

Betsy says HI!!!!

Announcements

The next LABQUEST meeting will be this Wednesday, August 13 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:

- Certain Napping Patterns Associated With Increased Risk Of Death
- Health Benefits Of Peaches
- Blueberries Promote Longevity
- Neodymium And Praseodymium (Heavy Rare Earths) mined in NV.
- ABTC Awarded \$144 Million DoE Contract - to construct a second Lithium-Ion recycling center
- Tomb Of Ancient Mayan Ruler

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](#).

- [FDA Warning Letters To Marketers of Products With 7-OH](#) - The US Food and Drug Administration has issued [warning letters](#) for manufacturers of products containing 7-hydroxymitragynine (7-OH).
- [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 -

- [Azoospermia \(Absence Of Sperm\)](#) - An AI-assisted procedure called [STAR](#) (Sperm Tracking And Recovery), using high-speed imaging, robotics and microfluidics, can detect and retrieve for use in IVF procedures even the smallest number of sperm in samples previously thought to be void

of sperm. A step forward in dealing with male infertility. [Background](#). The male partner accounts for about 40% of all infertility cases in the US, and about 10% of those are due to azoospermia. [Columbia University Fertility Center](#).

- [Research Advance For Parkinson's Disease \(PD\)](#) - Research [announced](#) by Stanford University has [identified](#) an enzyme called 'LRRK2' that disrupts crucial communication between neurons in the brain in a way consistent with PD. The researchers [identified an inhibitor](#) for this enzyme that arrested the symptoms of PD in mice genetically designed to be subject to PD. The next step is safety testing in human subjects. Stay tuned.
- [Pancreatic Ductal Adenocarcinoma \(PDAC\)](#) - Oncolytics Biotech (San Diego CA) has [announced](#) promising preliminary results from human trials of its PDAC immunotherapy treatment candidate pelareorep. Stay tuned.
- [Blue Natural Food Color Approved](#) - The US Food and Drug Administration (FDA) has [approved](#) Gardenia (Genipin) Blue as a color for use with foods in the US.

Other Health Science News -

- [Certain Napping Patterns Associated With Increased Risk Of Death](#) - according to a new study led by researchers at Massachusetts General Hospital, details [here](#) and [here](#). Summary of recommendations: limit naps to 30 minutes (set a timer), avoid napping between noon and 2 pm, avoid changing nap patterns from day to day. *Association* (shown by the study) is not *causation* (study doesn't show the underlying *cause* of tiredness). If tiredness during the day persists, see a doctor to look for underlying health conditions. [Publication](#)
- [Impact Of Ultraprocessed Foods On Women's Health](#) - [Details](#). There are small changes you can make yourself that can make a difference.
- [No Safe Level Of Processed Meat](#) - A recently published study found that eating even one portion per day was associated with increased risk of Type 2 diabetes, colorectal cancer and ischemic heart disease.. [Details](#)
- [For A Longer Healthier Life](#) - A cardiologist makes three recommendations, [here](#). Summary: 1) [Regular Exercise](#), 2) [Mediterranean Diet](#) - colorful fruits/berries/vegetables, nuts, whole grains, olive/avocado oil, seafood (fatty fish, shellfish), limited lean meats (skinless/roasted/broiled chicken), eggs (not fried), selective dairy (low fat, probiotic active culture, based on A2A2 milk), avoid ultra-processed foods, 3) [Preventive Screening](#) - go to your primary care doctor once or twice annually for a 'wellness' exam to get ahead of chronic diseases with early detection.
- [Losing Belly \(Visceral\) Fat When Over 50](#) - visceral fat is the type most likely to lead to ill health. See where you stand by using the Body Roundness Index (BRI) at the link above, or just get out the tape measure as indicated in the very obvious photo, [here](#). Tune-up: take special note of the four dietary tips. Good information and willpower will do it. Drugs and supplements not needed.
- [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 -

- [Best Bread In Washington DC](#) - See the list, and their specialties, [here](#). [in memoriam Jim S.]
- [Want A Health Tune-Up For Your Favorite Sandwich?](#) - Start with a health tune-up for the bread. See 3 registered dietitians' recommendations for bread types and brands,

[here](#). Summary: [Review the contents label for WHOLE wheat](#), not just wheat. Other *whole* and *sprouted* grains are also good. Seeds are good. Fiber!!

- [Top High Protein Food For Lowering Cholesterol](#) - A registered dietitian [recommends](#) walnuts because they have: healthy polyunsaturated fats, healthy Omega 3 unsaturated fats, antioxidants, and fiber - all serving to lower LDL cholesterol. Raw is best. To avoid mold, refrigerate after opening the package.
- [Greek Yogurt Or Cottage Cheese More Nutritious?](#) - Registered dietitians say Greek yogurt is a bit better in micronutrients, and a better source of *probiotics* ... cottage cheese has more protein, but usually more Sodium. So both are good, and which is better depends on your nutritional goals. See a *micronutrient* and *macronutrient* rundown of each, and additional details, [here](#).
- [When To Eat A Banana](#) - depends on your nutritional goals, according to a registered dietitian, [here](#). [For energy](#): before working out, at breakfast, mid-afternoon. [For digestion](#): at mealtime. [For weight loss](#): before meals, as a snack, before working out. Avoids: Eat only when still at least slightly green, *not* fully ripe. Do not eat within 2 hours of bedtime. Do not eat within 2 hours of eating antioxidant-rich foods, to get the full effect of the antioxidants in the food.
- [Fridge Lifetime For Cut Watermelon](#) - 3 to 5 days if stored at 9 to 36° F, so probably in the meat drawer of your fridge. Measure the temperature yourself. Don't rely on the manufacturer's setting. [Details](#) No part of fresh storage should be warmer than 37° F, meat drawer about 32° F
- [Health Benefits Of Peaches](#) - Details and a nutritional run-down, according to a registered dietitian, [here](#). Summary: heart, vision and gut health benefits because of their fiber, vitamin and antioxidant content. Either fresh or frozen is OK (best not cooked), but no bananas within two hours before or after (see above bullet).
- [Blueberries Promote Longevity](#) - According to a registered dietitian, their [antioxidants](#) and fiber reduce the risk of age-related disease. See her reasoning, tips on incorporating fruit into recipes, and other details, [here](#). Fresh or frozen OK. Best: frozen *wild* blueberries.
- [7 No-Added-Sugar Drinks For Healthy Hydration](#) - recommended by a registered dietitian and sports trainer, [here](#). Tune-up: its coconut **water** not coconut *milk* or coconut *cream*. Organic.
- [5 Foods A Cardiologist Recommends Not Feeding Children](#) - [here](#). Summary: microwave popcorn, flavored yogurts, processed meats, sugary cereal/drinks, deep fried foods.
- [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 -

- [Creating New Urban Green Space In Washington DC](#) - isn't easy in a city that's two-thirds paved over. Construction with a two-year timeline has begun on decking over the several blocks of Connecticut Avenue just above Dupont Circle - from the circle North to P Street NW, with the first work starting on the median as far North as T Street. See before-and-after views of the \$37.8 million project [here](#). Features: bioretention planters,

permeable paving for stormwater management, benches, bike racks, and new lighting. There will be a similar project on [North Capitol Street](#). Not as *Grand* as the huge 500-street [project in Paris](#), but what is.

- [Georgetown West Heating Plant](#) - This [1948, coal burning steam heating plant](#), located near the waterfront in Washington DC, was [decommissioned in 2000](#), has now been redeveloped ([historic adaptive reuse](#)) into a \$300 million, 64 unit [luxury condominium](#) ready in 2026, and is setting a condo price record for DC - [\\$3,000/ft²](#). The adjacent former coal yard will be redeveloped into a 1-acre public park bordering the C&O canal. Some infrastructure details [here](#). It took a quarter century! [Sonja B., Peter MK]
- [Adding Energy Storage](#) - is an important aspect of adding renewable energy generating sources to the grid. See the ambitious goals Massachusetts has set for getting both done together, [here](#).
- [Spain Strengthens Its Grid](#) - and plans to add energy storage facilities to help integrate renewable power sources and avoid blackouts. The [timeframe for installing new wind and solar energy facilities will be reduced](#).
- [Lithium Extraction From Claystone Deposits In Nevada](#) - [American Battery Technology](#) (Reno NV) has [announced](#) that its [mining/refining project in Tonopah Flats NV](#) (for producing battery grade lithium hydroxide) has been selected as a US Transparency Project of national importance. This is expected to greatly accelerate the permitting process. Lithium Hydroxide is a key supply chain material needed for manufacturing Lithium-based EV batteries.
- [Wind Energy In Egypt](#) - [AMEA Power](#) (Dubai UAE), in joint venture with [Sumitomo Corporation](#) (Tokyo Japan), has commissioned its 500 MW, 77 turbine Amunet Wind Power Plant in Ras Ghareb, Red Sea Governorate, Egypt. The new *onshore* plant is the largest operating plant of its kind on the continent, producing power for 500,000 homes, and offsetting 1.4 million tons of CO₂ annually. [Details](#). Great things are happening.
- [Houses Built With Rice](#) - 60% rice husks, the rest is clay, cement and glue. The inventor in Kyrgyzstan has already begun building houses with it, and says that the '[bricks](#)' are as strong as [cement](#) due to the silica occurring naturally in the husks, provide very good thermal insulation, and are cheap. In India, millions of tons of rice husks fill landfills. Win win?
- [Driverless EVs For Warehouses, Factories, Airports And Solar Farms](#) - [Bradshaw EV](#) (Peterborough UK) and [Oxa](#) (Oxfordshire UK) have teamed up to make this happen, [details](#).

Other Science News -

- [Astronauts From India, Poland And Hungary](#) - have arrived at the International Space Station (ISS) under a program organized by [Axiom Space](#) (Houston TX), a company that organizes private spaceflights. [Details](#).
- [Neodymium And Praseodymium \(Heavy Rare Earths\)](#) - will be mined, refined and used to manufacture powerful NdPr (Neodymium/Praseodymium) magnets at the MP Materials Corporation (MP, Los Vegas NV) mine and refinery in Mountain Pass CA.
 - The US Department of Defense has agreed to invest an initial \$400 million, make a \$150 million loan, and will guarantee purchase of all the magnets the company can produce there for 10 years. The company has leveraged the federal investment to attract an additional \$1 billion in private banking finance. Fast forward! [Details](#) [CC]
 - [MP And Apple Agreement On Recycled Magnets](#) - The companies have [announced](#) a \$500 million agreement to enlarge MP's existing magnetics facility in Ft Worth TX, known as 'Independence', to provide Apple with 100% recycled rare earth magnets for its products ... supporting an all-US circular supply chain.
- [US Support For New Lithium Mining, Manufacturing And Reclamation Technologies](#) -

- Lithium Extraction From Claystone Deposits In Nevada - [American Battery Technology](#) (ABTC, Reno NV) has [announced](#) that its [mining/refining project in Tonopah Flats NV](#) (for producing battery grade lithium hydroxide) has been selected as a US Transparency Project of national importance. This is expected to greatly accelerate permitting. Lithium Hydroxide is a key supply chain material for manufacturing Lithium-based EV batteries.
- ABTC Awarded A \$1 Million Collaborative Agreement - with the US Department of Energy's (DoE) Argonne National Laboratory [ReCell Center](#) to advance novel lithium manufacturing technologies ... cheaper, less waste and pollution. [Details](#)
- ABTC Awarded \$144 Million DoE Contract - to construct a [second Lithium-Ion recycling center](#) capable of processing 100,000 tons per year of recyclable materials - 5 times the capacity of the first plant. The output will be battery grade nickel, cobalt, manganese, and lithium hydroxide products to be sold into the North American market.
- ABTC Received \$900 Million 'Letter Of Interest' - from the US Export-Import Bank (EXIM) - financing up to that amount for development of the company's lithium mining and refining operations. [Details](#)
- 2600 Year Old Etruscan Tomb - was [discovered and opened](#) for the first time in the [rock necropolis](#) at San Giuliano, Italy. [Etruscan civilization](#) reached its peak in the 6th century BCE, and many of its features were incorporated into Roman culture.
- Tomb Of Ancient Mayan Ruler - Te K'ab Chaak was the first ruler (circa 331-350 CE) of the ancient Mayan city of Caracol in present day Belize. His [tomb](#) has recently been discovered by a [team of archeologists from the University of Houston](#) ... underneath another burial chamber discovered in 1993. He was 5'7".

Nice Thing - [skip ads, full screen]

- River Sounds And Bird Song - for relaxing, [here](#).
- Cello And Piano Lullabies - Bach, Schubert, Gounod, Saint-Saëns, for relaxing, [here](#).
- Die Zauberflöte (Magic Flute) - The complete 2.5 hour opera in two acts by W.A. Mozart, performed in the original German by the Paris Opera, [here](#). [note the Masonic Order symbolism]
- The Magic Flute (Die Zauberflöte) - W.A.Mozart, the 7.5 minute aria 'Pa-pa-pa Papageno', sung in English by Nathan Gunn, Metropolitan Opera, [here](#). [use closed captions option, cc]