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MediShare: Arnold Kalan, M.D., WB6OJB
News Editor: Warren Brown, M.D., KD4GUA



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Marco Blogsite: marco-Ltd.blogspot.com
listserve: http://googlegroups.com

Web Site: http://www.marco-ltd.org
Internet address: warren.brown1924@gmail.com

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MEDICAL MARIJUANA

THE USE OF MEDICAL MARIJUANA HAS NOT BEEN SCIENTIFIALLY TESTED DUE TO GOVT. RESTRICTIONS. ITS USE IS INCONCLUSIVE FOR CONCLUSIONS ABOUT ITS SAFETY OR EFFICACY.

Short-term use increases the risk of minor and major adverse effects. Common side effects include dizziness, tiredness, vomiting and hallucinations. Long-term effects of cannabis are not clear. Concerns include memory and cognition problems, risk of addiction, schizophrenia in young people, and the risk of children's access.

The Cannabis plant has a history of medicinal use dating back thousands of years across many cultures. Medical cannabis can be administered using a variety of methods, including liquid tinctures, vaporizing or smoking, eating cannabis edibles, taking capsules, using lozenges, dermal patches or oral/dermal sprays. Synthetic cannabinoids are available as prescription drugs. Recreational use is illegal in most of the world, but the medical use is legal in Austria, Canada, Czech Republic, Chile, Columbia, Finland, Germany, Belgium, Israel, Italy, the Netherlands, Portugal, the U.K. and Spain.

In the U.S., federal law outlaws all cannabis use, while 30 states and the District of Columbia no longer prosecute for the possession or sale of medical marijuana, as long as the individuals are in compliance with the state's medical marijuana sale regulations.

There is limited evidence suggesting cannabis can be used to reduce nausea and vomiting during chemo therapy, to improve appetite in those with HIV/AIDS, and to treat chronic pain and muscle spasms.

Many different cannabis strains are collectively called "medical cannabis", thus many varieties all share the same name which is ambiguous and can be misunderstood. A Cannabis plant includes more than 400 different chemicals of which about 70 are cannabinoids. In comparison, typical government-approved medications contain only 1 or 2 chemicals. The number of active chemicals in cannabis is one reason why treatment with it is difficult to classify and study.

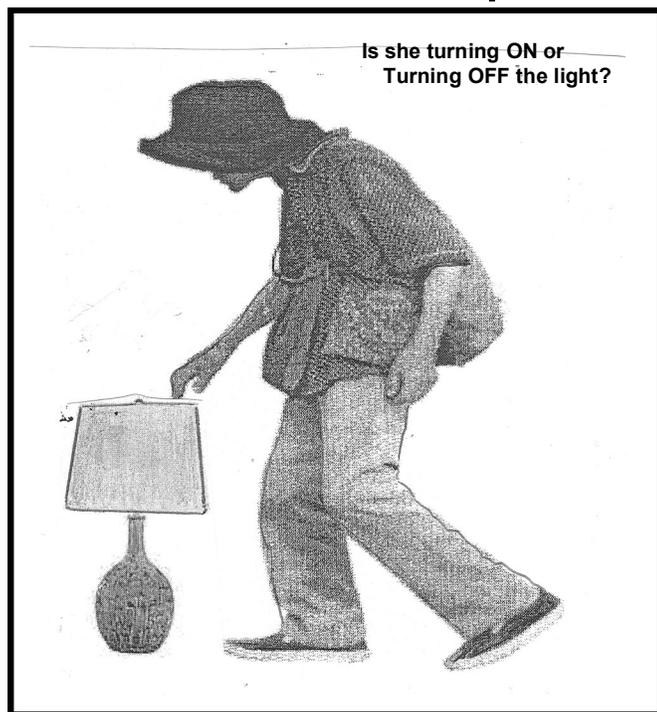
Using a THC-dominant strain can show that it may help people with insomnia get more rest and that it could reduce the severity of tics in Tourette syndrome, yet the same strain could induce psychosis in a person with a psychiatric disorder.

One study suggested that sustained heavy daily adolescent onset cannabis use over decades is associated with a decline in IQ by age 38, with no effects found in those who initiated cannabis use later, or in those who ceased use earlier in adulthood.

The tar produced by smoking pot is similar to that found in tobacco smoke and over 50 known carcinogens have been identified in cannabis smoke, however light use is not believed to increase the risk of lung cancer. Because 97% of case-reports also smoked tobacco, a formal association with cannabis could not be made.

Cannabis usually causes no tolerance or withdrawal symptoms except in heavy users. About 9% of those who experiment with marijuana eventually become dependent. The rate goes up to 1 in 6 among those who begin use as adolescents, and one-quarter to one-half of those who use it daily. The

Continued on Page Two



LATE BREAKING NEWS

Chip Keister, N5RTF reports that the past 8 MARCO Grand Rounds are archived at the following address: http://marcoaudio.ddns.net:2199/start/tkeister Click on any audio file to listen to that week's net. Download if you like. No passwords are required. Feel free to share this link. There is room for 100 listener at a time.

NEED CATEGORY I CME?

Go to www.mpmcme.org enter; go to "medical surgical archives" and a list will pop up...pick the lecture you want (includes mandatory ones) & when completed take the simple test and submit it to "Lee" for accreditation. When your medical license is up for renewal, notify Lee & she will submit the papers required. Tell her you affiliated with the hospital through MARCO and Dr. Warren Brown. (Tnx to Morton Plant Hospital, Clearwater, Florida, an associate of the University. of South Florida medical school.

The 2017 Annual MARCO meeting was held at the Hilton Garden Inn in Schaumburg, Illinois in Chicago on April 27 through April 30th. 15 attended the business meeting and banquet. It was cold in Chicago and our boat trip on the Chicago River went Arctic minus the snow but the winds hit 40 mph. It was good weather for those with hot flashes. Minutes on Pg.11.

WRITE TO US!
 We welcome your comments.
 Mail to Marco, P.O. Box 127,
 Indian Rocks, FL,
 33785. Email to
 warren.brown1924@gmail.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	14.342	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 14.342. You qualify for one hour Category II CME credit with your check-in.

highest risk of pot dependence is found in those with a history of poor academic achievement, deviate behavior in childhood and adolescence, rebelliousness, poor parental relationships, or a parental history of drug and alcohol problems.

Exposure to THC can cause acute transient psychotic symptoms in healthy individuals and people with schizophrenia. One study concluded that cannabis use reduced the average age of onset of psychosis by 2.7 years relative to non-cannabis use. A French review from 2009 came to a conclusion that cannabis use, particularly that before age 15, was a factor in the development of schizophrenic disorders.

The most psychoactive cannabinoid found in the cannabis plant is tetrahydrocannabinol (THC).

In the U.S. the FDA has approved two oral cannabinoids for use as medicine: dronabinol (*Marinol*) and nabilone (*antiemetics associated with chemotherapy that has failed to respond to conventional therapy*). Dronabinol, synthetic THC is listed as Schedule III, meaning it has some potential for dependence and nabilone, a synthetic cannabinoid is Schedule II, indicating a high potential for side effects and addiction.

Research as of 2016 has found the following: **Cancer:** Some cannabinoids have been shown to exhibit some anti-cancer effects in lab experiments. **Dementia:** No findings. **Diabetes:** There is some evidence that pot may help slow cell damage in type 1. **Epilepsy:** Lots of hype but current data indicates no conclusions can be drawn. **Glaucoma:** A 2009 review indicated while cannabis can help lower intraocular pressure, it recommends against its use because of "its side effects and short duration of action coupled with a lack of evidence that its use alters the course of glaucoma." **Tourette syndrome:** Beneficial response without serious adverse effects.

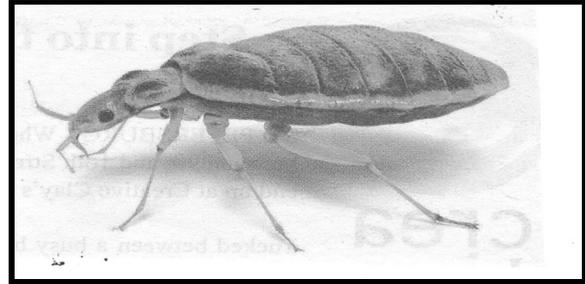
THE GREEN RUSH...Marijuana is legal in 30 states; 12 for recreational use. 58% of American adults favor legalization of marijuana in the U.S. Medical marijuana is legal in 18 states.

THC, the potent chemical in Pot occurs in 3% to 22% of plants. Therefore plantations are grown with similar varieties to maintain THC content. 40% of American adults have tried the drug whereas 1 in 25 world citizens use it.

Eating marijuana cookies takes about one hour for the high to occur, whereas with smoking it occurs almost immediately. Memory effects last for about three weeks and are more potent in the young. Urine samples will remain + for about one month. There are 50 carcinogens present in the smoke but there is no present evidence of chronic use causing cancer. Side effects include increased pulse rate for 3 hours, decreased BP, dry mouth, cough, red eyes, increased appetite, slow reaction time and diminished libido. 10% of users become addicted. "Charlotte's Web" is a strain with little THC.

Various addictions, exhibiting withdrawal, include: smoking, drinking alcohol, taking recreational drugs. More mild addictions include caffeine use, chocolate ingestion, gambling, shopping (increases dopamine release), plastic surgery, tanning, exercise, sleep, use of social media, smart phones, sex, porn and internet use. Not all addictions are bad.

RF EXPOSURE....If you doubt that radio frequency (RF) has the ability to cook things ask for a demonstration of a micro-wave oven. Dish-shaped antennas, designed to work in microwave frequencies concentrate RF energy so that it may be directed like a flashlight beam. If you happen to be standing at the focus point, you will quickly realize how that meatloaf feels in the microwave oven. You should never stand near any kind of antenna which concentrates RF energy (or open waveguide transmission line) when the transmitter power is on. Always use a good quality of coaxial cable transmission line to minimize RF leakage. Your antenna must be mounted high enough so that people cannot touch it. The strong field around an antennas can be very intense—and keep your "rubber duck" antenna held away from your head.



DECLARING WAR ON THE "BED BUGS!"

Think you can avoid getting a bed bug infestation because you do not stay at hotels? Think again. Bed bugs can be found anywhere people go. These blood sucking creatures can be found in so many places that most people never even dream of.

For instance, restaurants have reported bed bug infestations. These critters will leave the clothing, back packs and pocketbooks of previous occupants of a restaurant seat. This means just sitting down for a nice meal may cause an infestation for you at home. Sadly this is not the only place bed bugs can hitch a ride on us. Just watching a movie at the local theater may also create a bed bug outbreak at home. Just like a restaurant, bed bugs will leave a previous occupant waiting to hitch a ride. Once on, they attach themselves to your clothing or bags, they will have a chance to go home with you to create a new colony.

But wait, there are more reasons of concern. Bed bugs have also been known to infest churches, schools, cars, gym lockers, laundromats, concert halls and more. Anywhere people congregate, so do bed bugs. So, just living our everyday lives may have consequences when it comes to getting a bed bug infestation at home. Additionally, when bed bugs do infest our homes. The beds are not the only area they will seek refuge. They will nest in our nightstands, dressers, couches, coffee tables, office chairs, lounge chairs etc. Any place in our homes can be an infestation area for bed bugs.

What can be done to prevent an infestation? Sadly, nothing is one hundred percent effective in preventing a colony from starting at home. However, there are things that can be done to help reduce the likelihood of getting an infestation. For instance, if a pocket book or backpack can be left at home instead of having brought into a potential bed bug infested area, do so. Once the outing is complete, check clothing and body for any bed bugs prior to entering your home. I know these preventative measures are not the most practical ones to achieve. At the very least, I would suggest checking your home for bed bugs as often as you can. When you change the sheets, check the bed. When you clean your house, check the furniture. When found best to call an exterminator.

As you can see bed bugs are not just a problem for hotels. These blood sucking insects live anywhere we humans go. Consequently, just about everywhere we spend our time can be a source of an infestation.

FIRST SUNSPOT OF SOLAR CYCLE 25

On Dec. 18, 2016, the first sunspot of the new solar cycle—Solar Cycle 25—emerged and was assigned sunspot number 12620 on Dec. 20th. It was a "high-latitude" sunspot, at 23 degrees south solar latitude and had the "reverse magnetic polarity" of the Solar Cycle 24 sunspots in the southern hemisphere.

The solar minimum is expected to occur in early 2018. As the new sunspot cycle continues to develop we will eventually see more Solar Cycle 25 sunspots, in both solar hemispheres and they will continue to be at high latitudes at first and then slowly drift towards the Sun's equator as we progress through Solar cycle 25.

The UK Biobank announced a major research initiative with GSK and the Regeneron Genetics Center (RGC) to generate genetic sequence data from the 500,000 volunteer participants in the UK Biobank resource. The initiative will enable researchers to gain valuable insights to support advances in the development of new medicines for a wide range of serious and life threatening diseases.



Genetic evidence has revolutionized scientific discovery and drug development by proving clear links between genes and disease. Currently, an estimated 90% of potential medicines entering clinical trials fail to demonstrate the necessary efficacy and safety, and never reach patients. Many of these failures are due to an incomplete understanding of the link between the biological target of a drug and human disease. By contrast, medicines developed with human genetic evidence have had substantially higher success rates and patient care has benefited.

UK Biobank is the world's most comprehensive health resource. It has been collecting information and samples from its 500,000 participants for the past ten years. RGC and GSK have committed an initial investment to enable the sequencing of the first 50,000 samples, to be completed before the end of 2017. Sequencing of UK Biobank's samples will be carried out at RGC, N.Y., one of the world's largest human genetics sequencing centers. Sequencing of the full 500,000 samples is expected to take 3 to 5 years.

UK Biobank has amassed an enormous amount of securely-stored health, lifestyle, medical and biological data. Genetics research is already shaping better treatments. This exciting new initiative is expected to start producing findings rapidly during this year.

The Chief Scientific Officer of Regeneron stated, "Our large-scale sequencing and analysis capabilities, coupled with UK Biobank's vast trove of de-identified information, pose tremendous opportunities for clinically meaningful discoveries that can make a difference. We have long-recognized that advancing the pace and clinical utility of human genetics research requires collaboration and an open exchange of data between industry, academia and public health groups, and we are pleased to expand upon our existing foundational research collaborations through this effort the UK Biobank and GSK. For Regeneron, we believe this initiative will greatly enhance our existing efforts in gene discovery and genetics-guided drug development.

What does this mean? Basically Genetic sequencing will help predict what diseases patients are prone to develop, ways of removing the genetic factors causing them and treatments that will ameliorate their harmful effects. A new specialty has been born.

PERSONALIZED MEDICINE HAS ARRIVED(?)

The FDA recently approved 10 of the personal-genomics company 23andMe's screening tests for genetic health risks, including one for Alzheimer's and one for a rare blood disorder. The decision represents a turning point in the democratization of personalized medicine. It's also a turnaround for the FDA which had pulled the tests from the market in 2013. The company had blamed itself for that episode, admitting that it failed to follow up on promised communications with agency staff.

For the first time, patients don't have to go through a physician to learn about potential risks related to their genetic makeup. These tools can empower patients to become co-directors of their own medical destinies.

Across the country, patients are networking with others with similar ailments, participating in researchers to develop better models of poorly understood diseases. 23andMe, PatientsLikeMe and Curious are developing new platforms to help Americans manage their own health but **what about the family doctor?** Remember the saying "Only fools treat themselves." (Tnx to the WSJ for excerpts)

Medical marijuana was approved by **Florida** voters in the last election. In an effort to familiarize **Florida** doctors with their options, Morton Plant Hospital, Clearwater, FL., sponsored a lecture by Dr. Christine Price on what **Florida** doctors can expect at this early date. Please realize that each state has its own regulations and your state may have different but similar requirements.

Highlights: There will be 5 dispensing organizations utilizing very low THC levels (.8% or below) marijuana grown by 6 companies (mostly in Texas,)

To receive a 45-day prescription of medical marijuana in Florida you must be a Florida resident. The prescription must be written by a qualified physician who must take an 8-hour course with periodic testing.

To qualify for medical marijuana you must have a "terminal illness (?)" which includes HIV, Parkinson's, glaucoma, PTSD, epilepsy, AIDS, multiple sclerosis, Fibromyalgia and chronic pain.

The marijuana dispensed is in tincture drops to be used under the tongue and swallowed capsules only. The THC levels are low enough NOT to give a HIGH but simply sufficient to bind to pain receptors.

Medical marijuana costs about \$200/month and is NOT covered by Medicare. Nor is there a code yet.

Medical marijuana is legal in Massachusetts, Colorado, Washington, Oregon, Nevada and California.

FREQUENTLY ASKED QUESTIONS....

What is a "Monoclonal antibody?" One way the immune system attacks foreign substances in the body is by making large numbers of antibodies. An antibody is a protein that sticks to a specific protein called an *antigen*. Once attached, they can recruit other parts of the immune system to destroy the cells containing the antigen.

Researchers can design antibodies that specifically target a certain antigen, such as one found on cancer cells. They can then make many copies of that antibody in the lab. These are known as *monoclonal antibodies (mAbs)*

Monoclonal antibodies are used to treat many diseases, including some types of cancer. To make a monoclonal antibody, researchers first have to identify the right antigen to attack. For cancer, this is not always easy, and so far mAbs have proven to be more useful against some cancers than others.

Over the past couple of decades, the US FDA has approved more than a dozen mAbs to treat certain cancers. As researchers have found more antigens linked to cancer, they have been able to make mAbs against more and more cancers. Clinical trials of newer mAbs are now being done on many types of cancer.

Monoclonal antibodies are antibodies that are made by identical immune cells that are all clones of a unique parent cell. They can have monovalent affinity, in that they bind to the same *epitope* (the part of an antigen that is recognized by the antibody). In contrast, polyclonal antibodies bind to multiple *epitopes* and are usually made by several different plasma cells (*antibody secreting immune cell*) lineages. Bispecific monoclonal antibodies can also be engineered, by increasing the therapeutic targets of one single monoclonal antibody to two *epitopes*.

Given almost any substance, it is possible to produce monoclonal antibodies that specifically bind to that substance; they can then serve to detect or purify that substance. This has become an important tool in biochemistry, molecular biology and medicine. When used as medications, non-proprietary drug names end in **-mab** and many immunotherapy specialist use the word mab to specify "monoclonal antibody."

What is the difference between "sensitivity" and "specificity?"

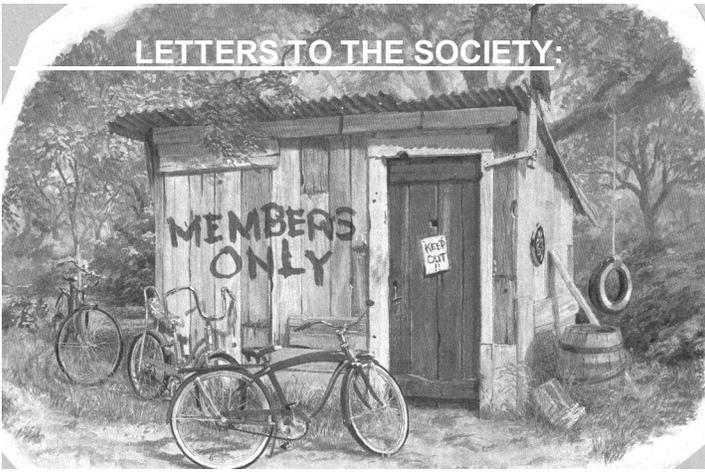
Sensitivity = number of true positives/ (over) the number of true positives + number of false negatives.

Specificity = number of true negatives/(over) the number of true negatives + number of false positives.

What is man's maximal life span? Even if you are never sick a day in your life, your biological clock will limit how old you can grow. The normal limit is 118 years.



LETTERS TO THE SOCIETY:



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.



New Guidelines for "Heart Failure." Entresto (*Sacubitril/valsartan*) is the first and only FDA-approved medicine of its kind representing a breakthrough in heart failure treatment.—*look it up!* Meanwhile **Cipro has an adverse reaction warning...** Do not use unless approved by infectious disease specialist. For details check it out.

What is "White Noise?" It is a combination of all noise frequencies together and sounds like TV noise without the picture or our radio noise without the voices (*also described as space noise, the result of the "Big Bang"*). We use white noise to block unwanted sounds like one's spouse snoring or to block tinnitus in our ears. "Pink Noise" sounds more like a heavy rain and a slightly higher pitch. The term "White" is used because light blocks out all other visual frequencies and "white" noise blocks out all other noise frequencies.

Discussing politics...In these days we can circumvent blasphemy by 1. Not discussing politics. 2. Stop watching news show on TV. 3. Discuss politics only with those with the same feelings that you have. 4. Agree to disagree with your opponent over two martinis..

Fear...We live in a "Age of Fear" when we are probably safer than ever simply because our brains are flooded with information, (*TV, radio, internet, newspapers etc.*) and eventually we began to believe it. Actually, we are the biggest threat to ourselves not the TV.

RadioShack goes under again...In March, RadioShack filed for Chapter 11 bankruptcy for the second time in 2 years, placing the future of its 1,500 remaining stores and 5,900 workers in jeopardy. The 1,743 retail outlets that survived the 2015 bankruptcy were acquired by General Wireless Inc. Founded in 1921, RadioShack probably did more to spread the early tech culture in the US than any other commercial outlet. The remaining stores are currently open for business.

HAARP is transmitting again...The run of ionospheric investigations conducted earlier this year from Alaska's High Frequency Active Aurora Research Program (HAARP) observatory, quite likely the most powerful HF transmission facility in the world—were its first since being taken over 18 months ago from the military by the University of Alaska Fairbanks. Past "top-secret experiments" on producing an "airglow" phenomenon by lighting and heating the ionosphere are continuing.

Tesla's Elon Musk Newest... idea, *Boring Company*, was displayed in a conference in Vancouver recently. It is an underground roadway system beneath cities that would zip cars through several layers of tunnels. He also reiterated Tesla's plan to announce "probably four more of its giant battery factories by year-end and a new electric semi-truck." He showed an animation of elevators built into the street that would lower cars to a tunnel network running on many levels, where they would travel on high-speed "skates" along what appeared to be magnetic rails. These skates would top out at roughly at 130 mph. To lower the cost he would develop boring machines that could reinforce smaller tunnels as they go thus speeding the digging process. He claimed this is safer than Uber's concept of "flying cars."

Kudos from Frank Haley, VE6KF, Edmonton, Canada.

Jim Gershman K1JJJ, writes: To the immediate left of my mailing label is the inaccurate Web Site for Marco...it should read: <http://www.marco-ltd.org>. Thanks Jim, it has been corrected. Unfortunately, the Post Office requires us to print that page upside down for reasons unknown. The word "site" was also abbreviated to "sit" (the "down" was not mentioned.)

From Jeff Wolf K6JW, It is with deep sadness that I must report the death of long-time MARCO member and my close cousin, **Dr. Gene Hoening N3HG.** I received word from his daughter Sara that Gene passed away quietly this morning, April 16, 2017. Gene was a wonderful bright, dynamic person who until recent years was quite active in MARCO. He will be greatly missed by all who knew and loved him.

Danny Centers W4DAN, Cleveland, TN. Writes: *Have won the "Single Operator, Low Power Delta Division in the 2016 ARRL 160 meter contest."* Congratulations go to Danny for his perseverance in this category.

From Dave Justis KNOS, Virginia..."Thanks for discussing the very interesting topic of monoclonal antibodies. We were making these at the Univ. of Cincinnati and Minnesota many years ago for a variety of situations including detecting Lupus related C3 nephritis. using goats as the IgG producer in the 1970s, and later at Biosite & other immunochemical research sites to detect cardiac markers such as CKMb and Troponin in the 90s that are now the markers of myocardial damage. Many were also being investigated as tumor specific antibodies not only to detect cancers such as CA125 and CEA, but also to treat cancers.....when I was an NIH fellow, there was a great deal of interest in immunochemistry and now years later, the field is likely about to explode...especially if cancer is involved." *Dave is a regular on Grand Rounds, so tune in on Sunday at 11 am Eastern and enjoy the chatter.*

Also from **Dave KNOS,** "Thank you for a very informative discussion of tick borne illness and Lyres disease. Enclose is the current update on the subject from the Virginia Dept. of Health. We did see a lot of Lymes in the St. Croix River Valley area between Minnesota and Wisconsin. I fortunately took the 3-part vaccine when it was available and had adequate titers...yesterday I saw a patient who had completed a 20 day course of Doxycyline and ended up with severe esophageal pain...likely from sticking one of the pills in the distal esophagus.

From **Frank Haley VEGKF, Edmonton, Canada:** "I do enjoy our "Aether." I'm an anesthesiologist, well past my "Best before" date. My hearing is not good so I'm trying to keep up my CW. The 2-meter band is good; we even have a digital repeater system functioning. The computer I haven't quite mastered but am looking into CW via internet. Hope springs eternal in the human breast...thank you, yes, I'm still here at 92.

This Future Classified spot is reserved for YOU

MARCO encourages you to use this space to advertise.
There is no charge to MARCO members.
 List your older equipment and make way for the NEW.

FAT

We usually think of fat as unhealthy excess storage to be gotten rid of at all costs, but researchers have reached a different conclusion: Fat is actually a vital organ that releases essential hormones and sends crucial messages to our brains. And because fat is so important, our bodies work hard to protect it. Instead of simply battling it, we need to focus on how to maintain a healthy level of it.

Jeffrey Friedman, a molecular biologist at Rockefeller University, was among the first to discover that there was more to fat than just storing calories. In the 1980s, he was researching mice that ate uncontrollably. After nine years, Dr. Friedman discovered that fat produces a hormone that he named **leptin** (from the Greek *leptos*, or thin), which is released into the bloodstream and binds with areas of our brain responsible for appetite. His lab's obese mice had a genetic defect in their fat that prevented them from making functional leptin and getting the signal to stop eating. Humans with a similar genetic defect can eventually eat themselves to death.

Fat's connection with leptin poses a dilemma: When we lose fat, we also have decreased levels of leptin the appetite suppressing hormone. As a result, we are hungrier than before weight loss. Leptin also affects our muscles and thyroid hormone, and reduced amounts of it slow down our metabolism. These combined effects of decreased levels of leptin drive us to regain weight.

We now know that fat also can affect brain size. People who are genetically leptin-deficient have smaller brain volume in some areas, as do patients who are malnourished because of anorexia. Leptin also enables wounds to heal faster and strengthens our immune system by activating T-cells, the body infantry.

And leptin isn't the only crucial hormone produced by our fat. It also manufactures adiponectin, a hormone that keeps our blood clear of harmful toxins and fats.

The benevolent type of fat that is the primary producer of leptin and adiponectin is subcutaneous, found directly under our skin in places such as our abdomens, thighs, buttocks and arms. This should be distinguished from visceral fat, which is stored under the stomach wall, nestled against our internal organs. The latter is the **"bad" fat** that we hear so much about. It can become inflamed and lead to diabetes and heart disease.

But "good" fat can fight "bad" fat. By making adiponectin, subcutaneous fat guides circulating fats in our blood out of our veins and into the subcutaneous fat tissues where they belong. The hormone also reduces visceral fat. Luckily exercise promotes the release of adiponectin. This is why some wrestlers are both fat and fit (at least until they retire); They exercise around seven hours a day, which helps keep their visceral fat under control even as they pile on the subcutaneous fat that they need to compete.

The new science of fat suggest some health points. First, we should appreciate our fat. Our culture is obsessed with shedding flab, as any sports or fashion magazine cover will tell you, but normal amounts help to keep us healthy.

Second, if you're going to worry, focus on visceral fat, which is associated with disease. For those of us who aren't sumo wrestlers, jogging 20 miles a week or doing intensive interval training three times a week has been linked with a reduction in visceral fat. Intermittent fasting—prolonging the overnight gap between meals to 14 hours or more—also can help.

Finally, if you are above the average fat mass range of 25-30% for women and 18-24% for men, and want to maintain your weight loss, it may take more effort than you expect. Fat can alter our appetite and metabolism to drive us to regain weight, an effect that can last for years. So real weight loss requires a long term effort. By better understanding how fat works, what makes it accumulate (which isn't just gluttony) and selecting a diet that will work over the years, we are more likely to succeed at keeping the pounds off.

And as you pick your personal weight targets, remember: Obesity is unhealthy, but too little fat isn't good for you either.



5

LEPTIN, the Satiety Hormone

LEPTIN, The "*Satiety Hormone*," is a hormone made by adipose cells that helps to regulate energy balance by inhibiting hunger. **Leptin** is opposed by the actions of the hormone "*Ghrelin*," the *hunger hormone*. Both hormones act on receptors in the arcuate nucleus of the hypothalamus to regulate appetite to achieve energy homeostasis. In obesity, a decreased sensitivity to leptin occurs, resulting in an inability to detect satiety despite high energy stores.

Although regulation of fat stores is deemed to be the primary function of leptin, it also plays a role in other physiological processes, as evidenced by its multiple sites of synthesis other than fat cells, and the multiple cell types beside hypothalamic cells that have leptin receptors. Many of these additional functions are still unknown.

In 1994, the identification of the gene for leptin was found. Furthermore, since this "ob" (*obesity*) gene's expression was increased, not decreased, in human obesity, it suggested resistance to leptin. Leptin was the first fat cell-derived hormone to be discovered.

Leptin levels vary and are higher between midnight and early morning, suppressing appetite during the night.

Similar to what is observed in chronic inflammation, chronically elevated leptin levels are associated with obesity, overeating, and inflammation related diseases, including hypertension, metabolic syndrome and cardiovascular disease. While leptin is associated with body fat mass, however the size of fat cells and the act of overeating, it is interesting that it is not affected by exercise. Thus it is speculated that leptin responds specifically to adipose-derived inflammation.

Taken as such, increases in leptin levels (in response to caloric intake) functions as an acute pro-inflammatory response mechanism to prevent excessive cellular stress induced by overeating. When high caloric intake overtaxes the ability of fat cells to grow larger or increase in number in step with caloric intake, the ensuing stress response leads to inflammation at the cellular level and ectopic fat storage, i.e., the unhealthy storage of body fat within internal organs, arteries, and/or muscle. The insulin increase in response to the caloric load provokes a dose-dependent rise in leptin, an effect potentiated by high cortisol levels.

Although leptin reduces appetite as a circulating signal, obese individuals generally exhibit a higher circulating concentration of leptin than normal weight individuals due to their higher percentage of body fat. These people show resistance to leptin, similar to resistance of insulin in type 2 diabetes, with the elevated levels failing to control hunger and modulate their weight. A number of explanations have been proposed to explain this.

It has been suggested that the main role of leptin is to act as a starvation signal when levels are low, to help maintain fat stores for survival during times of starvation, rather than a satiety signal to prevent overeating. Leptin levels signal when an animal has enough stored energy to spend it in pursuits besides acquiring food.

Dieters who lose weight, particularly those with an overabundance of fat cells, experience a drop in levels of circulating leptin. This drop causes reversible decreases in thyroid activity, sympathetic tone, and energy expenditure in skeletal muscle, and increases in muscle efficiency and parasympathetic tone. The result is that a person who has lost weight below their natural body fat set-point has a lower basal metabolic rate than an individual of the same weight who is of that natural weight; these changes are leptin-mediated homeostatic responses meant to reduce energy expenditure and promote weight retain as a result of fat cells being shrunken below normal size.

Leptin was approved in the U.S. in 2014 for use in leptin deficiency and generalized lipodystrophy.

KEEP MARCO PERKING !

Pass this copy to a friend OR send us a \$15 membership



Fat is one of the three main macronutrients, along with carbohydrate and proteins. Fats, also known as triglycerides, are esters (replacing a hydrogen of an acid by an alkyl or other organic group) of three fatty acid chains and the alcohol glycerol. The terms “oil”, “fat”, and “lipid” are often confused. “Oil normally refers to a fat with short or unsaturated fatty acid chains that is liquid at room temperature, while “fat” may specifically refer to fats that are solids at room temperatures. “Lipid” is hydrophobic, and are soluble in organic solvents and insoluble in water. Some fatty acids that are set free by digestion of fats are called “essential” because they cannot be synthesized in the body from simpler constituents. There are two essential fatty acids (EFAs) in human nutrition: alpha-linolenic acid (an omega 3 fatty acid) and linoleic acid (an omega-6 fatty acid). Other lipids needed by the body can be synthesized from these and other fats. Fats and other lipids are broken down in the body by enzymes called lipases produced in the pancreas.

When it comes to body fat, most Americans are concerned with losing as much as possible. But this is referring to WHITE FAT (also called yellow fat), which is the type that typically accumulates in your belly and thighs.

Another type of fat is called “brown fat and emerging research suggests that many people may be better off increasing this beneficial type of fat. In fact, a new study reveals that one reason you may have trouble staying slim as you get older is because your levels of brown fat generally decreases with age.

Most people are familiar with age-related weight gain or obesity. As you get older, you have to watch your diet more closely and stay more active just to maintain your weight, let alone lose any. Meanwhile, when you were in your 20s, you could eat whatever you wanted without gaining a pound.

One reason for your body's propensity for weight gain as it ages may have to do with decreasing levels of brown fat, which occurs naturally as you get older. Brown fat is a heat-generating type of fat that burns energy instead of storing it, and this may have important implications when it comes to weight loss.

It is colored brown because it is loaded with mitochondria that convert the fat directly to energy to produce heat. Researchers initially thought its primary function was to help produce heat in the absence of shivering.

Human newborns have a generous supply of brown fat to keep warm, but by adulthood they lose most of their stores of it. Until just a few years ago, it was thought that adults had no brown fat at all, since you can adequately shiver as a way to keep warm (babies on the other hand cannot).

Newer research revealed that not only do adults have some brown fat, but it appear to have physiological roles beyond heat generation. These roles are just now beginning to be explored.

As for what this has to do with your age...it's known that as you get older, the thermogenic activity of brown fat is reduced, similar to what happened with the mice in the study. This “failing” of brown fat is likely a key reason why there's a tendency to gain weight with age. One researcher stated, *“A common complaint is that older people have to work twice as hard with their diets and exercise to get half of the results of younger people. Now we have a much better idea why this is the case. Our brown fat stops working as we age.”*

Brown fat has been located in the neck area, around blood vessels (helping to warm your blood), and “marbled” in with white fat in visceral fat tissue. It's now thought that virtually everyone has small amounts of brown fat in their body, although certain groups of people tend to have more brown fat than others. Interestingly, it appears that the more brown fat, or the more activated brown fat, the better, as there are direct correlations between the activation of brown fat and metabolic measures of good health. For example. **Slender people have more brown fat than obese people do. Younger people have more brown fat than elderly people. People with normal blood sugar levels have more brown fat than those with high blood sugar.**

Women also tend to have more brown fat than men, and people taking beta blocker drugs to treat high blood pressure have less active brown fat. The latter is likely because catecholamines, which are hormones released as part of your body's natural “fight or flight” response, are known to activate brown fat, but beta-blockers block catecholamines, thereby suppressing the activation of beneficial brown fat.

A Harvard researcher recently stated, *“We showed that brown fat and white fat have completely different origins. Brown fat is derived from muscle and that was a big surprise.”*

The FDA has issued 14 warning letters and four online advisory letters addressed to US based companies illegally selling products that fraudulently claim to prevent, diagnose, treat or cure cancer. More than 65 products were found to be in violation.

Since it is a violation of the FDA Cosmetic Act to market and sell products that make these claims, they will need to respond stating how the violations will be corrected. Failure to do so may result in legal action such as product seizure, injunction and/or criminal prosecution. These products include a variety of pills, creams, ointments, oils, drops, syrups, teas and diagnostics. The products are marketed for use by humans or pets and make unproven cancer claims, such as preventing, reversing or curing cancer; killing/inhibiting cancer cells or tumors; or other similar anti-cancer claims.

The FDA Consumer Updates page lists red flags a consumer can look for to identify fraudulent products. Language such as “new discovery,” “scientific breakthrough” or “secret ingredient” or any other claims touting the product as a miracle cure should be questioned. Also questionable, conspiracy theories claiming the pharmaceutical industry and government are keeping the cure a secret. Another popular tactic may be to include testimonials in lieu of scientific evidence.

Consumers are encouraged to report adverse reactions associated with these or similar products to the agency's MedWatch program.

It appears that spending time in cold temperatures may be a valid, but uncomfortable, way to activate your brown fat. The finding is so strong that some researchers joked they would be opening a “frosty spa.” In one study, scientists found that they were able to activate brown fat in adult men by exposing them to cold temperatures. The men burned more calories when cooled and lost white fat, the kind that causes obesity.

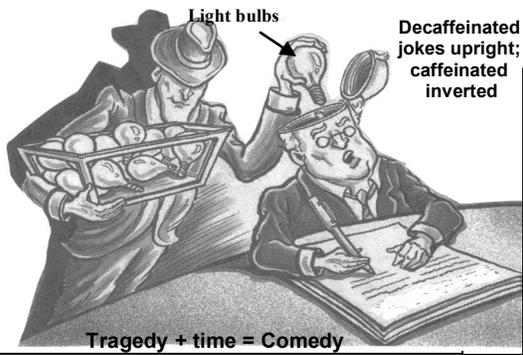
Swedish research published in 2009 also found that cold temperatures increased the activity in the subjects brown fat regions. In fact, cold-induced glucose uptake was increased by a factor of 15! Based on animal models, researchers estimated that just 50 grams of brown fat (which is less than what most volunteers have been found to have) could burn about 20% of your daily caloric intake—and more if encouraged. One researcher gave the following suggestions for putting this into practice: **Place an ice pack on your upper back and upper chest for 30 minutes each day...try drinking about 500 ml of ice water each morning; take cold showers; immerse yourself in ice water up to your waist for 10 minutes three times per week.**

In one mouse study, the animals converted white fat into brown fat simply by exercising. The study found that an enzyme called *irisin*, triggered the conversion of white fat cells to brown. This later proved true in humans. *“Our results showed that exercise doesn't just have beneficial effects on muscle, it also affects fat...it's clear that when fat gets trained, it becomes browner and more metabolically active. We think there are factors being released into the bloodstream from the healthier fat that are working on other tissues.”*

In summary: Lipids (fats) dissolve in alcohol not in water, wax, oil, or other fats. White (or yellow) fat has a single droplet and is stored in the gut, waist, thighs of obese people. **Brown fat** consists of multiple droplets, has a higher iron content and contains mitochondria which burn up the droplets to produce heat. It is found mostly in the neck and back of skinny people and decreases in amounts as we age. Brown fat is activated by cold and helps babies who are unable to shiver to keep warm. Drugs that fire up brown fat could be useful for treating people with fatty liver and obesity and is probably ten years away.

Until that pill arrives one can try skipping breakfast and avoid eating at least three hours before going to sleep. This should effectively restrict your eating to an 8-hour window each day. This “intermittent fasting” daily should rearrange your Circadian rhythm and possibly provide your body an inefficient absorption system that should restrict your absorbable calories.

LIGHTEN UP...



MARCO OFFICERS, 2016-2017

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MediShare Director: Arnold Kalan, M.D., WB6OJB

He wanted fruit salad for supper....the recipe said serve without dressing. So, I didn't dress. What a surprise when he brought a friend home for supper!

A SHOT OF WHISKEY...In the old west a .45 cartridge for a six-gun cost 12 cents and so did a glass of whiskey. If a cowhand was low on cash he would often give the bartender a cartridge in exchange for a drink. This became known as a "shot of whiskey.."

A man woke up in a hospital after a serious accident. "Doctor, doctor, I can't feel my legs." The doctor replied, "I know. I amputated your arms!"

Transport pilot to troops.... "I'm flying you boys to Hawaii for some good R & R." A trooper responds, "You mean I & I don't?" "What's I & I?" the pilot asks. "Intoxication & intercourse!"

Did you hear about the adult man who grew 2 inches in height in less than a year? It was astronaut Scott Kelly while circling the Earth in the Space Station—no gravity, he simply expanded—NO yoke!

CONFUCIUS SAY: Man who mix Viagra and Ex-Lax doesn't know if he's coming or going... Viagra is like Disneyland. a one hour wait for a 2-minute ride....It is much better to want the mate you do not have than to have the mate you do not want.

Definition of "Minimum"...A small English Mom.

A fleeing Taliban terrorist, desperate for water, was plodding through the Afghan desert when he saw something far off. Hoping to find water, he hurried toward the mirage, only to find a very frail little old Jewish man standing at a small makeshift display rack selling ties. The Taliban terrorist asked, "Do you have water?" The Jewish man replied, "I have no water. Would you like to buy a tie, they are only \$5."

AN IRISH priest is driving down to New York and gets stopped for speeding. The state trooper smells alcohol on the priest's breath and then sees an empty wine bottle on the floor of the car. He says, "Sir, have you been drinking?" "Just water," say the priest. The trooper says, "Then why do I smell wine?" The priest looks at the bottle and says, "Praise the Lord! He's done it again!?"

Man in bar, asks blonde "How much does it cost to make you dizzy?" She answers, "Fifty bucks and the name is Daisey!"

- REGIONAL DIRECTORS: Robert A. Nevins, M.D., KF1J (1st) robert.nevins@gmail.com
Bruce Small, M.D., KM2L (2nd), Phone 716 713 5597 cell
Keith Adams, M.D., N3IM (3rd) docadams@hughes.net
Mary Favaro, M.D., AE4BX, (4th), Phone: 843 267 6879
Tom Reilly, M.D. W3GAT (5th), w3gat@nwlagardner.org.
Paul Lukas N6DMV (6th), dmvpalko@yahoo.com; 310 370 9914
Albert Breland, M.D., KA7LOT (7th), Phone: 858 793 6887
Roger M. Higley, D.D.S., W8CRK(8) rhigley599@aolcom
Bill T. Hargadon, WA9HIR (9th), Phone: 708 341 2338
Frederic M. Simowitz, M.D., K0FS (0) Fredsimo@aolcom,
DIRECTORS AT LARGE: Harry Przekop, PA-C WB9EDP, hprzekop@aol.com; 312 829 8201
Arnold Kalan, M.D., WB6OJB wb6ojb@yahoo.com
Linda Krasowski, R.N., KE5BQK. bkrasowski@elp.rr, 915 857 5933
Jeff Wolf, M.D., K6JW, k6jw@arrl.net, 310 373 597

INTERESTING FACTS...Montana has three times as many cows as it does people. In more than half of all states, the highest paid public employee in the state is a football coach. Alaska has a longer coastline than all of the other 49 U.S. states put together. According to one recent survey, 81% of Russians now have a negative view of the U.S. That is much higher than at the end of the Cold War. It costs the govt. 1.8 cents to mint a penny and 9.4 cents to mint a nickel. Why are poor Georgia folks called "crackers?" A. Some early Georgia settlers were jail breakers from the North (it was a penal colony prior to the Revolution) and jail breakers long ago were called "crackers."

MEMORIES OF YEARS AGO IN MARCO

Our History Book

Fifteen years ago in Marco

May 18, 2002, Dayton, Ohio...Marco President Bruce Small turned the Presidency of MARCO to Keith Adams N3IM. "Chip" Keister N5RTF was elected "President-elect" and will begin his term in 2004. Our secretary, Robin Staebler, WE1MD, was taken ill just prior to the meeting and was transferred to the Good Samaritan Hospital in Dayton. Twenty-six attended the Annual Banquet held at the Pine Room in the Holiday Inn North. We will meet in Philadelphia next year.

Ten years ago in Marco

June, 2007...Santa Monica, CA., Arni Shatz, MD, N6HC, gave an exciting presentation of his 2005 Dxpedition to Kure Atoll in the Pacific before an estimated 30+ group of Marco Hams and friends.

"Counterfeit Drugs" was the lead article in *Aether* where we mentioned "The drug companies may lose money; the patient may lose something else."

Five years ago in Marco

June, 2012... "Pandas" is not a disease entity but is thought to be an attack on the immune system that results in a variable combination of tics, obsessions, compulsions and other symptoms. Rheumatic Fever is thought to be a "Panda."

The annual meeting was held in Dayton where Secretary Danny W4DAN suggested that dues be held annually rather than indiscriminately. His motion was passed.

Officers to the upcoming year will be: President-elect, Jeff Wolf; K6JW; Secretary, Danny Centers W4DAN; Treasurer, Lou Wiederhold. Immediate Past-President Linda Krasowski became a Director-at-Large.

IS GENETIC TESTING RIGHT FOR YOU?

John Y..... M.D. practices in Largo, FL. He writes in a local paper: My practice is always interesting. It seems I never get the plain old sore throat problems. Most of my cases are of the complicated type. But I have found out over the years that if you stick with the basics i.e., physiology, biochemistry and now I'll add genetics, a lot of these tough cases can become more solvable.

A person came to see me about a year ago; His balance was off and he was tired. Now this person was 70 and I thought that is not that surprising, but as I examined him he definitely was off-balance and weak. I had him run a number of labs but nothing showed. His condition progressed. The neurologist felt he may have some form of Lou Gehrig's disease (amyotrophic lateral sclerosis), but the only abnormality he could find was a greatly elevated Vit. B12 level. I tried many different treatments but nothing helped. So I decided to break him down genetically. He had a deficit at MTHFR. To fix this gene or find the secondary pathway to fix the genetic deficit we gave him methyl folate and methylated B12. He proceeded to have a seizure. So we looked at the metabolized B12 and sure enough he has a genetic deficit at a gene called TCNO2 so he could not absorb Methyl B12. However if he could take the adenosine B12 he could absorb B12 (*then how come his B12 level was elevated?*) So he started adenosine B12 and several months later he was out of his wheelchair and his muscle mass returned. He never had Lou Gehrig's disease, he just needed the right form of Vit. B12. Only his genetic code could tell us that. How many so called chronic illnesses may be only a simple genetic fix?"

Another gentleman who suffered with depression and anxiety came to us, because nothing helped. The drug did nothing. His mother had depression and anxiety as did his daughter, so we decided to break him down genetically and he had a COMT and MAO and MHFR. Together these defective genes can give one anxiety and depression. We reworked the genetic pathways of these genes and figured out the fix; a few days later no more depression and anxiety. All is well until his GI doctor put him on Nexium which would counter act our fix. 1 hour later all his symptoms returned. Nexium you see, stops a number of genetic pathways and can make depression and anxiety worse. We stopped the Nexium and he recovered.

Next time you feel you just aren't better have your doctor break you down genetically. You may be surprised by the results.

Does this sound like a scam? Is this similar to the ads for "Your own stem cells cure everything?" Makes one think he or she or you are not ahead of the curve...or is this fellow really on the ball? Give us your opinion—my opinion is this guy is fishing (*for money?*).

BOB CURRIER MARCO GRAND ROUNDS OF

THE AIR. (Corrections to Marco)

14.342, Sundays, 11 am Eastern, One Hour Cat. II CME

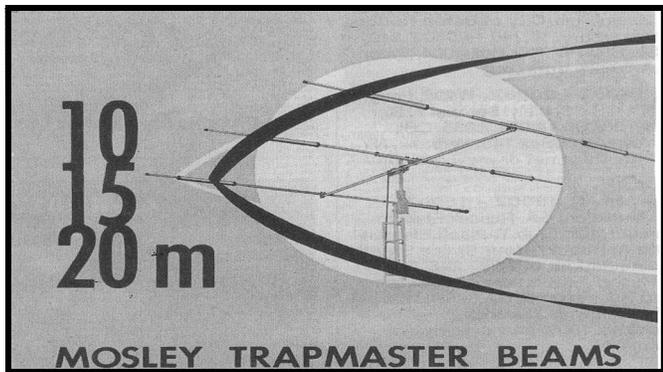
CALL	HRS.	NAME	QTH
NU4DO	13	Norm	Largo, FL.
N5AN	13	Bud	Lafayette, LA
KD4GUA	12	Warren	Largo, FL.
WB6OJB	12	Arnold	Pac.Pal. Calif.
KC9CS	12	Bill	Seminole, FL.
KK1Y	11	Art	Seminole, FL
N2JBA	11	Ed	Amenia, NY
N5RTF	11	Chip	New Orleans, LA
K9CIV	11	Rich	Knox, IN
WA3QWA	11	Mark	Chesapeake, VA
WO4PH	11	Tom	Denver, CO
N4TSC	11	Jerry	Boca Raton, FL
W4DAN	10	Danny	Cleveland, TN
N9RIV	10	Bill	Danville, IL
WB1FFI	9	Barry	Syracuse, NY
KM2L	9	Bruce	Clarence, NY
W6NYJ	9	Art	Beverly Hills, CA
KE5SZA	9	John	Marietta, OK
WB9EDP	9	Harry	Batavia, IL
N2OJD	9	Mark	Sydney, Ohio
W8LJZ	9	Jim	Detroit, MI
NOARN	9	Carl	Colorado
K6JW	8	Jeff	Palos Verdes, CA
KNOS	8	Dave	Virginia
WA1HG Y	7	Ted	Massachusetts
W1RDJ	7	Doug	Cape Cod, Mass.
WB2MXJ	7	Joe	St. Metairie, LA
K9YZN	7	Mike	Crystal Lake, IL
K4RLC	7	Bob	Raleigh, NC
WOUNZ	7	Paul	Warsaw, MO.
KE8GA	6	George	N. Carolina
N8CL	6	Chuck	Albany, NY
N4MKT	5	Larry	The Villages, FL.
K3iK	5	Ian	Shavertown, PA
WA1EXE	5	Mark	Cape Cod, Mass.
W4MEA	4	Max	Tennessee
K0FS	4	Fred	St. Louis
N4DOV	3	David	Ft. Lauderdale, FL
KD8IPW	3	Mary	W. Virginia
K7NM	3	Lee	Salt Lake City, UT
K1WDR	3	Wayne	Parish, FL
K4JWA	3	Jim	W. Virginia
KC9ARP	3	Michelin	Batavia, ILL.
W1BEW	2	Bobbie	Tennessee
AE4Bx	2	Mary	Myrtle Beach, SC
N7NLM	2	Mort	Tucson, AZ
KD5QHV	2	Bernie	El Paso, TX
KB5BQK	2	Linda	El Paso, TX
WB8EYE	2	Daryl	New Phila., Ohio
W9BPP	2	Susan	Colorado.
N8GMB	2	Chuck	Willoughby, Ohio

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*	1400 (44 nets) (New Freq)	31.82 (Year of Terrorist)
2014	1756 (47 nets)	37.36
2015	1722 (49 nets)	35.14
2016	1687 (46 nets)	36.67
2017	466 (13 nets)	35.85

Record number of stations checked-in was 51, on Feb. 24, 2013

Editor's Note: The Marco Grand Rounds of the Air each Sunday, rolls off a Mosley TA-33 on my roof since 1995. (A good friend.)



I can't count how many times I've been operating HF and heard, "The antenna here is a tribander, a Mosley TA-33". There are several comparable antennas available, yet this design, which has its roots in 1951, seems to linger on and stay in use. You can see its popularity for yourself if you search for it on the ARRL website. You will find over 80 hits—many describing how a TA-33 was used on Field Day.

Originally called Mosley Electronic Specialties, Mosley Electronics began by making adapters for the 3/4-inch tube sockets used by Hams in the late 1930s and early 1940s. The business was run out of the Moseley basement, but quickly grew. Mosley Electronics owner Carl Mosley was an active and innovative antenna designer and inventor of other electronic products.

Mosley started the company about 1939, making small hardware for the electronics industry, but it wasn't until 1951 that the company was incorporated. The TV industry was booming, and the company grew as a supplier of parts for TV use.

Around 1955, Carl Mosley introduced the first model of the TA-33. The design was later protected by a US patent for a "Multiple Frequency Antenna System."

Several things contributed to the TA-33's popularity. First, the instruction manual was only two pages long, including the detailed parts list. Assembly was quick and easy, as long as you followed the one drawing. The current Mosley company says the antenna uses aircraft-grade aluminum and stainless-steel hardware, which is probably the reason for the antenna's long life.

From the start, the company also advised its customers that no balun or matching network was needed—a claim that has been debated and discussed literally hundreds of times in various antenna groups.

Mosley Tram Master beams are designed so they don't require unwieldy matching arrangements, which means users don't have to make frequent trips to the roof for adjustments. The beams are fed by directly connecting the line to the radiator's open center, achieving a match for the range of each band, with low SWR near resonant frequencies and in the range of the bands, from one end of the band to the other.

Of great interest are published modifications to the basic TA-33. As usual, while the original manufacturer has been producing newer versions, hams have been modifying the basic design. For example one Ham added 6 meters to his tribander.

In summary...The Mosley TA-33 triband Yagi has reasonable performance and the ability to stay up with a minimum of maintenance seems to contribute to its continued use. While alternative designs are readily available, it's still common to hear on the air.

(To request a catalog from Mosley, call 800 325 4016;
www.mosley-electronics.com or www.mosleyelectronics.com
*****)

CLINICAL QUESTION...Do Citrate salts treat and prevent calcium-containing kidney stones in adults? **A.** Citrate supplementation reduces stone size to less than 5 mm and prevents new stone formation when compared with placebo or no intervention. Citrate therapy also stabilizes existing stones and decrease the need for re-treatment. These benefits come at the expense of upper G.I. disturbances that lead to a higher dropout rate.

Baby, it's cold outside! 18 members of Marco and spouses found their way to the Windy City on April 27 through April 30th. Cold winds, rain and these brave souls weathered the torrents to come to Chicago for the 2017 annual meeting of Marco. The hotel was warm and comfy and the food was great and we also made excursions to other popular restaurants in the area and had a great time of fellowship. We were reminded that Chicago gets its name from stinky onions and verbose politicians not the weather. Though we have had too much of all of it lately except maybe the onions.



I personally leaned more about several members that I am glad to know with more appreciation and more concern.

Our secretary, Joe Brealt has already sent minutes out to let you know what we accomplished and that we are looking forward to 2018 in Dayton.

I had a good time in Chicago and hope you did too. If you couldn't make it, I hope you are well and were missed and remembered. Hopefully we will make it to Dayton next year.

Keith and Chip will have been to Dayton this year and we look forward to the report on the new venue and the hotel situation as we make plans for next year.

Supposedly spring is here but it doesn't seem like it yet, however, the propagation witch wasn't all that good this winter still is not too good even as the atmospheric changes come about and spring comes upon us. Well we are at the bottom of the sunspot cycle I personally am looking for more low band work as I already have the DxCC on the upper bands through 10M I've been working several years to get the 80M DxCC but that has eluded me. As soon as I do work or get QSL card then I will have seven band DxCC.

There are many who endeavor to check in on Sunday morning for the Grand Rounds of the Air. We get frustrated because of propagation but fortunately we can stream the presentations by Warren KD4GUA.

Keep joining in and share your points of view. It make us better and closer. See you next time and on the air. RICH K9CIV.

CURIOSITY SHOP...It is estimated that American legislators have passed 35 million laws designed to enforce the Ten Commandments.

More people are studying English in China now that are speaking English in the United States.

Why is that sensitive nerve in your arm called the "funny bone"?
A. Because it's close to the upper arm bone known as the "humerus".

Medical checkups in nudist colonies show a much lower incidence of high blood pressure than is found in the general public

FLUORIDES, Good or BAD?

In the U.S. & other developed countries, fluorides are often added to drinking water and toothpaste to help strengthen teeth and prevent cavities. But too much naturally occurring fluorides can have exactly the opposite effect.

Large amounts of fluoride can lead to dental fluorosis and skeletal fluorosis.

Dental fluorosis is a darkening or mottling of the teeth, and you can tell very easily when people smile, because their teeth will be dark and discolored. While dental fluorosis is not painful, it can have a dramatic effect on an individual's ability to get a job or find a spouse.

Skeletal fluorosis is much more debilitating. For example, women in India have been known to be unable to put their hands behind their heads. Some skeletal fluorosis can come with pain associated with it as well, and children sometimes end up with bowed legs or deformed knees or arms.

Recently, dentists in the U.S. have been advocating 1.1% fluoride prescription (.24% is average) toothpaste—5X more than the average fluorides—for receding gums whereas in many European countries fluorides in the drinking water is actually banned!

Flourides to prevent dental decay were introduced about 60 years ago and have proven relatively safe & helpful in small amounts but be leery when your dentists pushes them.

10 where no other options exist to have a healthy baby.”

Carlyle Rowland, N0ARN, Denver writes: What I want to know is how long can an insurance company say something is experimental? My first wife passed away in 1984 from Lymphocytic leukemia while in recovery from a bone marrow transplant at the City of Hope in California. Currently some 34 years later my grandson has Lymphocytic leukemia and the insurance company is stating it is an experimental procedure and not covered. It's amazing how 30 years ago we had a choice of Mayo, Mt. Sinai, MD Anderson and City of Hope in California. Now you can go to any of hundreds of hospitals and it is still experimental. Why?

Let's go back in history: Humans have altered the genomes of species for thousands of years through *selective breeding*, as contrasted with natural selection, and more recently through mutagenesis. Genetic engineering as the direct manipulation of DNA by humans outside breeding and mutations has only existed since the 1970s. The term "*genetic engineering*" was first coined by Jack Williamson in his science fiction novel "*Dragon's Island*," published in 1951—one year before DNA's role in heredity was confirmed by Alfred Hershey and Martha Chase, and two years before James Watson and Francis Crick showed that the DNA molecule has a double-helix structure.

In 1972, Paul Berg created the first recombinant (*a form of DNA produced by combining genetic material from two or more different sources*) DNA molecules by combining DNA from the monkey virus SV40 with that of the lambda virus. In 1973, Herbert Boyer and Stanley Cohen created the first transgenic organism by inserting antibiotic resistance genes into the plasmid of an E.coli bacterium. A year later Jaenisch created a transgenic mouse by introducing foreign DNA into its embryo, making it the world's first transgenic animal. These achievements led to concerns in the scientific community about potential risks from genetic engineering, which were first discussed in depth at the Asilomar Conference in 1975. **One of the main recommendations from this meeting was that government oversight of recombinant DNA research should be established until the technology was deemed safe.**

In 1976 Genentech, the first genetic engineering company and a year later the company produced a human protein (*somatostatin*) in E.coli. Genentech announced the production of genetically engineered human insulin in 1978. The insulin produced by bacteria, branded *humulin*, was approved for release by the FDA in 1982.

The first field trials of genetically engineered plants occurred in France and the USA in 1986, tobacco plants were engineered to be resistant to herbicides. In 2009, 11 transgenic crops were grown commercially in 25 countries. In 2010, scientists at the J. Craig Venter Institute created the first synthetic genome and inserted it into an empty bacterial cell. The resulting bacterium, named *synthia*, could replicate and produce proteins.

With all these advancements why is Carlyle Rowland having problems?

Here is a major report, dated 14 Feb. 2017, 11 am EST:

Powerful gene editing procedures could one day be allowed to prevent people from passing on serious medical conditions to their children, according to a major report from senior US researchers. The cautious endorsement from two of the most prestigious US science institutions means that human embryos, sperm and eggs could all be genetically manipulated to mend faulty genes which are known to cause serious disease or disability, once research has shown it is safe to do so.

The report from the National Academy of Sciences & the National Academy of Medicine says the procedure is "highly contentious" because any genetic changes that are made are then inherited by the next generation. "The technology would therefore cross a line many have viewed as ethically inviolable," it states.

Most scientists agree that far more work is needed before clinical trials of so-called "*germline*" therapies can begin in humans. But the report argues that if the procedure is found to be safe and effective in the years ahead, it should not be rule out in exceptional cases.

"There is an enormous amount of research that has to go into this, and then the question is what are the conditions where you'd even consider it, and those are very tightly defined," said Rudolf Jaenisch, a member of the report committee and professor of biology at MIT. "It would be conditions

One example is when an adult carries two copies—rather than one—of the gene that causes Huntington's disease, a devastating condition that steadily damages nerves in the brain. If that person has children they will inherit at least one copy and will develop the disease. With gene editing, harmful copies could potentially be fixed in the parent's sperm or eggs, or in any embryos created through IVF. (*meaning unknown.*)

The national academies' report comes at a time when scientists are making spectacular progress in genome editing. With the latest gene editing tool, named **Crispr-cas9**, scientist can alter single letters of the DNA code, or rewrite whole genes. The technique has given researchers unprecedented insights into the basic biology of development and cancer, but has also been tested in animals as a treatment for a wide range of diseases. Last year, a Chinese group became the first to launch a trial of **Crispr-cas9** to treat patients with aggressive lung cancer for whom all other therapies had failed.

The national academies' report goes on to back the use of genome editing to correct faulty genes in adult tissues, such as the liver, lungs and heart, where the changes will not be passed on to children. But while it recommends that the tools used only to prevent and treat diseases and disabilities, the report points out that in the future, the same interventions could potentially enhance people's natural abilities. For example, a gene editing therapy that boosts the muscles of patients with muscular dystrophy could perhaps be given to healthy people to give them superhuman strength.

Risks include inaccurate gene editing that might produce unwanted mutations; the difficulty of predicting harmful effects; the difficulty of removing any harmful modifications from the gene pool; inequality that might result from enhancing one group of people but not another; and the moral and ethical considerations in purposely altering human evolution.

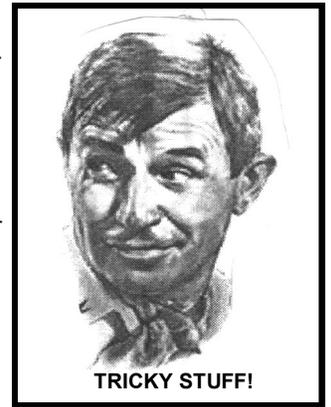
In summary...we are finding that genes have multiple jobs to perform, not just ONE. When we alter a gene for that just ONE we are altering that gene for all its other duties. Altering that gene for one good reason could have a bad effect on 100 or more other effects—thus the need to be careful. Think of the reason not to destroy all female mosquitoes to prevent malaria—it would perhaps wipe out the bat family who feed on mosquitoes and upset the world food chain.

We now have the power to quickly and easily alter DNA. It could eliminate diseases. It could solve world hunger. It could provide unlimited clean energy AND it could really get out of hand.

MOSQUITO FIGHTING UPDATE

Pay attention to the ingredients of bug sprays & other repellents, because they're not equally effective at warding off mosquitoes that carry diseases like Zika virus. Products with DEET (check the percentage) or oil of lemon eucalyptus, which contains an ingredient known as PMD, are more effective at repelling the *Aedes aegypti* mosquito that carries Zika, chikungunya, yellow fever & dengue. Wearable devices advertised as mosquito repellents should largely be avoided, their data suggests.

In their study, researchers purchased & tested 11 products & altogether they tested five wearable devices, five sprays & one candle, using human volunteers who had not bathed or used deodorant for at least 15 hours. Without any type of device or spray, about 89 to 91% of the mosquitoes were attracted to the volunteers. Of the five wearable devices, only one—the OFF! Clip-on—significantly reduced the number of mosquitos. The attraction rate was only about 27% when people were three feet from the cage. The device used a fan to disperse an insect-repelling chemical known as metofluthrin. The other wearable devices included a speaker to repel mosquitoes & three bracelets that emitted different oils & none had any effect on reducing attraction. And like many of the wearable devices, the candle that contained citronella oil did not reduce the number of mosquitos. But all the spray-on repellents significantly reduced the number of mosquitos attracted to the participants. The tested spray-ons generally used DEET or oils like lemon eucalyptus.



SEND A FRIEND A MARCO MEMBERSHIP—ONLY \$15/YEAR

MINUTES OF CHICAGO ANNUAL MEETING

11

Chicago, April 28, 2017...Hilton Garden Inn, Schaumburg, IL...Attendees: Bruce Small, Jeff Wolf, Chuck Lind, Michaline Przekop, Harry Przekop, Stuart Oserman, Howard Davy, Warren Brown, Richard Lochner, Marsha Lochner, Joe Breault, Jay Gartzlitz, Mary Favaro, Lou Molnar.

Meeting called to order by K9CIV at 8:16 am CDT. Roundtable introductions of all.. **Marco net and newsletter editor** KD4GUA said he continues to enjoy his work. All expressed their appreciation for his work on the net and newsletter.

Secretary's Report from WB2MXJ: Minutes of the 2016 meeting were reviewed and approved without changes. Membership Report: 114 members with dues up to date (newsletters to 254).

Recommend discussion and vote on use of an online database and membership dues payment system detailed in the MARCO Newsletter of April 2017; "MARCO board and reps, I've had some requests as Marco Secretary that dues be paid and managed online, such as via PayPal and an online database. The proposal would be to: develop an online database integrated into the Marco website that has the ability for members to self-update their membership data and pay dues online, and this replace the manual access database the Marco Secretary currently uses. That this website update be done by the internet committee &/or a consultant they pick as they deem appropriate to assure a good and secure system integrated into the Marco website. That it includes automated user friendly functions & emails sent by the system, such as (a) a thank you email for renewing dues; (b) a reminder email that December ends their current dues period, that dues are due the next month; (c) similar reminder emails every x months after dues expire; (d) an automated policy that after x years of not paying dues the member is purged from database; (e) that the current list of comp members be reviewed by the board every 1-2 yrs and the online database system blocks dues reminder emails for those people; (f) that anyone interested in Marco can enter their info and receive a free newsletter for at least a year before dues are due; (g) that the Marco Secretary has backdoor access to the online database so that for those who prefer doing dues or membership interest inquires manually, it can proceed as it does now, except that the Secretary will be updating the online database for members also adds a flag for whether you prefer to receive the Marco newsletter electronically or by mail, and if electronically than once the Marco newsletter is posted on the website an automated email is sent to all members with that flag-electronic with a link to the current Marco newsletter.

Finance wise, I suspect this proposed system with dues reminder would increase dues income more than the system costs over time. A subgroup appointed for this purpose (e.g., Pres, Pres. Elect, Sec., Treas, Internet committee) can sort through the policy details of implementation such as which fields in the current database to port over to the online database, approving the automated emails text, etc."

Motion 1 — The Secretary & Treasurer will pursue setting up PayPal for Marco dues to work by end of 2017 so it works for dues due Jan. 2018—YES, passed unanimous. Whether a second PayPal account would be setup for MediShare donations to be discussed at a future meeting.

Motion 2 — The Secretary, Treasurer & Internet Committee will explore setting up an online membership database as described above to present at the 2018 Marco meeting at Hamvention—YES, passed unanimously. WA9ZPL amendment passed to include in the system automatic tax receipts for Marco dues for business expense (not charity as not a 502 ©(3), and MediShare tax receipt as a 501 ©(3).

AE4BX said that to prevent historical access problems when people die in office, the Marco President, Secretary and Treasurer should be signatories to Marco finance accounts. This practice has lapsed and should be corrected. Every 2 yrs at leadership changes this should be remembered.

Treasurer's report by WIBEW—K9CIV read report as WIBEW not present. Marco balance \$8890.76; deposits: \$2215 + 185 outstanding; Expenses: \$2466.07 + \$300 outstanding.

MediShare balance \$25,025.18; Deposits: \$18,775; Expenses: \$0.

President-elect AA4FL report: MediShare domain registry sale for \$17,000 was put into the MediShare account and MediShare will be part of the online Marco site now.

Paperwork for 501©(3) for Marco—need to confirm paperwork is being done before issuing tax receipts—will check with Arnold where the paperwork is and who is filing annual reports to government. Perhaps legal documents like articles of incorporation, 501c3 can be on website. Secretary will coordinate with Treasurer to clarify the documents.

2 proposed scholarships in the Healing Arts—see attachments of the 2 proposals—both scholarship funds with condition AA4FL, clarify if US applicants only. Amended—all scholarship recipients receive comp Marco membership for 2 years.

How to encourage medical students to get into ham radio and Marco? Should medical students have waived dues to be in Marco? Students are interested in emergency communications, telemedicine, missions and these



Jeff Wolf & XYL Rosalie—
"WE WERE THERE!"

might be opportunities to reach them and help them to work through Marco and other radio groups.. Further exploration via a committee that AA4FL will coordinate to report back next year. Discussion brought up that Marco has a huge retention issue, not yet addressed.

Webmaster's report by KT8E—Not present.

MediShares's report by WB6OJB—not present.

Radio-Internet Coordinator's report by N5RTF—not present.

K9CIV is hopeful that the Hamvention booth members can find a better hotel for Marco; still have the old hotel reservation for 2017-18, but it is far away without transportation to Hamvention.

Met in lobby at 6 pm for the Marco Banquet. At the banquet Marco Past President K6JW gave a short memorial about Marco members who were recent SKs...

Proposed Amateur Radio Scholarship Fund: The MARCO Scholarship Fund will be administered by the ARRL Foundation.. Applicants must be licensed Amateur Radio Operators. They can be from any US state or ARRL division, with no geographical preferences. An applicant's field of study must be one leading to a career in the healing arts, including but not necessarily limited to medicine, dentistry, vet medicine, nursing, pharmacy EMT, or radiology tech. Preference will be given to undergraduate students and those in certificate programs, but graduate student may also apply.

Within their online application, applicants should include the following within the Ham Radio interests and activities section: Volunteerism and/or and public service activities making use of amateur radio. How they would make amateur radio relevant in their future careers. In addition, they should show a desire to encourage others in the healing arts to become licensed hams.

The MARCO scholarship will be funded by an initial contribution of \$1,000. The contribution and earnings on the endowed scholarship will go toward funding the annual award. Additional sums may be added to the fund. Annual contributions to the fund should be made by Dec. 31 of each year. This scholarship is for the exclusive use of the winner and is to be applied to tuition, books, fees and other educational expenses. The scholarship award will be \$500, with the first scholarship to be awarded in 2018. The scholarship is a single year award. Applicants can apply again for subsequent years. The FAR Scholarship Committee will disburse the scholarship funds directly to the awardees.

Speaker after business meeting Rick Tucker DEA agent x 25 years and prior to that police officer for 10 years in narcotics. Lived in Thailand for years as a DEA agent, now retired 9 yrs. Presented opium issue from the DEA agent perspective with 10% of the population using opiates for bad purposes, not as they are prescribed. The bigger problem of docs are non compliant patients not using as directed, rather than drug seekers.



Bruce Small KM2L
& XYL, Terri

NEW FACES* for MARCO & RENEWALS, as of May 1, 2017

Bernstei, Marvin W2PAT
 Kennedy, John N2LW
 Petrizzi, Mark, WA1EAX
 Sharp, Jacob, W6DUH
 Smith, Larry, N4FD
 Stapp, Mike, K#OWW
 Wolfia, Lyman, K9LZJ
 Varga, Michael, NR3C



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 All the new mem-
 bers we hoped to
 have signed up in
 Dayton, Ohio
 At the new
 Site of the
 ANNUAL
 HAMVENTION

NO RADIO, NO ANTENNA?
 Keep in touch with MARCO on "listserve" E-Mail your request to join to BruceSmall73@gmail. Com If on the list simply contact marco-ltd@googlegroups.com
 And/or
 Tune in to Marco Grand Rounds on your computer: www.reliastream.com/cast/start/tkeister

**MEDICAL AMATEUR RADIO COUNCIL, LTD.,
 New Membership Application & Renewal form**

REGULAR MEMBERSHIP \$25: A licensed professional in the health care field who holds an amateur radio license. A DX Membership is \$25 in U.S. currency .

ASSOCIATE MEMBERSHIP \$15: Anyone licensed or unlicensed who is interested in medicine and radio.

10 year Regular membership fee \$200 (a saving of \$50). Associate membership for 10 years is \$100 (also a saving of \$50).

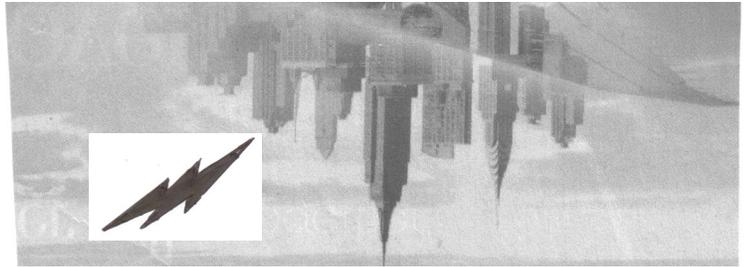
Name: _____
 Address: _____

Call Sign _____ Type License: _____
 Phone: _____
 Internet Address: _____
 Your Birthday _____ (Year optional.) Member ARRL _____

**Applications for membership should be sent to
 Secretary Joseph Breault WB2MXJ,
 1615 Brockenbraugh St., Metairie, LA, 70005
 Email: wb2mxj@arrl.net**

**WHY NOT SEND A HAM FRIEND A MEMBERSHIP IN MARCO,
 \$15, ONE WHO IS INTERESTED IN BOTH MEDICINE & RADIO.**

Your Renewal Date
 Is January 1 of each year



Web Site: <http://www.marco-ltd.org>
 MedShare Web Site: <http://www.medishare.org>

MARCO Grand Rounds is held every Sunday at 11 a.m. Eastern Time, 10 a.m. Central, 9 a.m. Mountain and 8 a.m., Pacific Coast time on 14.342. You qualify for one hour credit, Category II CME with your check-in.

DAY	EASTERN TIME	FREQ.	NET CONTROLS
Any Day	On the Hour	14.342	Halling Frequency
Sunday	10:30 a.m.	14.140	NSRTF (CW-net)
Sunday	11 a.m.	14.342	KD4GUA

MARCO NET SCHEDULE



"AETHER"

MARCO'S

**MEDICAL AMATEUR RADIO COUNCIL, LTD.,
 P.O. Box 127, Indian Rocks Beach, FL, 33785
 (Send dues to Jos. Breault, M.D., WB2MXJ, 1615 Brockenbraugh St. Metairie, LA 70005.)**

**105th
 Edition
 (2000-2017)
 April 2017**