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A non-profit Corporation, founded in 1965, privately supported for the public good and dedicated to the advancement of Medicine through Amateur Radio.

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P.O. Box 127, Indian Rocks Beach, FL., 33785-0127

NEW MISSION FOR PHYSICIANS

21st-CENTURY PATIENTS WILL BE DEALING WITH DIRECT-TO-CONSUMER LABS LOADED WITH GENOMIC REPORTS—

"WHAT DOES ALL THIS MEAN???"

Recently, a patient came in the office with a \$200 read-out from his *direct-to-consumer* Lab report from his saliva specimen. It presented him with his risks for various diseases and drug responses, along with a genetic-based analysis of his likely ancestral origins and a few selected physical traits. **He took it to his doctor and the doctor didn't know how to interpret it!**

Today, thousands of people have gone online and accessed their genetic information. Some view this information recreationally, but to others, genetic profiles provide a new perspective on their health. The later group has high-lighted one of the first concerns for the patient-physician relationship in the post-Human Genome Project era, now a decade old. For future physicians, this highlights a new challenge for medical education.

According to his genetic profile, the patient had an above average risk of developing type 2 diabetes. He is also a carrier for Tay-Sachs disease, and he has particular variations in drug-metabolizing liver enzymes, among other findings. After receiving his report, he embraced the information and started eating healthier foods and joined a running group. He went online to learn about Tay-Sachs and what his liver enzyme status meant for his alcohol and caffeine consumption. He also sent a copy of his report to his physician, whose knowledge and guidance, he felt, would help him make better sense of the findings. But during his next visit, his physician brushed the report side and went on with business as usual!

The doctor simply assumed the findings were in his medical history and because he hadn't been prepared to interpret it. Teaching styles and curricula may vary from school to school, but in the present medical education, there is not much in genetic data or in genomic training. Patients sense this discomfort in their physicians.

Genetic testing isn't the first patient-generated challenge physicians have faced. A growing interest in over-the-counter alternative medications, like St. John's wort or ginkgo biloba, has recently tested the medical community's ability to work with curious proactive patients. Many schools and residency programs acknowledge this new trend in health care and they have responded by adding lectures, training exercises and even certification programs to their curricula. Physicians today are much better prepared to counsel this group than prior. Now we must tackle this new exotic field of human genetics.

(Hi-lights for the above was taken from Abhishek Pandey's excellent article which appeared in JAMA, April 10, 2013, Vol. 309, No. 14, Page 1471)

GENOMIC MEDICINE

Genomic medicine, sometimes also known as *personalized medicine* is a way to customize medical care to your body's unique genetic makeup. Each of the cells in the body contain DNA, the molecules you inherit from your parents that determine how your body looks and functions. DNA is arranged like a twisted ladder, with information stored in the arrangement,

Continued on Page Two



STARTING THIS ISSUE, on page 11....The story of ham radio-operator Capt. Kurt Carlsen W2ZXM and his one-man battle to save his ship, the "Flying Enterprise" after being battered by a Category 4 hurricane in the North Atlantic in December 1951.

LATE BREAKING NEWS

Sunday Grand Rounds now on 14.342 MHz, 11 am Eastern.

2014 Dayton HamVention/Marco Meeting & Banquet... Meeting, Friday morning, May 16, 2014; Banquet, Saturday night May 17, 2014. To be held at the Holiday Inn-Dayton Airport, 10 Rockridge Rd., Englewood, Ohio, 45322. This facility is one of the closest motels to the Hara Arena, which is the location of the HamVention. If you can attend for the full session, consider booking your room for the nights of May 15, 16, & 17. Call this facility direct at 937 832 1234, and state that you will be with the Marco group. If you prefer, reservations can be made on line using the code "MAR." Room rate is \$134.95 per night, plus junk fees. The corporate Holiday Inn web site is showing NO ROOMS AVAILABLE. If you Google the Holiday Inn Dayton ? Airport at Englewood, Ohio, you should be able to go to the local facility site and book using the code "MAR" without the quotation marks. Cancellations must be made 30 days prior to check in date to avoid penalty. There are a limited number of rooms available for Marco members. As a matter of fact, the original block of 15 rooms that were set aside sold out in two weeks. We were able to negotiate a few more rooms to be added to our block. Book early! Making plans this early is inconvenient, but take into consideration that this is the location of one of the largest ham-fests in the world, and the accommodation are at a premium.

WRITE TO US!
 We welcome your comments.
 Mail to Marco, P.O. Box 127,
 Indian Rocks, FL,
 33785. Email to
 warenbrown@aol.com
 Letters may be edited for
 brevity & clarity.

MARCO NET SCHEDULE

<u>DAY</u>	<u>EASTERN</u>	<u>FREQ.</u>	<u>NET CONTROLS</u>
Any Day	On the Hour	14.307	Hailing Frequency
Sunday	10:30 a.m. Eastern	14.140	CW Net, Chip, N5RTF
Sunday	11 a.m. Eastern	14.342	Warren, KD4GUA

(Alternate confidential Grand Rounds frequency—
 on or about 14.344 or as announced on the air.)

**MARCO'S CW
 NET IS NOW
 CALLED THE
 "Bob Morgan
 Memorial
 Net"
 Sundays, 10:30 am,
 14.140 MHz**

Page 2

MARCO Grand Rounds is held Sunday at 11 a.m. Eastern Time; 10 a.m. Central; 9 a.m. Mountain, and 8 a.m. Pacific Coast time on 14.307. You qualify for one hour Category II CME credit with your check-in.

or sequence, of the rungs. Sections of the NA ladder that contain information needed to make proteins are known as genes. The entire structure is the genome. A nearly complete map of the DN sequence was completed in 2003, and since then, scientists have worked to understand how each gene functions and how it is coordinated with every other gene. The human genome may contain 20,000 to 23,000 genes.

WHAT IS GENOMIC MEDICINE? Everyone responds to stress and the environment differently, and they also respond to disease and to treatments differently. Although greater than 99% of a DNA sequence is identical from person to person, the last 1% helps to explain these differences. Different people may have small variations in specific genes and some people may have genes that others do not. These may increase susceptibility to a specific disease or provide protection from that illness. Scientists continue to discover new ways that subtle gene differences cause large differences in health. This understanding can lead to better ways to prevent, diagnose and treat many types of health conditions.

Genomic medicine describes these efforts. Although genomic medicine is early in development, some areas where it has shown promise include:

Risk assessment—For instance, women with a BRCA gene mutation (variation) are at higher risk of developing breast cancer than those without the mutation.

Early detection—individuals with mutations in genes that increase risk of colon cancer benefit from earlier and more frequent screening for colon cancer.

Diagnosis—for some types of heart disease, detection of a gene mutation can lead to diagnosis and treatment that can prevent sudden cardiac death before any symptoms occur.

Prognosis—for many types of cancer, including some types of lung cancer and leukemia, presence or absence of specific mutations means a higher likelihood of survival.

Tailored treatment—It is now understood that some of the variability in how people respond to medications is explained by the way their bodies interact with the drugs. The field of **pharmacogenomics** seeks to understand these differences. For some medications, identifying individual gene differences can help customize both the selection of medications and choosing for the best response.

HAM LICENSES AT ALL TIME HIGH !

The number of radio amateurs in the US reached an all-time high of almost 710,000. 2012 was definitely a banner year for the number of hams in the US as Amateur Radio's population reached an all-time high.

As of Dec. 31, 2012, there were 345,369 Technicians, 163,370 General licenses and 130,736 Extras.

The number of licensees increased at an average rate of 21 per day, while the number of US licensees has increased by 7% since 2008. More than 3000 new licenses were issued in 2012 than in 2011, while upgraded license activity remained steady in 2012.

In the past 40 years, the number of Amateur Radio operators in the US has grown at a remarkable rate: December 1971: 285,000, December 1981: 433,000, December 1991: 494,000, December 2001: 683,000. December 2010: 696,041, December 2011: 702,056 and now almost 710,000.

We have had some bad times however, with the losing of some ham frequencies to the automotive industry, the diminution of CW traffic and the apparent limited enforcement of ham regulations by the FCC.

Remember when we thought ham radio was finished, replaced by cell phones and the internet? We were wrong—the spark has survived!



XYLs on the Boardwalk at the MARCO Annual Meeting in Myrtle Beach, SC, May, 2013...left to right, Mrs. Paul Lukas, Mrs. Warren Brown, Mrs. Danny Centers and Mrs. Arnold Kalan

"TERRORIST'S" PREVIOUS RECORD

Prior to MARCO's necessity in moving Sunday Grand Rounds of the Air from 14.307 to 14.342 in May 2013, because of the "Terrorist's" interference, he was previously cited by the FCC in December 2000.

Information obtained by Marco President Mary Favaro reads:

The FCC says Amateur Extra licensee Michael E. Guernsey, ND8V of Kalamazoo, Michigan, has agreed to a nine-month suspension of his HF privileges, starting Jan. 1, 2001. FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth said that if Guernsey does not violate FCC rules or the license modification agreement, the FCC will clear his file of past complaints in any future enforcement action against his license.

The action came in the wake of allegations that the licensee had caused deliberate interference on 20 meters "particularly communications of Hispanic operators and truckers when you perceived them to have an improperly "wide" SSB signal or a signal which in your opinion exhibited excessive microphone gain," Hollingsworth said. The FCC also cited allegations that the licensee may have used profanity and obscenity on the air, that he may not have identified by call sign, and that he might have deliberately interfered with communications on the Maritime Mobile Service Net.

Since moving to the new frequency of 14.342, net check-ins dropped 25% but now seem to be improving.

Meanwhile, back on July 14th, Guernsey was back to his old tricks of using foul language and interfering with stations on that frequency. Apparently, a more recent warning has gone unheeded.

MARCO had sent dozens of letters to the FCC at Gettysburg with zero results. Apparently he is being treated with benign neglect. To bad Riley Hollingsworth is no longer active in the FCC.

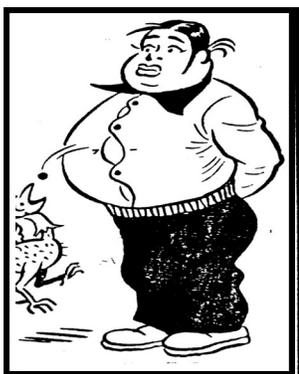
New Scientist reports: Pumping the blood of young mice into the diseased hearts of old mice rejuvenated those organs, raising the possibility that a similar technique will work in humans. Researchers found the young mouse's blood contained high levels of a protein called GDF11. Simply injecting the protein into old mice, they found, rejuvenated their hearts. Human blood also contains GDF11, and researchers now plan to investigate whether it could reverse the effects of aging on human hearts.

GASTRIC BYPASS SURGERY PLUS....

AS PRESENTED ON MARCO GRAND ROUNDS OF THE AIR, MAY 12, 2013

Gastric bypass procedures (GBP)

are any of a group of similar operations that first divides the stomach into a small upper pouch and a much larger lower “remnant” pouch and then rearranges the small intestine to connect to both. Surgeons have developed basically three different ways to reconnect the intestine, thus leading to several different GBP names. Any GBP leads to a marked reduction in the functional volume of the stomach, accompanied by an altered physiological and physical response to food.



The operations prescribed to treat morbid obesity (*defined as a BMI greater than 40, or weight more than 100 lbs over normal weight, or BMI greater than 35 (BMI is body weight in Kg divided by the square of the height in meters)*) with a co-morbid condition such as type 2 diabetes, hypertension, sleep apnea etc. Bariatric surgery is the term encompassing all of the surgical treatments for morbid obesity, not just gastric bypasses. The resulting weight loss, typically dramatic, markedly reduces comorbidities. The long-term mortality rate of gastric bypass patients has been shown to be reduced by up to 40%. As with all surgery, complications occur. A recent study revealed that 15% of patients experience complications as a result of bypass and .5% died within six months of surgery due to complications.

U.S. Insurance coverage...To be consider for coverage one must send a letter of medical requisite for a bariatric surgeon; provide documentation of a medially supervised diet; provide evidence of failed attempts to lose weight via diet and exercise.

Types of surgery...Some restrict the amount of food that can be eaten and are not a bypass procedure. The least traumatic and safest is the **Lap-Band system:** a silicone band is placed around the upper part of the stomach creating a small pouch that holds less food and will induce a feeling of fullness. The silicone band is hollow and filled with saline. By adding or removing saline from an outlet imbedded in the abdomen, the band can be made tighter or looser. Adjustments are made to meet individual weight loss needs. It is reversible, takes only about one hour to perform and can be done as “*same day surgery.*” The procedures involves making 5-6 small openings in the abdomen. These allow the surgeon to pass a light, camera and surgical instruments into the wounds. The abdomen is then inflated with carbon dioxide gas to allow a better view of the stomach. Surgical instruments are then placed into the abdomen to complete the surgery. It is usually accepted by insurance carriers. Disadvantages are: Slower weight loss which takes about 4 years to lose as much as the more complex surgeries. Requires follow-up Possibility of saline leakage, erosion or obstruction exist.

Laparoscopic Sleeve Gastrectomy...Restricts the amount of food that can be eaten. *Not a “by-pass” procedure.* The older conventional bypass consisted of a two-stage procedure: the first is a *sleeve gastrectomy* and the second is a conversion into a gastric bypass or duodenal switch. Patients usually lose a large quantity of their excess weight after the first sleeve gastrectomy alone, but if weight loss ceases the second step can be performed. Staples are placed along the left side of the stomach and the lateral portion of the stomach (80%) is removed. This has the appearance of a “sleeve” or a narrowed tube-like stomach. Advantages: Safer, easier and faster to be performed. No malabsorption, no adjustments. By removing the stomach fundus there is less Ghrelin hormone secreted which stimulates hunger but results in some diarrhea. It can be converted to gastric bypass if needed. No risk of internal hernias. Disadvantages: Permanent, 1-3% leak rate which may be difficult to heal. Surgeons fee between \$4,500 and \$6,500. Total cost around \$20,000 in the U.S. and around \$5,500 in Mexico.

Roux-en-Y Gastric Bypass. proximal.First done in 1967, laparoscopically since 1993. Most complicated and most commonly done procedure but can expect best results with 75% of expected weight loss within 1.3 years. Staples are placed around the top of the stomach forming a small

3 pouch the size of an egg. The stomach may be partitioned—like a wall with staples or may be totally divided; this is preferred to prevent the stomach reuniting. This is then connected to the jejunum and lower down the duodenum is attached to the lower jejunum thus forming a “Y”. This allows the gastric and duodenal enzymes to act on the ingested food. Both the Sleeve and Roux-en-Y may cause the “Dumping syndrome (*gastro-intestinal upset*) but much less with the Sleeve. Mortality is .2 to 1% Vitamins and minerals must be taken along with iron and calcium. **The Gastric bypass, Roux en-Y distal** is when the small intestine (20-33’ in length) is moved further down the G.I. tract, the amount available to fully absorb nutrients is progressively reduced, traded for the greater effectiveness of the operation. Causes reduced absorption of food. The unabsorbed fats and starches pass into the large intestine, where bacterial actions act on them to produce irritants and malodorous gases. These larger effects on nutrition are traded for a relatively modest increase in total weight loss.

Older procedures such as anastomizing the stomach (Billroth II procedure, gastrojejunostomy) to the small intestine are no longer used but various loop procedures such as the **Mini-gastric bypass” (1997)** where the stomach is narrowed to a *sleeve* and is joined to the jejunum. It is simpler than the Roux en-Y and is popular in Asia and gaining momentum in the U.S.

Many think an operation proves to be the most effective therapy of adult-onset diabetes mellitus (60% are resolved) and perhaps other co morbidities such as hypertension 50% improved, hyperlipidemia 43%, sleep apnea 60%, depression, certain cancers (*esophageal, breast, uterine, ovarian, prostate, colon and cervical*).

To gain the maximum benefit from surgery, it is important that the patient eat only at mealtimes, 5 to 6 small meals daily, and **NOT eat between meals,** which can effectively “bypass the bypass.”

Cost of surgery is usually recouped in about 2 years.

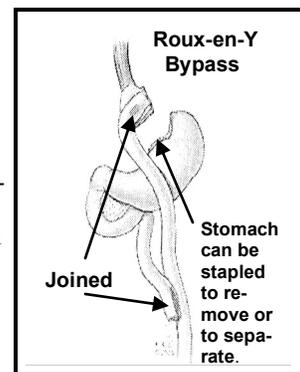
Complications are 7% with lap surgery and 15% through open incisions. They include: Infection, venous thromboembolism, hemorrhage, hernia, bowel obstruction, anastomotic leakage, anastomotic stricture, anastomotic ulcer, Dumping syndrome and nutritional deficiencies of calcium, iron, zinc, thiamine, B-12, proteins, Vitamin A and folate deficiency.

Living with gastric bypass: This surgery has an emotional and physiological impact. Many who have undergone surgery suffer from depression in the following months as result of a change in the role food plays in their emotional well-being. It may take as long as three months for emotional levels to rebound. Muscle weakness is also common.

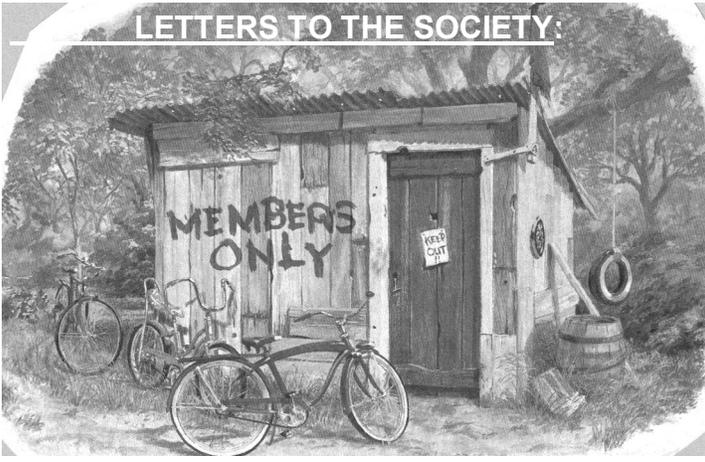
Dumping Syndrome...Normally, the pyloric valve at the end of the stomach regulates the release of food into the bowel. When the gastric bypass patient eats a sugary food, the sugar passes rapidly into the intestine, where it gives rise to a rise in insulin secretion causing “*dumping syndrome.*” The body will flood the intestines in an attempt to dilute the sugars. An affected person may feel their heart beating rapidly and forcefully due to the insulin surge HYPOglycemia, will break into a cold sweat, get a feeling of butterflies in the stomach, and may have an anxiety attack. The person usually has to lie down, and could be very uncomfortable for 30-45 minutes. Diarrhea and vomiting may then follow.

REMEMBER: Diet causes weight loss; exercise maintains weight loss.

All MARCO dues are payable in January of the current year, Please remit your 2013 dues if you have not done so. Your mailing label will reflect your status by: 1. If there is no renewal date shown you are paid up. Next dues due Jan. 2014. 2. A renewal date will indicate you are paid until then. 3. If you are not current the line after your name will indicate your membership expired.



LETTERS TO THE SOCIETY:



Kudos from Glen Haydon, Palo Alto, CA.

Correctons: OOPS! Wayne Rosenfield K1WDR, Glen Haydon KG6DQV, Ed Rubin N4JBA and Arthur Kahn W6NJY had their call signs in error in the last listing of CME credits. They have since been corrected.

Jeff Wolf K6JW writes: “Rowie (his XYL) and I had the pleasure of visiting with Gene Hoenig (N3HG) and his wife Judy (N3MBW) over the holiday weekend at their home in Silver Spring, MD. Antenna restrictions in their residential complex make it impossible for Gene to check into the MARCO net, but he sends his regards to all..”

Lew N9WL writes: “I occasionally listen to *Grand Rounds* and find it interesting although I am not in the medical profession. With power line noise at the QTH of S7+1 I can only listen when I work portable. After reading an issue of *Aether* I thought your readers would enjoy this: I read the package insert for my Rx meds and this is my layman’s translation” “*After taking Zolpidem (Ambien) you may get up out of bed while not being fully awake and do an activity you do not know you are doing. The next morning you may not remember that you did any thing during the night. They include: driving a car (sleep driving), making and eating food, talking on the phone, having sex, sleep walking. Call your doctor right away if you find out you have done any of the above after taking Zolpidem tablets.*” This brought to mind a comment: If you do something that you do not know you are doing when you are doing it, how can you report to your doctor that you did something that you do not remember doing? (Lew goes along with the same logic in not remembering eating, driving, talking on the phone and sleep walking. Maybe the Company was taking some of its own medicine when they wrote the package insert!).

Ellen Przekop KC9ARN writes: “Thank you from all the flight attendants for helping out in in-flight medical emergencies.” She was referring to all the nice e-mail concerning physician assisted emergencies that were submitted by Arnold Kalan WB6OJB, Mike K9AJ, Mary AE4BX, Jeff K6JW and Jerry N4TSC. Ellen also thanked those who wrote the FAA concerning the lifting on the ban of carry-on knives which has since been rescinded.

IAN Kellman K3IK, Shavertown, PA. writes: “Bruce, glad to hear all is well after your adventure as a patient (*Bruce Small KM2L had emergency by-pass heart surgery on March 30, 2013*).I am still amazed at the miracle of cardiac surgery when I think back to the mid 60’s when I was in med school and used to watch in dismay as cardiac surgery patients suffered for weeks post-op in hospital with tubes coming out of numerous iatrogenic ports. To Hell, I say, to all those fools who think we in the health professions want to keep people sick and dependent on us.”

Al Breland, Jr., KA7LOT, San Diego later wrote: “Bruce, glad to hear you’re home and doing well...so many of us have now had CABGs (*mine was in January 2010*) that I’m beginning to wonder if perhaps ham radio operation causes coronary artery disease???”

EDITOR’S NOTE: Walter Winchell began broadcasting in 1933 to an audience of 25 million people. The Winchell style was unmistakable. He talked rapidly at 197 words per minute..the voice was high-pitched and not pleasant to the ear; but it was distinctive. The staccato quality made every item compelling. He claimed he talked so fast because if he talked more slowly people would find out what he was saying...he began his radio program with a series of dots and dashes operating the key himself. Telegraphers throughout the country complained that what Winchell tapped out made no sense. He realized he hadn’t the faintest knowledge of Morse code but he refused to have an experienced telegrapher provide the sound effects for him. He wrote like a man honking in a traffic jam.



If grocery prices had gone up as fast as health care prices since 1945, here’s what a report says you’d pay for: A dozen eggs would now cost \$55; a gallon of milk, \$48; a dozen oranges, \$134. (*the full report is at www.iom.edu*)

Brian Hall, writing at read-write.com states: “I’m not sure who is to blame, his mother or the public school system, but it turns out my son, days away from graduating from high school—does not know how to send mail through the US Postal Service. The boy has a smartphone, a tablet and a laptop, does some basic coding and gets excellent grades. He can bang out what appears to be 60 wpm using only his thumbs. But a letter? Forget it—he doesn’t even know how to properly address an envelope. He put the mailing address at the top right of the envelope—and only the address, no name. I then handed him a stamp. This clearly baffled him—he placed it on the top left corner. I told him to put the return address on the upper left and he said, “*What’s a return address?*”

Navy sinks all caps except the white ones...says a letter from Jonathan I. fox, northfield, n.j. to the wall street journal.... “*this article notes that caps are hard on the eyes, time consuming, offensive, out of style and costs the u.s. navy \$15 million a year* (NOW HEAR THIS: NAVY ABANDONS ALL CAPS,” page 1, June 13, WSJ). Maybe the next capital idea is to move to all-lowercase lettering.

Analog buttons versus digital touch screens...The New Ford Motor Co. really is an improvement over the old version. It only took it three years to come to grips with the problem of putting back dashboard buttons after complaints about the digital touch system on their trucks...back to the future?

It is now 500 years since Niccolo Machiavelli produced the most famous book on politics ever written. “*The Prince.*” In it he stated, “A good man will come to ruin among so many others who aren’t good,” and he redirected politics by asserting that a prince must “learn to be able not to be good and that his advice to do evil would bring common benefit to everyone” Among his followers were Napoleon and Hitler.

America’s No-Fly zones are already in place...in the U.S!!! The \$42 million axed from the military in 2013 is already damaging America’s combat readiness. Flying and maintaining proficiency in high performance aircraft is not like riding a bike. It requires constant training and now flying-time is registered not in *proficiency time* but in *maintenance time*. Pilots flying time has been cut almost in half. It reminds one of what Gen. **Curtis LeMay** once said, “*Our preparedness for war should be the measure of our desire for peace.*”

Conspiracy Theories ...the newspaper man William Randolph Hearst is accused of manipulating the U.S. into the Spanish American War of 1898 and he did headline the N.Y. Journal “*How Do You Like The Journal’s War?*” In 1901, a journalist named James Creelman claimed that in the months before the war, the Journal’s Illustrator, Fred Remington, telegraphed from Cuba, “*Everything is quiet, there is no trouble here...there will be no war, I wish to return.*” To which Hearst replied, “Please remain. You furnish the pictures and I’ll furnish the war.” The problem with the story is that Remington was no where near Cuba at the time. It doesn’t matter that no copy of the telegram exists or that Hearst denied ever sending it. To this day, the fictitious communiqué remains the single-most quoted proof that Hearst engineered the war. (Tx Amanda Foreman, WSJ, June)

CUTTING-EDGE NUTRITION

The problem is most medical schools provide little nutrition education yet patients expect physicians to have detailed nutritional knowledge. Why are there no secrets in medicine yet so many in nutrition? The answer “Money.” Below are the bare scientific facts today with the advertisements left out.

The top 10 nutritional deficiencies are: 1. Fiber 2. Vitamin D. 3. Long chain omega-3 fats. 4. B vitamins (folic acid & B-12). 5. Calcium. 6. Magnesium. 7. vitamin K. 8. Iron. 9. Trace minerals (selenium, zinc, chromium). 10. Probiotics.

The Center for Nutrition Policy found that **10% of the population had a good diet**; 74% inadequate and 16% poor. Poor or inadequate diets are linked to four of the top 10 causes of death: heart disease, cancer, stroke, diabetes.

The deficiencies we DO NOT see in the USA are: calories and dietary toxins. Since 3,500 calories forms 1 pound of fat if we add 100 extra calories each day then at the end of one year we have taken in 36,500 extra calories which makes 10 pounds of fat. If one cuts out a 100 calorie “treat” daily he will lose 10 pounds of fat in one year.

The Top Ten Junk Foods are: Regular soft drinks, cake (sweet rolls, doughnuts, pastries); hamburgers (cheeseburgers, meatloaf); Pizza, Potato chips, (popcorn.), White rice, rolls, (buns bagels); cheese or cheese spread, beer, French fries.

What are the two most common toxins in the American diet? Corn syrup & sugar—sugar loaded drinks disrupt normal food metabolism with abnormal glucose spikes and hydrogenated fat (trans fat) which increases insulin resistance, worsen lipid profiles, stiffens tissues, increases cancer risk.

The foods we should eat more of: greens, lean protein, seafood, beans, soy, whole grains, berries, nuts, flax, garlic, green tea, nonfat yogurt, red wine, dark chocolate. The number 1 deficiency is **FIBER**.

Deficiency #1, Insoluble Fiber is found in whole grains, fruits and vegetables. It prevents colon cancer and constipation. **Soluble fiber** is found in citrus fruits, vegetables, nuts, oats. It reduces cholesterol if taken in substantial quantities and slows down digestion of sugars, thereby reducing insulin resistance. Fiber consumption is inversely associated with: insulin levels, weight gain and other CV disease risk factors. **If you only had your patients track one thing, fiber might be the best bet!** 5 cups of fruits and vegetables daily and more oats, beans, nuts will do the trick.

Deficiency #2, Vitamin D... You could get it from sunshine but most don't get enough UVB to make sufficient vit. D. Benefits include: increases in calcium absorption and improves bone health; decreases bone pain and myalgias; low vitamin D is associated with increased auto-immune disease rates; associated with better BP control and lowers CVD rates; blocks progression of pre-cancerous cells to cancer cells. Deficiency is associated with higher cancer rates for prostate, breast, colon and pancreatic cancers. **Sources:** Multi-vitamins, cod liver oil, calcium-rich foods, sunshine exposure 25 minutes in mid-morning. **Dosing:** 800 IU daily is minimum dose, 1,000 IU is recommended dose. Up to 3,000 IU daily has substantial safety (*toxic changes include, nausea & vomiting, anorexia, weakness, eight loss, weird behavior, ECG abnormalities and elevated calcium levels...*) **Vitamin D levels** should average out around 50 ng/ml (40-70 ng/ml) **If you are vitamin K deficient, giving extra vitamin D MAY increase arterial calcification.**

Deficiency #3, Long chain omega-3 fats. **Sources:** seafood (Alaska salmon, canned sardines), fish oil, seaweed supplements. (*Do not confuse with “medium-chain fatty acids such as omega-3 in flax seed oil, nuts, leafy veggies and Canola oil*). **Benefits:** Decreased incidence of sudden death by decreasing platelet activation and endothelial cytokine levels. It also reduces triglyceride levels, improves insulin sensitivity, decreases inflammation in Crohn's disease and RA. And may help prevent Alzheimer's disease. **Dosage:** 1 gram daily in a supplement containing 300 mg of both EPA and DHA. Make sure supplements are mercury and heavy metal free. The ratio of EPA (60%) to DHA (40%) is best. **Side Effects:** Over 2 grams daily may increase bleeding risk especially in those taking warfarin.

Deficiency #4, B Vitamins: Folate & B-12. Folate comes from

5 folic acid is a synthetic form used in supplements. <400 mcg daily **decreases** DNA repair and **increases risk** for colon cancer, Alzheimer's and CVD. Adding 1 mg (1000 mcg) daily increases growth of existing colon polyps. There is **NO benefit** for progression of diabetic neuropathy. Taking 400 mcg daily markedly reduces the rate of spina bifida. **B-12** absorption depends upon intrinsic factor and stomach acid. 3 mcg must be absorbed daily for health. Best to take the 1000 mcg tablet. **Sources:** animal protein, intestinal tract bacteria, **dirt** and supplements.

Deficiency #5, Calcium. Most teens and adults have a diet deficient in calcium. Use of proton pump inhibitors decreases calcium absorption and increases the risk for hip and other fractures. Recommended calcium intake is 1000 mg/day—if osteoporosis, 1500 mg. **What is an optimal life-style for bone health?** Weight-bearing exercises for 45 min. daily; a diet low in animal protein, salt, phosphate, caffeine, Vitamin A. Avoid more than 2 servings of alcohol daily, no tobacco, adequate Vit. D, calcium, & magnesium. **Sources:** dairy, soy, green leafy veggies, whole grains. **Supplements:** Calcium carbonate must be taken with food & may cause constipation. Calcium Citrate can be taken without food, comes in a large pill.

Deficiency #6, Magnesium. Low magnesium levels are associated with cardiac arrhythmias and cardiac mortality. Over half Americans don't take in enough Mg. **Sources:** grains, leafy veggies & legumes. Best supplement is magnesium citrate, glycinate—avoid magnesium oxide as it causes intestinal distress. **Calcium competes with Mg for absorption...calcium supplements block Mg absorption.** Best to take calcium-Mg supplements in a 2:1 to 3:1 ration.

Deficiency #7, Vitamin K. **Sources:** Spinach, collards, beets, broccoli, onions, raw, parsley, cabbage, asparagus, iceberg lettuce. Vit K1 @1,000 mcg & Vit K2 @45 mg daily increase osteoblast bone-building. Giving Vitamin K activates Matrix Gla-protein which blocks vascular calcification and thus giving vitamin D in Vit. K-deficient patients appears to increase artery calcification. What about coumadin use? Warfarin (Coumadin) blocks Vit. K cycling leading to increased vascular calcification and bone density loss. If a patient using Warfarin ate more greens they would then need a higher dose of Warfarin.

Deficiency #8 Iron. Probably the most common deficiency. **Sources:** Leafy veggies, lean animal protein, beans, grains, FeSO4 supplements.

Deficiency #9 Trace Minerals. Most people do not meet the needs of the body. **Sources:** Multivitamin supplement.

Why don't recent studies favor a multivitamin daily? A recent study of physicians indicated an increase in mortality and morbidity in doctors taking a multivitamin supplement. Apparently, those in the study were of the higher echelon of know-hows—who had been on proper diets and then took supplements which may have produced an over-supply of ingredients which may have induced false results. Apparently more study is needed especially in those deficient in these substances.

Deficiency #10 Probiotics. The GI tract normally contains trillions of healthy bacteria. Gut bacteria require dietary fiber to thrive. Healthy bacteria decrease inflammation, enhance detoxification, metabolize nutrients and drugs, and promote healthy GI function. **Probiotic types:** Acidophilus, Lactobacillus, Bifidobacteria, Saccharomyces Boulardii.

Probiotic balance depends on a healthy GI bacteria load. This increases with fiber intake. If long term fiber intake is less than 30 grams daily then probiotic supplementation often is required.

SUMMARY: Ensure adequate intake of fiber, vitamins D,B,K, fish oil, calcium & magnesium and probiotics. If you recommend a supplement, pick one with clear high quality standards, Don't forget to recommend lean protein, healthy fats and five cups of fruits and vegetables daily.

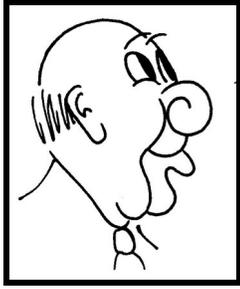
FORMULAS TO REMEMBER:

Calories needed to maintain weight = present weight X 15

To lose weight daily: Calories to maintain weight - calories eaten
3500

If on a 1000 cal. Diet: Calories eaten to maintain Wt. - 1000 = daily wt. loss.
3500

*****By Ralph WD0EJA *****



The visible spectrum is the portion of the electromagnetic spectrum that is visible to the human eye. This is called “**visible light**” or simply “**light**.” The human eye will respond to wavelengths from 390 to 700 nm. In terms of frequency, this is in the vicinity of 430-790 THz. A light-adapted eye generally has its maximum sensitivity at around 540 THz, in the green region of the spectrum. Unsaturated colors such as pink or purple variations such as magenta are absent. Infrared light (discovered

in 1800) has a longer wavelength (300 GHz-430THz) than visible light and ultraviolet light (discovered in 1801) has a shorter wavelength (400 nm and 10 nm) than visible light. Visible wavelengths pass through the “Optical window,” the region of the electromagnetic spectrum which allows wavelengths to pass largely unattenuated through the Earth’s atmosphere. An example of this is that clear air scatters blue light more than red wavelengths and so the midday sky appears blue.

Many species can see light with frequencies outside the “visible spectrum,” which is defined in terms of human vision. Many animals that can see into the ultraviolet range, however, cannot see red light or any other reddish wavelengths. The common goldfish is the only animal that can see both infrared and ultraviolet light.

In the 17th century, the explanations of the optical spectrum came from Isaac Newton, when he wrote “*Opticks*.” He first used the word *spectrum* (Latin for “appearance”) in 1671. He observed that when a narrow beam of sunlight strikes the face of a glass prism at an angle, some is reflected and some of the beam passes into and through the glass, emerging as different colored bands. He hypothesized that light was made up of particles of different colors, and that the different colors of light moved at different speeds in transparent matter, with red-light moving more quickly in glass than violet. The result is that red light bends (refracted) less sharply than violet as it passes through the prism, creating a spectrum of colors.

Newton divided the spectrum into seven named colors: red, orange, yellow, green, blue, indigo and violet (*Often abbreviated ROY G. BIV*). The human eye is however, relatively insensitive to indigo’s frequencies, and some people cannot distinguish indigo from blue and violet. For this reason some have suggested that indigo should not be regarded as a color in its own right but merely as a shade of blue or violet.

Spectral colors...Colors that can be produced by visible light of a narrow band of wavelengths (*monochromatic light*) are called pure spectral colors. The various color ranges indicated in the diagram are an approximation; the spectrum is continuous, with no clear boundaries between one color and the next.

Color	Frequency	Wavelength
violet	668-789 THz	380-450 nm
blue	606-668 THz	450-495 nm
green	526-606 THz	495-570 nm
yellow	508-526 THz	570-590 nm
orange	484-508 THz	590-620 nm
red	400-484 THz	620-750 nm

Spectroscopy...Spectroscopy is the study of objects based on the spectrum of color they emit or reflect. Spectroscopy is an important investigative tool in astronomy where scientists use it to analyze the properties of distant objects. Typically, astronomical spectroscopy uses high-dispersion diffraction gratings to observe spectra at very high spectral resolutions. Helium was first detected by analysis of the spectrum of the sun. Chemical elements can be detected in astronomical objects by emission lines and absorption lines.

The shifting of spectral lines can be used to measure the Doppler shift of distant objects. The first exoplanets were discovered by analysis of the Doppler shift of the parent star, revealing variations in radial velocity, the star’s speed relative to Earth, caused by the planet’s gravitational influence.

Color displays (*computer monitors and televisions*) mix red, green and blue color to create colors within their respective color triangles, and so can only approximately represent spectral colors.

HOW THE WHITE HOUSE GOT ITS NAME

During the War of 1812, the British stormed Washington D.C and set fire to the American President’s quarters. Thanks to a heavy rain storm, the fire was extinguished but the building was badly damaged and covered with black soot. In an effort to make the building presentable in a hurry, it was covered with white wash and since, the President’s home has been referred to as the White House.”

Your antenna is mounted and the coax is installed. What are you looking for to see if it works?

What is that? You can liken it to a piano wire. Physically the size of the wire determines how fast the wire oscillates back and forth per second. That value is the resonant point of the wire. When it resonates you hear the tone it produces.

With radio waves there are no moving parts. However depending on the frequency you chose to operate, the electrical energy oscillates at that value. Take 7 MHz, the current in the wire moves in one direction, weakens to the point of no current at all, then reverses in the opposite direction. This is done at 7 million times per second.

In order for that energy to leave your radio and coax it needs a resonant device at the end, the antenna. What is in the antenna to make it a resonant device?

To start, we can use a measurement most are familiar with, the Standing Wave Ratio or SWR. We usually measure SWR at the radio, what is it?

You can liken it to a calm body of water. Now throw something in the water. The object makes waves coming to shore. The waves look like they are traveling in one direction. Once it hits the shore the wave can not go further so it returns along the same path. When this happens the wave going out and coming in meet and it will look like the wave now is standing still, just going up and down in place. This also happens electrically when we have a Standing Wave on our coax line.

The cause of the standing wave is due to an antenna that is not resonant. It also involves the resistance of the antenna. Therefore if you scan your band you are operating on and observe the SWR dip to a minimum then rise again, you had just past the resonant point of the antenna system. Many times this is all you need to do to know if your antenna is working and if you need to raise or lower the resonant point.

This can be done with an Antenna analyzer or your radio. Using the radio, set it to a low power, use CW or FM (not SSB) and slowly scan the band you are using. If the antenna is working you should see a rise and fall in SWR value. Where the SWR is minimum is the resonant point of your antenna system.

What if you need to know more to get it working? More will be covered in the next edition.

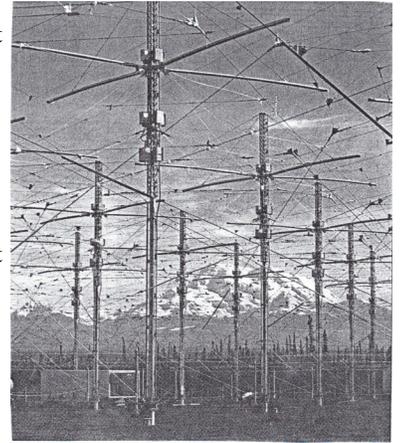
(Ralph is with the BILAL Co., Florissant, CO.)

A MAN GOES TO THE DOCTOR and tells him he hasn’t been feeling well. The doctor examines him and hands him three different bottles of pills. The doctor say, “*Take the green pill with a big glass of water when you get up. Take the blue pill with a big glass of water after lunch. Just before going to bed, take the red pill with anther big glass of water.*”

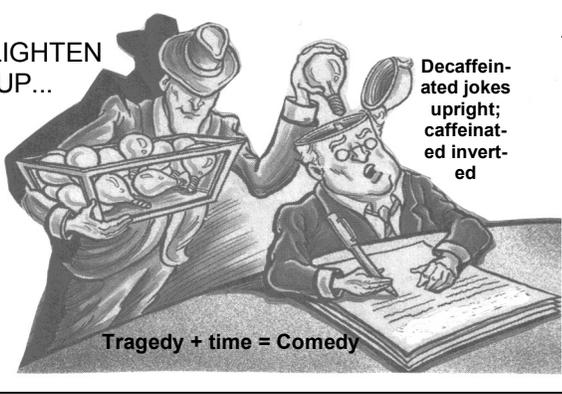
Startled to be put on so much medicine, the man stammers, “*Jeez doc, exactly what’s my problem?*”

The doctor replies, “*You’re not drinking enough water.*”

THE HONEYMOON....It was accepted practice in Babylonia 4,000 years ago that for a month after the wedding, the bride’s father would supply his son-in-law with all the *mead* he could drink. *Mead* is a honey beer, and because their calendar was lunar based, this period was called the “Honey Month” or what we know today as the “*Honeymoon*.”



LIGHTEN UP...



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HISTORY OF THE MEDICAL AMATEUR RADIO COUNCIL

In the fall of 1965, at the Astor Hotel in New York City, Dr. William L. Sprague WA0CRN, held a meeting of physicians and dentists interested in exploring the formation of a medically oriented amateur radio operators organization. A group of 95 members was organized. The organization was formalized at a meeting in New York on April 16, 1966. M.A.R.C.O. was chartered as a Corporation in the State of New York.

Marco is basically interested in medical and technical education and help to the less fortunate using our MediShare division. We offer one hour of category II CME for check-ins to our weekly Sunday "Grand Rounds of the Air," on 14.307 at 11 am Eastern time.

The first fellow revealed that he was the Parish Priest. The pro got flustered and apologetic & offered to return the money. The priest said, "No, you won fairly. The pro said, "Is there anything I can do to make it up to you?" The priest said, "Well you could come to Mass on Sunday and make a donation, then if you bring your mother and father by after Mass, I'll marry them."



Boy Scout Jokes: Why did the boy stare intently at the carton of orange juice? It said "concentrate!"Knock, knock. Who's there? Little old lady. Little old lady who? You're a great yodeler!....What did the chicken say after it laid a square egg? "Ouch."...What kind of flowers do we have on our faces? "Tulips."...If two apples are a pair, then are two pears an apple?

A woman in a supermarket is following a grandfather and his badly behaving 3 year-old grandson. It's obvious to her that he has his hands full with the child screaming for sweets, biscuits and fruit, Meanwhile, Granddad is working his way around, saying in a controlled voice, "Easy, William, we won't be long...Easy, boy." Another outburst, and she hears the granddad calmly say, "It's okay, William, just a couple more minutes and we'll be out of here. Hang in there., boy." At the checkout, the little terror is throwing items out of the cart, and Granddad says again in a controlled voice, "William, William, relax buddy, don't get upset, we'll be home in 5 minutes; stay cool, William." Very impressed, the woman goes up the elderly gentleman, "It's none of my business, but you were amazing in there, I don't know how you kept your composure and you just calmly kept saying, things would be okay, William is very lucky to have you as his grandpa." "Thanks," said the grandfather, "but I'm William...The little bastard's name is Kevin."

Two bees met in a field. One said to the other, "The weather has been cold, wet and damp, and there aren't any flowers, so I can't make honey." "No problem," said the first bee, "Just fly down five blocks and turn left. Keep going until you see all the cars. There's a Bar Mitzvah going on and there are all kinds of fresh flowers and fresh fruit." "Thanks for the tip," said the second bee, and flew away. A few hours later the two bees ran into each other again. The first bee asked, "How did it go?" "Great!" said the second bee. "It was everything you said it would be. There was plenty of fruit and oh, such huge floral arrangements on every table." "Uh, what's that thing on your head?" asked the first bee. "That's my yarmulke," said the second bee, "I didn't want them to think I was a wasp."

Reason given by a lady for being absent from work on Monday.... "My husband took an overdose of Viagra and I couldn't leave him with the maid."

The difference between Amnesia and Magnesia is that the person with amnesia doesn't know where he is going.AND, behind every great man there is a woman; Washington had his Martha. Napoleon had his Josephine and even Heinz had his tomato.

Did you hear about the absent-minded sculptor who put his model to bed and started chiseling on his wife?

"For 20 long and wonderful years," mused the gentleman at the bar, "My wife and I were deliriously happy." "Then what happened?" "We met!"

A fellow was getting ready to tee off on the 1st hole when a second golfer asked if he could join him. The first said, "sure", and at the end of the first two holes they were even. Then the second fellow said, "We're about evenly matched, how about playing \$5 a hole?" The first fellow said he wasn't much for betting but agreed to the terms. The second guy won the remaining holes with ease. As they were walking off while counting his \$80, he confessed to the first that he was the pro at a neighboring course and liked to pick on suckers.



MEMORIES OF YEARS AGO IN

MARCO

Our History Book

Bruce Small, KM2L

Marco Webmaster

TWENTY FIVE YEARS AGO IN MARCO

The August-September 1988 issue of the MARCO Newsletter reported that Williamsburg, VA was the overwhelming choice for the site of the 1989 annual meeting. Member Ernie Doherty N2CDK from nearby Grafton, VA was enlisted to handle the arrangements. We had a block of 25 rooms set aside at the Dayton Radisson for Hamvention. It was reported that John Bennet WD8NMV lost his home to a fire and then his dental office, when a fire started in a neighboring office. Sorry of reminding you of those times, John. Newsletter Editor and MARCO President Ed Briner WA3TVG wrote a profile of member Donald Day K0IND. Don was instrumental in funneling medical supplies to Central America and putting the MARCO nets on a business-like footing (*he wrote our net preamble*). Ed also contributed "Talking With Your Fingers," a column of, by, and for MARCO's RTTYers and Packeteers.

TWENTY YEARS AGO IN MARCO

Marco's July-August 1993 Newsletter announced the sad news that former President, long-time contributor and friend to MARCO Ed Ludin K2UK had passed away. President Robin Staebler NN3L be-moaned the effects that summer static was having on our attempted operations and urged everyone to hang in there until conditions improved. Bruce Hammond AA8HS contributed a design for a filter for alternator whine, built from Radio Shack parts. Page two included photos and an appreciation of three stalwart MARCO net control operators, Eldon Snow WA7RPR, Don Mallinson K2TNY and Bob Currier WB5D. We welcomed ten new members, including Richard Rodriguez AC4IS, Bradley Quist KM4GA, Norman Wong KD6HCS, Allan Pelch OZ1JSV, Thomas Kerns KI7HX, Fred Weber AA2KI, Jeffrey Morris VE4JEM, Walter Chitwood K4VGS, Ted Hatfield, KQ4IC and John Simelaro N3MDF. Warren Brown KD4GUA educated us all with a column taken from his Ground Rounds presentation titled "Is Insulin the Good Guy and Glucose the Bad Guy?" The back page sported a large photo of Polykarp Gadegbeku WB4LPC at the console of his very impressive station. It could have been the Voice of America Control Room.

FIFTEEN YEARS AGO IN MARCO

The August-September 1998 MARCO Newsletter was devoted almost entirely to MediShare international. Smitty W6JZU announced his intention to retire from his position as Chairperson. The Newsletter also contained MediShare's annual report and short descriptions of active projects at St. Luke's Hospital in Kaloleni, Kenya and Zolochiv Regional Hospital in the Ukraine. Also presented was a copy of the annual report of the Bush Hospital Foundation, a MediShare partner.

TEN YEARS AGO IN MARCO

In the afterglow of MARCO's annual meeting held in Philadelphia in late June, the August 2003 MARCO Newsletter educated and entertained readers with details of Benjamin Franklin's life, wisdom, and many accomplishments. Bruce KM2L revealed the top ten most dangerous drug interactions, while Chip N5RTF put in a plug for his favorite reading. *Material, Nuts and Volts Magazine*. In 2003 the publication printed plans for an inexpensive Geiger Counter and Chip built a number of them. This issue reprinted Mike McGirr K9AJ's talk about the Ducie Island VP6DI expedition. Mike delivered this talk at the MARCO Annual Meeting Banquet.

BOB CURRIER MARCO GRAND ROUNDS OF THE AIR

14.342, Sundays, 11 a.m. Eastern, One Hour Cat. II CME credit.

Corrections: wahrenbrown.aol.com

CALL	HRS	NAME	QTH
KD4GUA	23	Warren	Largo, FL.-
KG6DQF	22	Glen	Palo Alto, CA
W1BEW	21	Bobbie	Tennessee
W4DAN	21	Danny	Cleveland, TN
KNOS	21	Dave	Virginia
WA9HIR	21	Bill	Berwyn, IL
KC9CS	21	Bill	Largo, FL
WB6OJB	20	Arnold	Pac.Pal., CA
N4JBA	20	Ed	Amenia, NY
K9CIV	20	Rich	Knox, IN
NU4DO	20	Norm	Largo, FL
KM2L	19	Bruce	Clarence, NY
KK1Y	18	Art	Seminole, FL
N6DMV	18	Paul	Torrance, CA
WB5BHB	18	John	Vancleve, MS
KA4JWA	18	Jim	W. Virginia
N4TSC	18	Jerry	Boca Raton, FL.
N5RTF	16	Chip	New Orleans, LA
KD8IDW	16	Mary	W. Virginia
W6NJY	16	Art	Beverly Hills, CA
WA1EXE	15	Mark	Cape Cod, Mass.
N4MKT	15	Larry	St. Petersburg, Fl.
WB1FFI	14	Barry	Syracuse, NY
WA3QWA	13	Mark	Chesapeake, VA
N9YZM	12	Mike	Crystal Lake, IL
W4RDJ	12	Doug	Cape Cod. Mass.
N9RIV	12	Bill	Illinois
K4DOV	11	David	Ft. Lauderdale, FL
KE5SZA	11	John	Marietta, OK
W3FYA	10	Doug	Baltimore, MD
KE8GA	10	George	Fairview, N.C.
KB5FLA	10	Rich	Arkansas
AE4BX	10	Mary	Myrtle Bch., SC
K6JW	10	Jeff	Palos Verdes, CA
K1WDR	9	Wayne	Connecticut
KD5QHV	9	Bernie	El Paso, TX
N2OJD	8	Mark	Sidney, Ohio
W3DRB	8	Miles	Elizabethtown, PA
K0FS	7	Fred	St. Louis, MO
W5AN	7	Bud	Lafayette, LA
W0RPH	6	Tom	Denver, CO.
KA4WFP	5	Wayne	Ocala, FL
WB2MXJ	5	Joe	New Orleans, LA
W8LJZ	4	Jim	Detroit, MI
N9GJ	4	Greg	Cleveland, TN
KE5BQK	4	Linda	El Paso, TX
K4RLC	4	Bob	Raleigh, NC
K3IK	3	Ian	Shavertown, PA

Because of poor propagation we may have missed you—please correct by sending to wahrenbrown@aol.com

YEAR	TOTAL CHECK-INS	AVERAGE PER SUNDAY
1998	694	14.46
1999	766	15.95
2000	1,035	20.29
2001	1153	22.60
2002	1383	26.15
2003	1489	28.63
2004	1534	29.50
2005	1517	29.17
2006	1531 (one extra Sunday)	28.89
2007	1591 (one extra Sunday)	30.02
2008	1524 (Only 46 nets)	33.14
2009	1533 (46 nets)	33.32
2010	1591 (44 nets)	36.22
2011	1514 (44 nets)	34.41
2012	1602 (44 nets)	36.41
2013	764 (23 nets)	33.22

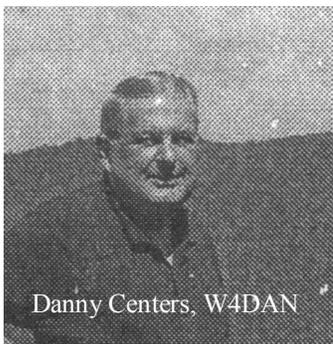
Record number of stations checked-in was 47, on Dec. 30, 2012

On 14.342 we are averaging 28 check-ins compared to 41 on 14.307 in 2013.

FREQUENCY

By Danny Centers, W4DAN

As bad as it may seem, sometimes a difficult situation can be turned into a viable one. When faced with a negative that seems to be impossible to remove, time should not be wasted worrying about eliminating it instead of making an effort to turn it into a positive. Though easier said than done, a little visualization may reveal some hidden positive aspects of the situation.



Danny Centers, W4DAN

The "Grand Rounds of the Air" net has been experiencing a negative situation lately. All reasonable, legal, and civilized steps have been taken to alleviate the intentional interference to the net. So far, efforts to remove this "negative" have not worked. It is time to begin trying to turn this negative into a positive.

A little cognitive thinking makes us realize that there is already a hidden positive element to this problem. The positive is that the perpetrator has decided to occupy the original net frequency of 14.307 MHz prior to, and during the time of the net. Therefore, it is impossible for him to interfere with the MARCO net while the net is in session on another frequency. This is our first positive. He has self quarantined himself to that frequency during the time that the net is being conducted on another frequency.

We should explore additional frequencies and band segments, and not be concerned about one lost frequency during one hour of operation. Unless things turn around soon, we are "just going to have to let it go," to coin an over used phrase. MARCO had the good fortune of occupying this frequency for several years. That was a positive that lasted approximately twenty years. Instead of settling on one new frequency, and hoping that we will be able to operate there without interference is only wishful thinking. Several other frequencies are under consideration. This has presented the opportunity for members to hone their operating skills. After a little practice, those that are not now accustomed to tuning and searching for signals could become more proficient at doing so. At this writing, 14.342 MHz +/- has been working very well.

It may be difficult, psychologically, for some to accept giving up the frequency of 14.307 MHz for the net. It is only one frequency among many. It is hard to accept the fact that one person can interrupt a good and successful operation that has survived for many years. We are authorized to, and have the capability of operating on many frequencies. Thank goodness we are not limited by the FCC to fixed channels as are many other two-way communication services.

Several more positives can result from this experience in the future. Posting of suggested frequencies on the MARCO reflector should become more prevalent, and result in more timely and useful communications. The reflector is an efficient method of updating net frequency revisions. Many of us already have computers at our radio operating positions. This should be an incentive for those that do not have this ability to upgrade. If you do not already subscribe to the list-serve reflector, made a request to BruseSmall73@gmail.com.

We shouldn't let paranoia creep into our thinking about this matter. There have been hints that the person that is interfering with the net is stalking us by obtaining a copy of *Aether*, obtaining access to the reflector, or scanning the band to cause more problems. We should concentrate more on returning to normal net operations instead of pursuing these unlikely notions. The person that is doing this is a well known QRM'er that usually interfere with anyone and everyone that he can within the frequency range of approximately 14.305 MHz and 14.315 MHz. There is no evidence that he has singled out MARCO, other than the fact that he wants to annoy us during the net. He creates havoc with anyone that he wishes to within the above mentioned band of frequencies. Confronting him on the air will only bring us down to his level. There s no plausible way to communicate, or to reason with a person that is as mentally disturbed as he is.

At first there will surely be some confusion and frustration. After practice, the occasional instance of having to track down the net operation among other signals will become second nature, and a worthwhile skill. This crates yet another positive. Practice being a good listener and you will find more enjoyment in the hobby.

THE PREZ SAYS:

By Dr. Mary Favaro, President of Marco

Things are going well in Oklahoma (*Mary is on locum tenens on an Indian reservation*). I've been to a couple of pow-wows now so practically a native. This HIS clinic is small, people are friendly and the pace is comfortable. Comfortable that is after I had to learn my 6th HER program. Sure would like HER standardized rather than having to learn a new one every place I go. ...also went to Eskimo Joe's, the famous bar/restaurant on the OSU campus here in Stillwater. Bought some T-shirts there too. The disappointment will be missing the storm center in Norman though, they will open for tours only Mon-Wed. and Friday. I even e-mailed them for a Saturday exception but that didn't work. I can't stay over to the following Monday as I have to zip home for my daughter's re-wedding the following Saturday. Next trip out that will get put on the schedule. ...haven't had time to search out a ham with radio for the Sunday net, but maybe before I leave73 to all.



Mary Kaye Favaro, AE4BX

MYRTLE BEACH

South Carolina ..A magician, left upper photo, places a suction plunger to remove all of President-elect Jeff Wolf's hair at the annual MARCO meeting in May, 2013. (*he hasn't needed a haircut since!*)



Photo left lower, George Vilican DDS KE8GA ponders his upcoming new date as he schemes his way out of attending the full session.



If it is zero degrees outside and the weatherman predicts it will be twice as cold tomorrow, how cold would it be?

Turning negative into positives will not come easy, and will require some work. The above comments are only an opinion, but it has been conveyed as an incentive to overcome a problem that must be solved for the continued success of the "Grand Rounds of the Air" net. It has been around for many years. With your efforts, input, and tolerance, it can continue to be the most informative and true medical service net on the amateur bands for many years to come.

Since I began writing this article two months before publication, I feel, and actually hope, that the above will be a moot point. My positive opinion is that by the time that it appears in print, the "Grand Rounds of the Air" will be back to normal. The editor of *Aether* may put this in file 13, or save it for another 20 years until the same problem arises again. My question is, "Would this be a positive, or a negative thing?"

LIGHT THERAPY

As presented on Marco Grand Rounds of the Air, June 30, 2013.

Light therapy consists of exposure to daylight or to specific wavelengths of light using lasers, light-emitting diodes, fluorescent lamps, dichroic lamps or very bright, full-spectrum light, usually controlled with various devices. The light is administered for a prescribed amount of time, and in some cases, at a specific time of day.

Common use of the term is associated with the treatment of skin disorders (*chiefly psoriasis*), sleep disorder and some psychiatric disorders. Light therapy directed at the skin is also used to treat acne vulgaris, eczema and neonatal jaundice. Light therapy which strikes the retina of the eyes is used to treat circadian rhythm disorders, such as delayed sleep phase syndrome and can also be used to treat seasonal affective disorder, with some support for its use also with a non-seasonal psychiatric disorders.

Other medical applications of light also include accelerated wound healing, hair growth, improvement in blood properties and blood circulation, and sinus-related disease and disorders. Many of these use low level laser therapy and red light therapy in the 620-660 nm range.

Skin Conditions...Two forms of phototherapy exist, **non-targeted phototherapy** (from sunlight, a tanning booth or a light box), and **targeted-phototherapy**, in which light is administered to a specific, localized area of the skin. Current targeted phototherapy is administered via excimer laser, elemental gas lamp, or via LED light. Current FDA cleared devices on the market include XTRAC excimer laser, BClear, Theralight, and Psoria-Light LED phototherapy. Targeted phototherapy is only administered to the affected skin, not the entire body, thus sparing healthy skin from UV rays which may lead to other health issues including skin cancer. With targeted phototherapy only being administered to the affected area of skin, more intense dosages of light can be administered allowing skin conditions to be repaired in less time. As of early 2012, the only FDA-cleared device to offer both UVA and NB – UVB treatment within one device is the Psoria-Light.

Psoriasis. In psoriasis, UVB phototherapy has been shown to be effective. A feature of psoriasis is localized inflammation mediated by the immune system. Ultraviolet radiation is known to suppress the immune system and reduce inflammatory responses. Light therapy for skin conditions like psoriasis use UV-A (315-400 nm wavelength) or UV-B (280-315 nm wavelength) light waves. UV-A combined with psoralen, a drug taken orally, is known as PUVA treatment. In UVB Phototherapy the exposure time is very short (1-2 minutes with Broadband UVB lamps and 5-25 minutes with Narrowband UVB lamps). The time must be controlled with a timer that turns off the lamp after the treatment timer ends. Too-long exposure results in burning of the skin; this is analogous to over exposure to sunlight.

Vitiligo. 1% of the population suffer from vitiligo and Narrowband UVB Phototherapy is an effective treatment. “NB-UVB phototherapy results in satisfactory repigmentation in vitiligo.

Acne vulgaris. Evidence for light therapy and lasers in acute vulgaris as of 2012 is not sufficient to recommend them. While light therapy appears to provide short term benefit, there is a lack of long term outcome data or data in those with severe acne.

Cutaneous T-cell lymphoma. The use of ultraviolet light therapy has been proven to be effective in treating cutaneous T-cell lymphoma, including mycosis fungoides.

Other skin conditions. Phototherapy can be effective in the treatment of eczema, atopic dermatitis, polymorphous light eruption and lichen planus. Narrowband UVB lamps, 311-313 nanometer is the most common treatment.

Wound healing. Some cases studies have found low-level laser light to be possibly helpful as an adjunctive treatment in wound healing, although a review of the overall literature does not support the use of low-level laser therapy for this purpose.

Agging skin. Red LED increase the collagen in the skin which fills in fine lines, wrinkles, and crow’s feet. You can see results in daily 15’ sessions. Blue light is used for acne, red light for uneven skin tones, redness or blemishes and green light for age spots.

Mood and sleep related: Seasonal affective disorder (SAD). While full sunlight is preferred for seasonal affective disorder, light boxes may be effective for the treatment. They are designed to filter out most UV light, which can cause eye and skin damage. Mayo states that

10 light therapy is of proven effectiveness for treating seasonal affective disorder and light therapy is seen as its main form of treatment. Controlled-trial comparison with antidepressants show equal effectiveness, with less expense and more rapid onset of therapeutic benefit, though a minority of patients may not respond to it. Direct sunlight, reflected into the window of a home or office by a computer-controlled mirror device called a heliostat, has also been used as a type of light therapy.



The effectiveness of light therapy for treating SAD may be linked to the fact that light therapy makes up for lost sunlight exposure and resets the body’s internal clock.

Non-seasonal depression. There is some value to patients with major depression, bipolar and postpartum depression.

Circadian rhythm sleep disorder (CRSD). In the management of CRSD such as delayed sleep phase syndrome (DSPS), the timing of light exposure is critical. For DSPS, the light must be provided to the retina as soon after spontaneous awakening as possible to achieve the desired effect. Some users have reported success with light that turns on shortly before awakening (*dawn simulation*). Morning use may also be effective for non-24-hour sleep-wake syndrome, while evening use is recommended for advanced sleep phase syndrome.

Light therapy has been tested for individuals on shift work and for jet lag.

Neonatal jaundice. Light therapy is used to treat cases of neonatal jaundice through isomerization of the bilirubin and consequently transformation into compounds that the newborn can excrete via urine and stools. A common treatment of neonatal jaundice is the “bili light.”

TECHNIQUES

Photodynamic therapy. Is a form of phototherapy using nontoxic light-sensitive compounds that are exposed selectively to light, whereupon they become toxic to targeted malignant and other diseased cells.

This treatment uses light-activated drugs and a laser to destroy cancer cells and treat symptomatic tissues. First the doctor injects a photosensitizing agent to make cells more sensitive to light. The drugs are absorbed by cancer cells over the course of a few days. Next the doctor applies laser light to the airway (*in lung cancer*) using image guidance and when the laser is turned on, it shines on the tumor and reacts with photosensitized cells to destroy them. It takes only minutes to complete and can be performed as an outpatient. Another one of the treatments is using blue light with aminolevulinic acid for the treatment of actinic keratosis. This is not a U.S. FDA approved treatment for acne vulgaris.

Light boxes. (Similar to daylight) The production of the hormone *melatonin*, a sleep regulator, is inhibited by light and permitted by darkness. The reverse is true for *serotonin*, which has been linked to mood disorders. Hence, for the purpose of manipulating melatonin levels or timing, white light boxes providing very specific types of artificial illumination of the retina of the eye are effective. Getting to sleep after using the iPad or phone may no longer be a problem. Thin filters that block the blue light (*causes stimulation of adrenalin & serotonin*) that cuts off melatonin are now available.

RISKS & COMPLICATIONS: Ultraviolet light causes progressive damage to skin. This is mediated by genetic damage, collagen damage, as well as destruction of vitamin A & C in the skin and free radical generation. Ultraviolet light is also known to be a factor in formation of cataract, and possibly macular degeneration.

Modern phototherapy lamps either filter out or do not emit ultraviolet light and are considered safe and effective as long as photosensitizing drugs are not being taken. Patients using St. John’s wort, methotrexate or chloroquine should use caution with light therapy as there is a chance that these drugs could cause porphyria.

Note: Our ancestors did not have to deal with many hours under cool white fluorescent lights, nor did they spend any time looking at video display terminals at close range. Our eyes’ natural filters do not provide sufficient protection from the sunlight, let alone blue light emitted by these devices nor from the blue light emitted from black-light tubes. There is mounting evidence that prolonged exposure to blue light (*like from a computer screen*) may permanently damage the eyes, contribute to the formation of cataracts and to the destruction of cells in the center of the retina causing macular degeneration. Blue light is protected if filtered through yellow lenses—thus the yellowing of the human lens after age 20 is a protective device. Digital screens are less damaging than vacuum tube monitors.

BACKGROUND: At the recent Marco meeting in Myrtle Beach, SC., Wayne Rosenfield, K1WDR came to the Aether News Editor with a wonderful story of the heroism by a ham operator named Capt. Kurt Carlsen W2ZZM of the “*Flying Enterprise*,” a ship caught in a hurricane in the North Atlantic in 1951. Ironically, the News Editor, at the time, was a Navy medical officer aboard the USNS General Leroy Eltinge that stood by to possibly rescue passengers aboard that very ship. On top of that, the News Editor’s “Elmer” was a South African ham, Olliver Pierce WU4i, who at that time was corresponding by radio with Carlsen. Below, is this wonderful story, “*Simple Courage*,” written by Frank Delaney, ISBN 1-4000-6524-0, available at Amazon.com

The “Beaufort Scale” takes the weather’s blood pressure. At the bottom of the scale, Beaufort Force 0 indicates a sea as calm as glass; and at the top, Force 12, defines a hurricane—which takes its name from *hurakan*, the Caribbean Indian’s term for “an evil spirit of the sea.”

Admiral Sir Francis Beaufort, an Irish officer in the British Royal Navy, launched his thirteen classifications (0 to 12) in 1838 and, in his original construction, the scale estimated the wind’s speed for ships under sail. Almost as soon as he published it, the meteorological scientists of the day began to debate and refine it; over decades, they made many adjustments, including breaking Force 12 into the five categories by which hurricanes are assessed today.

Eventually, the London Meteorological Office took it further. To give a rounder picture, its officials addressed the scale in joint sea and land terms, and they couched it in accessible images. For example, the Force 0 of Beaufort’s mirror-calm sea has, on land, an air so still that “smoke rises vertically.” Next, in a Force 1 at sea, we get ripples, “but without foam crests,” while on land we have “light air. Direction of wind shown by smoke drift.”

These comparatives rise gently through the levels and grow impressive when the wind strengthens. A long way past the “small wavelets” and “leaves rustle” of Force 2, we reach the “strong breeze” of a Beaufort Force 6, at which point “large waves begin to form.” On land this translates to “whistling heard in telegraph wires; umbrellas used with difficulty.” Force 7 is called “Near Gale. Sea heaps up with white foam from breaking waves.” Onshore, as the British put it, this level of gusting makes “inconvenience felt when walking against the wind.”

Now begins the true ramping up: Force 8, “Gale Force”; Force 9, or Severe Gale”; and Force 10, “Storm force,” which introduces “very high waves with long over-hanging crests.” The English Meteorological Office observers say that a Force 10 is seldom experienced inland, but if it is expect to see trees uprooted.”

After that, if you’re out anywhere everything becomes a matter of luck. A Force 11, “Violent Storm” brings with it the exceptionally high waves—small and medium size ships might be for a time lost to view” and on land “widespread damage.”

Finally, we have Admiral Beaufort’s Force 12: “Sea completely white with driving spray; visibility very seriously affected,” On land Hurricane.

Mariners, naturally, think of these categories with more feeling. When Force 10 is reached, the waves climb, the crests roll over and hang like ornamental scrolls, and the wind whips the water into foam. This is the moment when the sea seems to turn completely white and the swells seem sluggish, almost torpid—until it finds something to hit.

And this is when visibility begins to shrink. Culled from the spume that looks like milk spillage on the surface of the ocean, a stinging, obscuring spray begins to fill the air. At Force 12, this thick white curtain blots out what little vision you had until then, and the sea under your hull seems like a heaving carpet of liquid snow. And you gasp in a Force 12, because the wind hits your face at anything between 50 and 100 mph. Merely to breath, you have to turn your face away into the lee of your shoulder, and make a pocket around your mouth with your hands.

If you’re on the North Atlantic Ocean in such a gale, and if the temperature is heading below the freezing point, and if, much earlier, as the wind was building, you supposed the flecks of foam and the lengthening spindrift no more than pretty whitecaps—think again.

As the wind climbs, do not stare at the ocean; it has now turned a lethal white that will feel like pins in your eyes. The view that you had gazed on earlier when it was green on gray or blue on blue, and calm or heaving gently or even thumping in a swell—this has become a foaming,

pulsating ice field. But the sight is so compelling, so liquid, so fast and savage, and, in the daytime, has a light so beautiful and preternatural, that you’d almost risk the stabbing blindness just to glance at it.



In which case you will expose yourself to further danger. The gale can pick up a knob of that white foam, freeze it, and skim it over the waves. It might as well be a steel arrowhead, the salt compressed in that glassy shard of ice will flay your skin to the cheekbone as though a savage had aimed it straight at your face.

Any seafarer out in such condition knows to wrap up, turn away, and—only if essential—negotiate the decks of his vessel with the care of a tight-rope walker. Otherwise stay inside. Those who have a right to be out there, the gulls and the whale and the other marine species—it’s their home. Man is the one who is mortally out of his element.

In late December 1951, the upper reaches of the Beaufort scale took control of Captain Kurt Carlsen and his ship as though they were the playthings of the winds. He was 37 years old, and his cargo vessel, *Flying Enterprise*, had fallen foul of a hurricane in the North Atlantic. She listed grievously, far over on her port side. Dense green waves lashed her tilting decks, and a thick veil of that opaque white spray hung in the air, cloaking visibility and deepening the darkness. With her masts bent and her radio antennae in shreds, the black freighter rolled in pain like a dying beast.

Now Carlsen had to deny this biblical tempest any further gains—he had to save the lives of his ten passengers and forty crew. One of his lifeboats had been shattered—it swung loose and useless like a broken limb; the other hung too close under the listing hull to be launched safely. He sent out a Mayday, and a variegated fleet of ships, from all around his part of the ocean, changed course and steamed toward him to help.

When they arrived, Carlsen then gave the order that no master ever wants to give: “*Abandon ship*.” The crew led the ten frightened passengers out of the cabin block of *flying Enterprise* onto a deck that tilted at an angle of sixty degrees, on a ship dipping so low that her masts—what remained of them—sometimes touched the sea, a broken, out-of-control vessel that might go down in a sucking vortex at any moment.

The passengers—four men, five women, and a boy—slipped and slid, here and there; nobody could walk across those slanting decks without tumbling down far and fast. Instead, each movement required a lurch as far as the next handhold; the stays of a hatch cover, the nearest stanchion, a length of pipe. As the passengers grabbed, they held on so fast that they seemed stuck to these metal fitments.

And they needed to cling; otherwise the surges that kept pounding over the ship would swipe them off like debris. Not one of these people, passengers or crew, not even the captain himself had ever been subjected to anything so relentless and fierce as the weather of those chilling December days. Earlier, Carlsen had addressed the passengers. In an unpanicked voice, he’d told them that they had fallen into great peril and that their best hope lay in embracing further danger—they would have to jump into the roaring waves. Mutely, they had prepared to do what they were told.

Now that their moment had come, Carlsen selected as the first to jump overboard a German woman in her early fifties named Elsa Muller. She would fulfill the sailor’s traditional injunction for “*women and children first*.” Her example would inspire: Who could dare refuse to follow this modest wife and mother.

Frau Muller reached the ship’s rail, gripped it, and, hand over hand, inched her way along to where the captain stood, under the lifeboat he couldn’t deploy. She wore only a nightdress under her coat; all her other clothes had been ruined by the storm when it burst into her cabin. The bitterly cold ocean swept over her bare legs again and again.

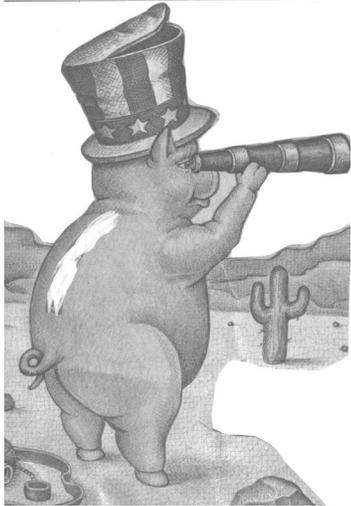
On the deck above, her family watched, fearing for her life. Curt Muller, a man of deep Christian faith, had been questioned more than once by the Gestapo and so had a working knowledge of fear. Beside him stood the Muller’s nineteen-year-old daughter, Leanne, and twelve-year-old son, Lothar.

Captain Carlsen, calm and matter-of-fact, handed Frau Muller one end of a rope. The other end ran down to the surface of the water where it disappeared into the swell. Carlsen, fluent in German, told Frau Muller that a lifeboat, from a rescue ship standing nearby, waited on the other end of this line, that the boat had already come in, had thrown the rope aboard the ship and would presently come back for her.

(Continued next edition)

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