

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:

- Seasonal (Conventional) Flu Rates Are High
- Certain Eye Drops Recalled
- New *In Vitro* Molecular Genetic Diagnostic Test For Colorectal Cancer
- Highly Pathogenic New Version Of Bird Flu
- Can You Get Bird Flu From Eating Eggs?
- Navy Tests Powerful New Anti-Drone, Anti Fast Attack Boat Laser Weapon

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](#).

- [Seasonal \(Conventional\) Flu Rates Are High](#) - and continue to increase across the country, [according to the CDC](#) - 24 milion flu-related illnesses so far this season, with [13,000 dead](#) from complications due to flu. Vaccinated?
- [Skin Tags \(acrochordons\)](#) - according to dermatologists, are benign growths that appear in areas of the skin that are subject to friction, details [here](#). Not to worry, once your doctor has verified that it isn't something less benign. [Removal?](#)
- [Certain Eye Drops Recalled](#) - due to fungal contamination. See the particulars of the voluntary recall announced by the manufacturer on the FDA website, and photos of the packaging, [here](#).
- [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 -

- New In Vitro Molecular Genetic Diagnostic Test For Colorectal Cancer - and advanced adenomas has been developed by [Mainz Biomed](#) (Mainz Germany). [ColoAlert](#) is in use throughout the EU. The company is currently running clinical trials aimed at FDA approval for use in the US.

Other Health Science News -

- Highly Pathogenic New Version Of Bird Flu - has been detected in Nevada dairy cattle. This is the same strain of the virus that was predominant in migratory wild birds last Fall. US Department of Agriculture announcement, [here](#) - smart USDA collaboration with the NV Department of Agriculture.
- Can You Get Bird Flu From Eating Eggs? - In principle yes, but it isn't likely. When chickens contract bird flu they stop laying eggs, and usually die (and millions are being euthanized). A [registered dietician says](#) for now it's best to cook eggs thoroughly - no sunny side up, or poached, or soft scrambled, or raw eggs in caesar salad. This too shall pass.
- Unprecedented Outbreak Of Tuberculosis In Kansas - centered in Kansas City KS. The US Centers for Disease Control (CDC) is assisting local health authorities. [Details](#). Cases have also been reported in Missouri. Active cases of tuberculosis are [highly infectious](#). There is a vaccine, [BCG](#), but it isn't generally used in the US.
- Pain In The Big Toe - or more precisely the joint at the base of the big toe that connects the toe to the foot, called the Metatarsal Phalangeal (MTP) Joint, is a common complaint. [Here](#) are 7 possible causes for MTP pain, along with some solutions.
- Excessive Burping - [Here](#) are 10 potential causes, along with some solutions Burping is a gas pressure clearing process. Up to 30 burps per day can be considered *normal*.
- Relationship Between Caffeine, BMI, Whole Body Fat, And Type 2 Diabetes - A [recently published study](#) indicated a relationship between [higher caffeine blood levels and lower risk of Type 2 diabetes](#), with about half of the effect achieved through lower BMI.
- What Is A Complete Protein? - Proteins are assembled from amino acids, 20 of which are essential to human life. Of the 20, the body can make all but 9, which must be taken in as food. A protein is considered *complete* if it contains all 9 of these *essential* amino acids: histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine. Details, and which natural foods supply complete proteins, [here](#).
- Increased (1997-2024) Nanoplastic Contamination Found In Brain And Liver Tissue - A study [published](#) this month by researchers led by the University of New Mexico showed a [rapid rise in nanoplastic particles in the brain and liver](#). 75% were derived from polyethylene. Dangerous trend.
- Black Plastic Kitchen Utensils - should be replaced due to the shedding of potentially toxic nanoplastic fragments. Choose stainless steel or wood/bamboo. See some alternatives [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](#).
- Your Poop Schedule And Your Health - Look yourself up, [here](#). Tune-up: older people and men go more often than the averages given. Let your doctor know if your schedule seems unusual.

Practical Nutrition -

- [9 Vitamins And Nutrients For A Long Life](#) - and the natural foods that can supply them, [here](#). Tune-up: To get enough Vitamin D at or above the latitude of the DMV, a supplement may be needed (especially in the Winter months).
- [20 Skillet Dinners For Winter](#) - reviewed by registered dieticians, [here](#). Tune up: Substitute oat milk for heavy cream, whole wheat pasta for white flour pasta, feta cheese for cream cheese or half of cheddar cheese, low Sodium salt, and either chickpea or corn tortillas (not white flour). No it won't be as creamy/rich, but it will have much less saturated fat.
- [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 -

- [Floating Solar In Madhya Pradesh Central India](#) - [Tata](#) Power Renewable Energy has just switched on its [Omkareshwar Floating Solar Project](#): 126 MW, 213,460 bifacial solar modules, 642 acre floating platform, wave breakers, ballast anchors, adaptive cableways, offsets 173,893 tons of CO2 annually, saves 42.5 million cubic yards of water annually by minimizing evaporation, positioned between the Indirasagar and Omkareshwar hydroelectric reservoirs. [Raga A]
- [Ocean-Based Renewable Energy Research](#) - In December 2024 the US Department of Energy [announced](#) an \$18 million investment in 27 research and development projects across 17 universities - to work on the potential of ocean-based renewable energy (waves, tides, underwater currents). [Details](#).
- [Humpback Anglerfish \(Melanocetus johnsonii\)](#) - A female was found on the *surface* off the coast of Tenerife in Spain's Canary Islands for the first time. They usually hang out 5,000 feet down, and never see the light of day. When mating, the males bite into the much larger females, and fertilize their eggs by external fertilization - 'sexual parasitism'. [Photo and details](#) - ugly! Their [dorsal appendage](#) carries bacteria that illuminate to attract prey (bait for the *angler*). [Peter P.]
- [Duke Energy Retiring Massive Coal Fired Power Plant](#) - The existing grid infrastructure of the 1,155 MW Allen Steam Station ([photo and details](#)) near Charlotte NC will be repurposed to connect with a new, **utility-scale battery system rated at 2,700 MW**. Construction will start this year, with final completion by 2031. Duke will also operate a 400 MW gas-fired generator in nearby Denver NC, to be switched on (0 to 100 percent in less than 15 minutes) during extended periods of high demand. The large piles of toxic coal fly ash will be moved to double-lined landfills onsite. Yes indeed!
- [US States Leading In Renewable Energy](#) - Summary (2023): California, Texas, Florida, North Carolina and Arizona for solar. Texas, Iowa, Oklahoma and Kansas for wind. [Surprised?](#)
- [Coal-Fired Power Reaches Record Lows In Australia](#) - in 4Q24 [less than 50% of electrical power for the first time](#). Roof-top solar was up 18% in the quarter, grid-scale solar was up 9% - both records. In January, Australia's government announced \$1.2 billion in financing to expedite the

transition from fossil fuels to renewables. Australia is one of the world's leading *exporters of coal*.

- [Mustang Inspired E-Bike](#) From Ford - They also have a model for Bronco fans. Details [here](#), and photos [here](#). Which pony-car bike is for you?
- [Scientists Study Strange Ice Mounds In Arctic](#) - [Pingos](#) are mounds of earth-covered ice that form in permafrost. As the climate warms, they are degrading, releasing methane, a greenhouse gas much more potent than CO2. [Details](#).
- [Mysteries Revealed In Ancient Ice](#) - Scientists working in Antarctica, near the Italian/French research station [Concordia](#), have drilled out a [1.74 mile long core of ice](#) that dates back 1.2 million years, and contains a running record of the composition of the Earth's atmosphere captured in bubbles in the ice... and volcanic ash layers. 3-foot long segments of ice core are being sent by ship to research labs in Europe (at -58°F) for analysis. The data reach back to the Mid-Pleistocene Transition, a time when the cycles between cold glacial and warm interglacial periods switched from 41,000 years to 100,000 years, and we *don't know why*. During that time the ancestors to *homo sapiens* died back from millions to [as few as 1,000 individuals](#), and we also *don't know why*. Understanding this **near miss to our own extinction** *might* be useful. [Peter P]
- [Very High Biodiversity Count Found Near Deep Sea Methane Seeps](#) - off the coast of Costa Rica. [488 distinct animal species were discovered](#) near a single vent: octopuses, fish, clams, yeti crabs, alien-like worms, squat lobsters, mussels, starfish, spindly sea stars, [and more](#). [Peter P.]
- [World's First Ship Tunnel](#) - The \$321 million tunnel will be built by Norway to allow ships to pass directly through a mountain ridge, rather than travel the turbulent waters surrounding the Stad Peninsula that have killed many sailors. See details, several artist concepts of the tunnel's appearance, and a map, [here](#). [Michael C.]

Other Science News -

- [Solar Storms, Satellite Communications And The Electrical Grid](#) - An extreme solar storm (coronal mass ejection event) could knock out satellite-based communications and the electrical power grid on a **continent-spanning scale**. Mid-2025 will be the peak of the 11-year solar storm cycle during which solar storms are more likely. [Extreme solar storms are rare](#), averaging one every 25 years, but they do happen. Satellites and the grid should be designed with that in mind. [Publication](#)
- [Ukraine Receives First French Mirage 2000-5 Jets](#) - and [additional F-16 jets from Holland](#). The Mirages are fitted for air-to-ground combat, and Ukrainian pilots have already been trained on them in France. Mirage mission in Ukraine - blow up more Russian HQs faster.
- [Navy Tests Powerful New Anti-Drone, Anti Fast Attack Boat Laser Weapon](#) - Speed of light, no physical ammunition required, AI enabled tracking and targeting. Now it begins, [here](#). Set phasers on BOOM!

[Nice Thing](#) - [skip ads] [Jenna D.]

[South Pacific](#) - Rodgers and Hammerstein film, 1958 - based on the original 1949 Broadway musical play. [Details](#)

- [Some Enchanted Evening](#) - Frank Sinatra, [here](#).
- [Some Enchanted Evening](#) - Andy Williams, [here](#).
- [Some Enchanted Evening](#) - Jose Carreras, [here](#). [Sonja B.]

- Some Enchanted Evening - [Giorgio Tozzi](#) (bass, dubbing actor Rossano Brazzi) with Mitzi Gaynor, original film scenario, [here](#).