#).
- Two New Ultra-High-Power Electrical Highways Planned In Germany - to be called Korridor K, consisting of two ultra high voltage DC links (V48 and V49), each capable of transmitting 2 GW ...

enough power to supply 4 million people. German transmission system operator [Amprion](#) will manage the \$2.1 billion initiative called [Energiewende](#) (energy transition), which will carry power from onshore and offshore wind farms in the North to four distribution stations to be built by Hitachi in Heide, Wilhelmshaven, Polsum, and Hamm. Clean wind energy from the North to users in the South and West, construction starts in 2030. Both smart and timely. Well done! (Sonja B., Hugo)

- [Michigan Nuclear Reactor To Be Restarted](#) - [Holtec International](#) (Mount Laurel NJ) plans to restart the 800 MW [Palisades Nuclear Plant](#) in Covert Township Michigan ([map](#)), with financial assistance from the US Department of Energy and the state of Michigan, and has filed a license application with the US Nuclear Regulatory Commission. Existing grid connections will be used to reduce cost.
- [Green Jet Fuel And Diesel From Food Waste](#) - On January 10 the US Department of Energy (DOE) [closed on a \\$1.67 billion loan guarantee](#) for [Montana Renewables](#) (Great Falls MT) to scale up its green jet fuel production to 300 million gallons annually - Sustainable Aviation Fuel (SAF). The first half of this funding has *now* (2/12/25) been released by DOE so that the project may proceed. Montana Renewables is a subdivision of [Calumet](#) (Indianapolis IN).
- [Advances In Solid State Battery Design](#) - [Details](#). See [Microvast](#) (Stafford TX) tech, [here](#).
- [Real World EV Battery Life Better Than Expected](#) - [Details](#).
- [Brake Pad Dust More Toxic Than Vehicle Exhaust?](#) - A [study](#) recently [published](#) by the UK's University of Southampton concluded that it can be, depending on composition - low metallic, semi-metallic, non-asbestos organic or hybrid-ceramic. Summary: "... non-asbestos organic pads were the most potent at inducing inflammation and other markers of toxicity, and were found to be more toxic to human lung cells than diesel exhaust particles. Ceramic pads were the second most toxic."

Other Science News -

- [German Drone Maker Will Double Production In Ukraine In 2025](#) - [Quantum Systems](#) (Munich Germany) already has two drone manufacturing facilities in Ukraine, making the '[Vector](#)' reconnaissance drone (target identification and surveillance, 18 pounds, 22 mile 90 minute range, VTOL, on-board AI) and the 'Trinity' mapping drone by the hundreds. [Background](#).

Nice Thing - [full screen]

[Dance of the Sugar Plum Fairy](#) - from the Nutcracker, ballet music composed by Pyotr Ilyich Tchaikovsky, 1892.

- [Danced](#) - Lauren Cuthbertson of the Royal Ballet, 2017, [here](#).
- [Danced](#) - Anna Nikulina of the Bolshoi Ballet, 2014, [here](#).
- [Music Video](#) - Played by pianist Jennifer Thomas as the Wind Fairy, the toys come to life, 2016, [here](#).