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

THE "PLACEBO EFFECT"

THE POWER OF SIMPLE SUGGESTION BY A SYMPATHETIC PHYSICIAN TO AN UNSUSPECTING PATIENT IS CONSIDERABLE: WHICH LEADS TO THE EXPRESSION "NATURE HEALS THE DOCTOR GETS THE FEE" IN 70% (?) OF CASES.

A placebo (*Latin for "I shall please"*) is a simulated or otherwise medically ineffectual treatment for a disease intended to deceive the recipient. Sometimes patients given a placebo will have a perceived or actual improvement in a medical condition, a phenomenon called the "placebo effect." In medical research, placebos are given as control treatments and depend on the use of measured deception. Common placebos include inert tablets, sham surgery and other procedures based on false information. However, placebos can also have a surprisingly positive effect on a patient who *knows* that the given treatment is without any active drug.

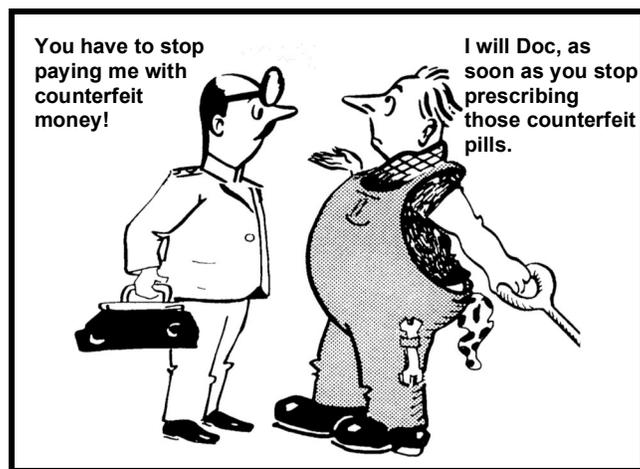
In one common placebo procedure, a patient is given an inert pill, told that it may improve his/her condition, but not told that it is in fact inert. Such an intervention may cause the patient to believe the treatment will change their condition; and this belief may produce a subjective perception of a therapeutic effect, causing the patient to feel their condition has improved—or an actual improvement in their condition. This phenomenon is known as the placebo effect. *Their use in the correct surroundings are encouraged.*

The placebo effect points to the importance of perception and the brain's role in physical health. However, the use of placebos as treatment in clinical medicine (as opposed to laboratory research) is ethically problematic as it introduces deception and dishonesty into the doctor-patient relationship.

A placebo has also been defined as "a substance or procedure...that is objectively without specific activity for the condition being treated." Under this definition, a wide variety of things can be placebos and exhibit a placebo effect. Pharmacological substances administered through any means can act as placebos, including pills, creams, inhalants and injections. Medical devices such as ultrasound can act as placebos. Sham surgery, electrodes implanted in the brain, and sham acupuncture, either with sham needles or on fake acupuncture points, have all exhibited placebo effects. The physician has even been called a placebo; a study found that patient recovery can be increased by words that suggest "the patient would be better in a few days." **It has been proposed that the placebo, which may be unethical, could be avoided entirely if doctors comfort and encourage their patients health.** In 2011, a Program in Placebo Studies was established at the Harvard Medical School.

"60-90% of doctor visits are estimated to be in the mind-body realm (remember the blush reaction—the mind is embarrassed and the body responds?) and are poorly treated by drugs and surgery. Then there is the death of a spouse whereas the living partner passes within months from induced mourning; mindful stress causing morbidity and mortality.

There are a lot of diseases where placebos will not cure, such as immunization, joint replacements, cataract operations, penicillin, hormone replace-



LATE BREAKING NEWS

Silent Key....Marco lost one of its most respected members in the passing of **Dr. Bob Morgan VE3OQM** on Christmas Day. Besides being one of the most loyal members of Sunday Marco Grand Rounds of the Air he headed the CW Net which preceded it. Many of you enjoyed his Aether-column "News from Canada" which was co-sponsored by his late cat "Bowser." He joins **Dr. Lou Wiederhold WA1HGE** in "Aether Heaven" our benevolent treasurer who passed away earlier this year. They will both be honored with our silent toast at the Marco Annual Meeting in Myrtle Beach this April. We hope you (all) can attend.

Orlando HamCation, Feb. 8,9, & 10th...plans for the Southeast Regional Marco meeting are moving ahead. Make your reservations at the Mystic Dunes Golf Resort, 7600 Mystic Dunes Lane, Celebration, Florida, 34747 (a Walt Disney 1890's town) phone 407 396 1311, Reservations: 888 483 7518. Going rate is \$143 per night for a 4-person suite or around \$72/couple.) For details go to "Mystic Dunes Resort" on Google. Best rates are obtained by doing this—as much as \$150 off the going two-night rate. For more information on the Hamfest go to hamcation.com.

Annual Marco Meeting will be held April 25-28 at the Breakers Hotel in Myrtle Beach, South Carolina. For reservations call 843 444 4444. Please notify our President, Dr. Mary Favaro at maryfav@aol.com so she can keep up with the numbers. Myrtle Beach is a wonderful place to spend a vacation and the **Breakers Hotel** is located right on the ocean beach.

Does BMI adequately convey a patient's mortality risk? A report last month that people who are slightly overweight have less chance of dying than those of normal weight had some researchers calling for further study of how a little extra fat can apparently be good for you. But others saw it as another sign that the standard way of measuring who is too heavy should be scrapped. Many years ago, to be fat was a sign of good health! Are those days returning or is the BMI inaccurate?

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>TROLS</u>	<u>EASTERN</u>	<u>FREQ.</u>	<u>NET CON-</u>
Any Day	On the Hour	14.30	Hailing Frequency
Sunday	10:30 a.m. Eastern	14.140	CW Net, N5RTF
Sunday	11 a.m. Eastern	14.307	Warren, KD4GUA



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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.

replacement—these things we need.

Dr. Howard Benson, cardiologist at the Harvard Medical School is now conducting a study where half the group who have by-pass surgery have others praying for them and half not—results pending. One surgeon once said, “Before every surgery, I say a prayer for my patient, over the patient before the scalpel starts.” Many others do the same thing—**are they quacks?**

Dr. Benson did a study in which he determined there were counter-balancing mechanisms to the “fight or flight response.” Just as stimulating an area of the hypothalamus can cause the stress response, **so activating other areas of the brain results in a reducing action.** This “relaxation and healing” response is a state of deep rest that changes the physical and emotional response to stress, that is, heart rate, blood pressure and muscle tension. He went on to say “*headache, headache, headache,*” over and over and got a headache started! “*You are wired to it by memory—association pattern, word with pain.*” Benson discovered that by speaking the same word or sound over and over again, praying or otherwise, can cause the body to relax and promote healing.

Clinical studies found that those who attended church regularly had lower death rates and were more likely to stop smoking, exercised more and had more social contacts and stayed married longer than those who did not. Now half of the countries medical schools have courses in body/mind and spirituality in classes.

Medicine and religion have been separate, even antagonistic for 200 years. The power of prayer in healing was a laughable topic thirty years ago when it was first brought up. But aging Baby Boomers are growing more religious. People are turning to alternative medicine for the reason it works psychologically but still lacks scientific validation.

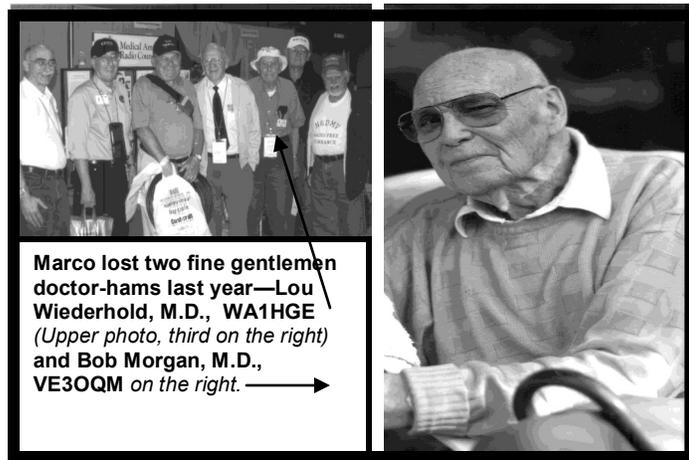
In stress reaction adrenalin, growth hormone, thyroid hormone and cortisone are thrown out. In the rebuilding state, insulin, testosterone, and estrogens are secreted. Constant consistent fear and anxiety produces constant secretion of stress hormones until they are deleted and then infection and disease sets in. **If we can stimulate the healing center by means including suggestion we may be able to help our patients heal faster similar to stressing them to making them worse.**

Because placebos are dependent upon perception and expectation, various factors that change the perception can increase the magnitude of the placebo response. For example the color and size of the placebo pill makes a difference, with a “hot-colored” pill (*red or yellow*) working better as a stimulant while “cool-colored” pills (*blue or white*) works better as depressants. Capsules rather than tablets seem to be more effective and size can make a difference—big pills increase the effect. Another factor is high price which increases the effect of placebo pills.

If a placebo cream is applied on one hand with the expectation that it is an analgesic, it will reduce pain only in that hand and not elsewhere. If a person is given a placebo under one name, and they respond, they will respond in the same way on a later occasion to that placebo under that name but not if under another.

Placebo analgesia (*pain relief*) depends upon the release in the brain of endogenous opioids (*endorphins known since 1978*). Placebo effects can last for over 8 weeks in panic disorder; 6 months for angina and 2.5 years in rheumatoid arthritis. Placebo effects after verbal suggestion for mild pain (*it shouldn't hurt now*) can be robust and still exist after being repeated ten different separate times even if they have no actual pharmacological pain killing action.

Withdrawal symptoms can occur after placebo treatment. This was demonstrated after discontinuation of the Women’s Health study of hormones where women had been on placebo for 5.7 years and when discontinued moderate



Marco lost two fine gentlemen doctor-hams last year—Lou Wiederhold, M.D., WA1HGE (Upper photo, third on the right) and Bob Morgan, M.D., VE3OQM on the right. —>

vere withdrawal symptoms were reported by 41%.

Roughly only 30% seem fully susceptible to placebo effects and it is not possible to determine whether it will work on whom.

About 25% of doctors use placebos as a diagnostic tool to determine if a patient’s symptoms were real, or if the patient was malingering. However, this was considered unethical. In the UK homeopathy is considered a placebo treatment and it is frowned upon.

A survey in the U.S. of more than 10,000 physicians found that 24% would prescribe a placebo simply because the patient wanted treatment; 58% would not and the remaining 18% said it would depend on the circumstances.

Those with Alzheimer’s disease lose the capacity to be influenced by placebos and this is attributed to the loss of their prefrontal cortex dependent capacity to have expectations.

Children seem to have greater response than adults to placebos. Knowingly giving a person a placebo when there is an effective treatment available is a bioethical complex problem.

The “**NOCEBO...**” is the opposite effect, a patient who disbelieves in a treatment may experience a worsening of symptoms. This happens when members of a control group receiving an inert substance report a worsening of symptoms.

Conditions where placebos are effective include: ADHD, anxiety, asthma, autism, BPH, binge eating disorder, bipolar mania, Crohn’s disease, depression, dyspepsia, epilepsy, food allergy, peptic ulcers, headache, hypertension, irritable bowel syndrome, migraine prophylaxis, multiple sclerosis, nausea & vomiting, pain, panic disorders, premenstrual disorder, psoriatic arthritis, GERD, restless leg syndrome, rheumatic disease, sexual dysfunction women, social phobias, ulcerative colitis, cough, congestive heart failure, herpes simplex, Parkinson’s disease (*false information, such as when electrical stimulation is turned “off” in those with implanted brain electrodes*) & pathological gambling.

An issue of concern to pharmaceutical companies is that the effectiveness of placebos has increased over time, thus making it more difficult to demonstrate the effectiveness of new drugs. The reason for this is unknown.

Have you prescribed placebos? Would you continue to prescribe them under certain conditions? Do you think this is unethical? It would be of benefit to all if you would submit your feelings on this tender subject that has so many possible repercussions both positive and negative.

EXPLAINING THE UNEXPLAINABLE

Doubts cast on effectiveness of Mammograms

Mammograms have done surprisingly little to catch deadly breast cancers before they spread, a *BIG* U.S. study finds. At the same time, more than a million women have been treated for cancers that never would have threatened their lives, researchers estimate.

An update on the problem at Clearwater Florida's Morton Plant Hospital on Nov. 20th helped explain the situation. We screen to test the asymptomatic patient in order to reduce a disease. But what enters into the picture is "BIAs." There are three types of bias: **Lead time bias** where one thinks that the earlier a disease is diagnosed the better we can treat the disease. What this actually means is that the earlier we catch the disease the longer a patient will seem to live beyond those diagnosed as late-stage disease. Thus the patient seems to live a longer life.

The second type of bias is **Over-diagnosed bias** when the patient is diagnosed earlier without true disease and seems to live longer. The third type has been called **length time bias** whereas a slow growing tumor allows a patient to live longer than a fast growing tumor.

Mammograms were begun in 1973 and since, the more mammograms the more cancers found. These have been graded "A" through "D." Grade A means do something—surgery, radiation and or chemo. Grade B means there is a moderate endorsement to do something. Grade C means small benefit for doing something and Grade D—don't do it, harm outweighs the benefit.

In 1989, annual mammograms after age 40 were begun. In 1996, mammograms were supposed to be done every one to two years if between ages 40-49 and one cancer was picked up in every 1,792 mammograms performed. For those between 50-69, one in 878 mammograms were discovered.

In 2009 it was recommended that a mammogram be done every 2 years on those between 40-74 toward helping to relieve the unnecessary harmful effects of anxiety, pain, additional imaging, financial stress and biopsies. Since one cancer has been found in every 929 women ages 40-49; one in every 322 in those 50-59; one in every 230 in those 60-69. Studies in those over 70 are not known. During this time only one in five biopsies have been actual cancers. During this time 10% of biopsies were misdiagnosed as being "cancer," when actually they were benign. **The incidence of cancers remained the same, doing exams every two years as had previously been done every one year.**

Recommendations now call for: 40-49, every two years. However, in those with a close family history of breast cancers and increased breast density, annual exams should be performed where the chances double of picking up active disease.

The recent study released in the New England Journal of Medicine in November 2012 offers the most detailed look yet at over treatment and it adds fresh evidence that screening is not as helpful as many women believe. Mammograms are still worthwhile because they do catch some deadly cancers and save lives, and some doctors disagree with conclusions the new study reached.

But it spotlights a reality that is tough for many to accept: Some abnormalities that doctors call "cancer" are not a health threat or truly malignant. There is no good way to tell which ones are, so many women end up getting treatments such as surgery and chemo that they don't need.

The findings revealed that no changes in breast cancer deaths have occurred since mammography came into wide use. Scientists had assumed that the actual amount of disease—how many true cases existed—did not change or grew only a little during those three decades. Yet they found a big difference in the number and stage of cases discovered over time, as mammograms came into wide use.

Mammograms more than doubled the number of early stage cancers detected, from 112 to 234 cases per 100,000 women. But late stage cancers dropped just 8% from 102 to 94 cases per 100,000 women.

This imbalance suggests a lot of over diagnosis from mammograms, which now account for 60% of cases that are found. If screening were working, there should be one less patients diagnosed with late-stage cancer for every additional patient whose cancer was found at an earlier stage. **Instead, we're diagnosing a lot of something else**—not cancer in that early stage and the worst cancer is still going on, just like it always was.

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COMMENTS CONCERNING CANCER TALK

On Nov. 25th we had a controversial discussion concerning a new study in the New England Journal of Medicine regarding the value of mammography.

Arnold Kalan WB6OJB, Pacific Palisades, CA, states: The 65-year old woman with ca in situ of the breast not to worry cause she'll die of something else. Well, next you'll tell me that I can tell the 50-year old with ca in situ of the cervix not to worry because she's probably got 5 years before it will cause problems. Sure!!!



Bruce Small KM2L, Clarence N.Y. stated on Listserve, "At no time in Warren's talk did he say that current advice is to leave tumors in place and tell women not to worry. No way, no how. The point of the discussion is that mammography has unintended consequences. In your own clinical experience I am sure that you have seen women who did much better than expected, and there are those that did much worse. Cancers behave in a heterogeneous way, and while our methods of grading and staging account for some of this behavior, it can't account for all of it. Mammography finds lumps that, when biopsied have the histologic characteristics of malignancy. All of these lumps are removed. Some of the women do very well, and we take credit, but it is clear that some of these tumors would have been very slow-growing and wouldn't have killed the patient. The study under discussion was an attempt to estimate how often this occurs—and apparently it is not rare. Because at the present time we have no way to identify these histological malignant but clinically benign tumors, the current practice is to remove them. We then do radiation and/or chemo, and these take a huge toll on our patients. Where we are headed is towards being able to profile these tumors genetically or to look for the presence of additional tumor markers that give a clear indication of prognosis. With that information we can perhaps make the decision to withhold RT/CT for clinically benign tumors, or, well down the road, to offer the choice of not operating.

Regarding screening in the US versus UK, the current cutoff for PSA testing is 75 at Memorial Sloan Kettering and Mayo Clinic, tempered by an estimate of life expectancy. The VA allows PSA testing up to age 80.

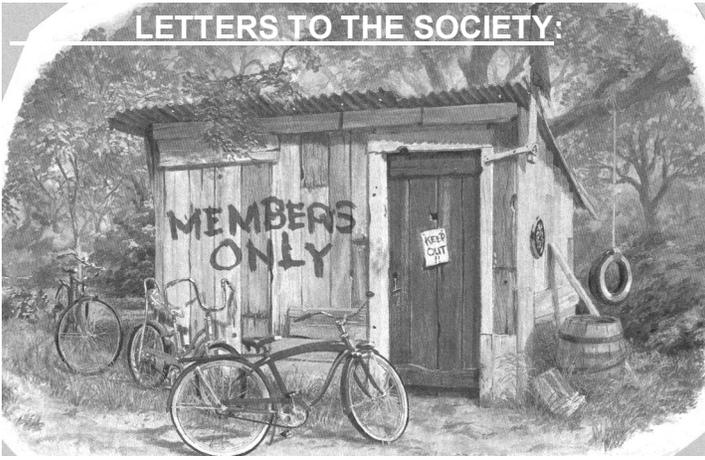
Mammography screening benefits do not stop in the UK at 74. In general they call for screening colonoscopy in medium to high risk patients up to the age of 75. Surveillance colonoscopy to follow-up previous malignancy or adenomas is individualized in older patients, depending on an estimate of their health and life expectancy.

Oh, and the life expectancy at birth for a Canadian is 80.7 years (ranked 12th world-wide), for a citizen of the UK 80.1 years (15th) and for the US 78.2 years (37th). Perhaps those who cross the border of care live less long than those who don't. Now that would be an interesting study."

Mary Favaro AE4BX, Myrtle Beach, SC writes, "We have been accustomed to doing good medicine. Afraid it is all down the tubes now. The Canadians have often have come to the US when socialized medicine refused to treat them. We'll have no place to go. My nephew did a fellowship in England. He said there the absolute cutoff was 74 years above that no diagnostic procedures colonoscopy, mammogram, pap smears, and of course, no corrective measures. Scary. Take care of your health. Not much out there for us. They are trying to tell us not to do PSA's any more because all those men will want corrective action if it looks like they have prostate cancer.

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...Ian Kellman K4IK, & Arnold Kalan WB6OJB.**

From **Jeff Wolf K6JW**, "The current issue of *Aether* has an article on page 3 that addresses the issue of license renewal. Noting that the W5YI-VED charges \$7 to process your renewal. There's no need to use the VEC and pay its fee as you can renew for free (or for the vanity fee if you have a vanity call sign) by going directly to the FCC's online website. For more information, check the following page on the ARRL website: <http://www.arrl.org/renewals>.

Bruce Small, KM2L ' I renewed my license at the FCC Website earlier this month. The process took under two minutes to complete and the printed copy of the license was delivered 6 days later

From **Bobbie WIBEW**, "Just got my newsletter and I found my call is still incorrect as is my net check in total. My call is WIBEW not WA1BEW. I have not missed a net this year, one of my goals was to make them all this year and so far I have not missed one check-in either by SSB or on Skype with Bruce. I do use them for category II CME's. (Mistakes corrected.)

On Dec. 4th **Warren KD4gua** wrote on listserv: "Knowledge is knowing a tomato is a fruit. Wisdom is not putting it in a fruit salad." **Bob Morgan VE3OQM** replied, "botanically the tomato is a berry." **Jeff Wolf K6JW** answered "technically it's a fruit but, for the record, I've never put it in a fruit salad. thus, I must be wise." **Arnold Kalan WB6OJB** also called the tomato a "berry" and was accused of spending too much time at Los Angeles' "Knotts Berry Farm." **Charley Krin** went on to say he had never been to Knotts Berry Farm but for taxing purposes the USDA and tax authorities classify the tomato as a vegetable...and that can be a significant difference in some cases. Eggplants and most cucurbits (cucumbers, melons, pumpkins and other edible gourds) fall under the same classification. **The answer is:** The tomato is botanically a fruit but it was called a "vegetable" by the Supreme Court in 1883 so that import taxes on tomatoes could be carried out. Now the question arises, **what is a watermelon—a fruit or a vegetable?** Does it fall into Charley Krin's definition as a fruit being called a vegetable?

From **Jane Morgan, Dec. 28, 2012, Hamilton, Ontario...** "It is with a broken heart that I am writing this note to let you know that my father, **Bob Morgan, VE3OQM**, passed away on Christmas morning. He was in the hospital and I was with him. It was peaceful, just as he wished. Dad enjoyed the Sunday morning Grand Rounds, researching the topics in the days before each meeting. He treasured the friendships which he made through MARCO. Please keep him in your thoughts and prayers." Letters of condolences came from Harry WB9EDP, Arnold WB5OJB, Mary AE4BX, Warren KD4GUA, Chip N5RTF, Fred K0FS, Jeff K6JW, Al KA7LOT, Linda KE5BQK, Bernie KD5QHV, Bruce KM2L, Keith K3IM, among others.

Ian Kellman K3IK, Shavertown, PA comments, "Have provided help over the years, including road side for traffic accidents, but reality is we provide more reassurance than we do medical help, since most patients have known problems and have their own medications and just need a kind hand. EMTs and paramedics are actually better suited to treat the immediate short term need, physicians really not prepared for the immediate problem as many are too deep into their specialty and have forgotten some of the basics of immediate care."

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.



The prevalence of autopsy-determined coronary atherosclerosis among US service members was 77% during the Korean War; 45% during the Vietnam War and now it has declined to 8.5%. Reasons suspected: Decline in smoking, better treatment for high blood pressure and hyperlipidemia and better eating habits. However, this is being challenged by a 70% rate of obesity among American adults with potential diabetes.

Newsweek magazine ended almost 80 years in print with its issue dated Dec. 31 as it transitions to an only on line-only format, a move that make it the most widely read magazine yet to give up on the print media. This leaves only **Time Magazine**, the leader in the newsweekly space with a circulation of 3.3 million. **US News & World Report** went online in 2008 and is profitable with 180 staff writers. Online publications requiring a paid subscriptions have struggled—*when will this publication be forced to go online only and could it survive?*

Charlie Reese, an Orlando reporter writes a completely neutral column: "Have you ever wondered, if both the Democrats and the Republicans are against deficits, WHY do we have deficits? Have you ever wondered, if all the politicians are against inflation and high taxes, WHY do we have inflation and high taxes? **Politicians are the only people in the world who create problems and then campaign against them.** It seems inconceivable that a nation of 310 million cannot replace 545 people (435 congressmen, one President and 9 Supreme Court justices) who run our government who show irrevocable signs of irresponsibility; then it must follow that what now exists is what they want to exist. If the tax code is unfair, it's because they want it unfair. If the budget is in the red, it's because they want it in the red. If they do not receive social security but are on an elite retirement plan not available to the people, it's because they want it that way. One should not let these 545 people shift the blame to bureaucrats, whom they hire and whose jobs they can abolish; to lobbyists, whose gifts and advice they can reject; to regulators, to whom they give the power to regulate and from whom they can take this power. Above all, do not let them con us into the belief that there exists disembodied mystical forces like "the economy," "inflation," or politics" that prevent them from doing what they take an oath to do. They and they alone, should be held accountable by the people who are their bosses." *Those of you with the answers should come forth and guide us.*

Guns in America...As of 2009, there were 114 million handguns, 110 million rifles and 86 million shotguns in the USA. Firearm-related deaths in 2009 were: 18,735 suicides; 11,493 homicides; 554 accidents; 333 legal use of force and 232 unknown cause. Guns were more widely owned in the South and Midwest. Twice as many men owned guns as women. Present Federal laws ban guns that can't be detected by security devices. Restrictions exist on machine guns that fire multiple rounds with a single pull of the trigger, silencers and short-barreled rifles and shotguns. Gun manufacturers produce civilian versions of the M16 service rifle that first saw combat in Vietnam. These guns, sometimes referred to as "modern sporting rifles," or AR-15s, don't allow for fully automatic fire. Expired federal laws, and some state laws, made some AR-15 style firearms illegal if they include multiple "assault weapon" features which include a muzzle flash suppressor, a bayonet mount, a detachable magazine; a pistol grip and a folding or telescoping stock.

WHAT ARE "PDF" FILES

Portable Document Format

PDF was developed in the early 1990s as a way to share documents, including text formatting and inline images, among computer users of disparate platforms who may not have access to mutually-compatible application software. It was among a number of competing formats such as DjVu, Envoy, Common Ground Digital Paper, Farallon Replica and even Adobe's own PostScript format (.ps). In those early years before the rise of the World Wide Web and HTML documents, PDF was popular mainly in desktop publishing workflows.

PDF's adoption in the early days of the format's history was slow. Adobe Acrobat, Adobe's suite for reading and creating PDF files, was not freely available; early versions of PDF had no support for external hyperlinks, reducing its usefulness on the Internet; the larger size of a PDF document compared to plain text required longer download times over the slower modems common at the time; and rendering PDF files was slow on the less powerful machines of the day.

From version 2.0 onwards Adobe distributed its Acrobat Reader (now Adobe Reader) program free of charge, and continued supporting the original PDF, which eventually became the de facto standard for printable documents on the web (a standard web document).

In 2008 Adobe systems' PDF Reference 1.7 became ISO 32000:1:2008. Thereafter, further development of PDF (including PDF 2.0) is conducted by ISO's TC 171 SC2 WG8 with the participation of Adobe Systems and other subject matter experts.

Portable Document format (PDF) is a file format used to represent documents in a manner independent of application software, hardware, and operating systems (*can be used on almost every type of program!*) Each PDF file encapsulates a complete description of a fixed-layout flat document, including the text, fonts, graphics, and other information needed to display it. In 1991, Adobe Systems co-founder John Warnock outlined a system called "Camelot" that evolved into PDF.

While Adobe Systems made the PDF specification available free of charge in 1993, PDF remained a proprietary format, controlled by Adobe, until it was officially released as an open standard on July 1, 2008, and published by the International Organization for Standardization as ISO 32000-1:2008. In 2008, Adobe published a Public Patent License to ISO 32000-1 granting royalty-free rights for all patents owned by Adobe that are necessary to make, use, sell and distribute PDF compliant implementations.

Effective Jan. 10, 2013, PDF creation tools will no longer be offered through Acrobat.com and will be available only through Adobe for a low monthly price. There are many free PDF creation programs such as PrimoPDF, which can be found at download.cnet.com (search for PrimoPDF). For Microsoft Office 2010 users, that capability is built-in (Save to PDF...). A free add-in for Office 2007 is available at www.microsoft.com/download; search for SaveAsPDFandXPS.exe.

(Perhaps Bruce KM2L or Chip N5RTF can explain it in more simple terminology?)

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THE END OF THE CASH REGISTER?

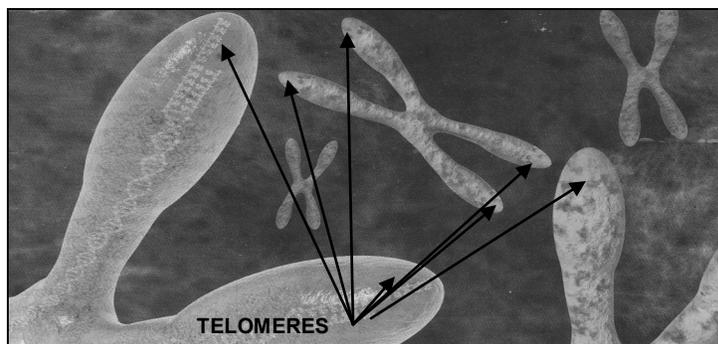
Did you ever change your mind about buying something because the line at the cash register was too long? In the near future someone will follow you around having a mobile hand held device that reads credit cards and send you your receipt by email. The lonely register will remain for cash purchases.

Urban Outfitters made a big splash last fall when it announced it had ordered its last new cash register and was going to Apple handhelds in their stores. Nordstrom and JCPenney have also embraced mobile technology to eliminate lines at the cash register.

Also, instead of seeing racks of dresses you'll see one or two models which you will order via the internet your size determined by a store scanner. Digital wallets are now available from Apple called "the Passport" where you can pay with e-cash from your Apple e-wallet."

5

YOUR LIFE EXPECTANCY DEPENDS ON YOUR TELOMERES ?



DNA threads called telomeres have been linked to life expectancy. The DNA that makes up your genes is entwined in 46 chromosomes, each of which ends with a telomere, a stretch of DNA that protects the chromosomes *like the plastic tip on a shoelace*.

Telomeres are quite long at birth and shorten a bit every time a cell divides, ultimately after scores of divisions, very little telomere remains and the cell becomes inactive or dies. And because elderly people generally have shorter telomeres than younger people, scientists believe that telomere length may be a marker for longevity as well as cellular health.

In a Duke University study, researchers analyzed DNA samples from 5-year-old children, and again when they were 10. During that interval, some had been subjected to physical abuse or bullying or had witnessed adults engage in domestic violence. "*We found that children who experience multiple forms of violence had the fastest erosion of their telomeres compared with children who experienced just one type of violence or did not experience any at all,*" said one of the authors.

Another study conducted at Brigham and Women's Hospital in Boston, hints at possible physical effects of chronic stress. Among a sample of 5,243 nurses nation-wide, those who suffered from phobias had significant shorter telomeres than those who didn't. According to the lead author, "*It was like looking at someone who is 60 years old versus someone who was 66 years old.*"

Another biologist stated, "*The telomeres are essential for protecting chromosome ends. When the telomere gets to be very, very short, there are consequences, noting the increased risk of age-related ailments.*"

While researchers are adding to the list of things that can shorten telomeres (*smoking for instance, and infectious diseases*), they've also zeroed in on activities that seem to slow down telomere degradation. In a German study people in their 40s and 50s had telomeres about 40% shorter than people in their 20s if they were sedentary, but only 10% shorter if they were dedicated runners.

Scientists don't understand exactly how negative life experiences accelerate telomere erosion—or how positive behaviors staves it off. At this time they are unable to say whether shorter telomeres cause aging or merely accompany it. But it's clear the fates aren't entirely in charge. According to the new science of telomeres, we can, to some extent, influence how much time we have left.

(Information for the above was taken from "Expiration Dates" which appeared in the Jan. 2013 edition of "Smithsonian," page 14.)

PHYSIC FACTS...Static electricity was the first kind of electricity to be discovered. The conservation of charge states that electric charge is neither created nor destroyed. The total amount of electric charge in the universe remains constant. **Electromagnetism** is the relationship between **electricity** and **magnetism**. Electric currents can produce magnetic fields and magnetic fields can produce electric currents.

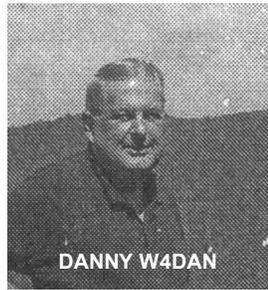
The word "**physics**" comes from the Greek word "physika" meaning "natural things," or the study of nature. Some of the migrating Germanic and Mongolian peoples were the Gauls, Viagoths, Franks, Huns and Vandals. We get our word "*vandal*" from the last group, who were presumably not the best of neighbors.

MULTI-BAND DELTA LOOP

By Danny Centers W4DAN

HOW DOES COAX WORK?

Warren KD4GUA brought the except about delta loop antennas that appeared on page 57 of the January 2013 issue of QST to my attention. We discussed the following advantages of the delta loop. It requires only one supporting structure, and it only requires slightly more space than a dipole. Good vertical polarization can be obtained without the need for radials. By tilting or slanting the plane from the vertical configuration, a little gain can be realized.



My suggestion for making the antenna more practical is to construct it for multi-band, instead of single band, operation. A good example for doing this is to cut the wire a full wavelength on the lowest frequency that you plan to use. For example, if you want to operate 80 through 10 meters, the length of the wire should be 288 feet. The formula for determining wire length for this antenna is 1007 divided by frequency in MHz equals length of antenna wire.

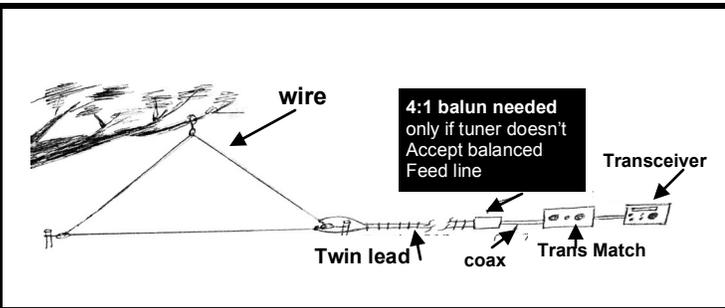
The following are examples of lengths of other frequencies:

- 160 through 10 meters = 560 feet
- 80 through 10 meters = 288 feet
- 40 through 10 meters = 144 feet
- 20 through 10 meters = 72 feet.

This type of the delta loop should be fed at the bottom corner for better vertical polarization. For horizontal polarization it can be fed at the top corner or midway in the bottom horizontal leg.

For multi-band operation, balanced feed line of either open wire, or ladder line should be used. This antenna is designed for use with a tuner that accepts twin lead. A tuner that does not accept twin lead can be used, but an outboard 4:1 balun should be placed between the tuner and the twin lead as shown in the drawing.

Delta loop antennas have been a part of my ant farm for many years. Except for the last couple of months since my tri-band beam has been back on the tower, and for the past two years, an 80 meter delta loop was used



when checking into the Grand Rounds of the Air net on 20 meters. It actually worked better for net operation than the beam because of the lower directivity and omni directional characteristics. Of course, it doesn't have the gain of the very directional beam.

COMMENTS FROM GRAND ROUNDS...Arnold WB6OJB

states: There have been several airline flights when they have asked me for medical assistance. The worst time was coming back from Australia when I was asked to see a paraplegic in the bathroom who had severe vomiting and diarrhea. Fortunately we had our medical kit with us and we were able to take care of the problem. Ian Kellman K4IK states, "Problem today, most of us are specialists and are reluctant to attend patients in airliners with problems since we have long ceased treating these conditions due to our specialties whereas the E.R. and family docs are right at home."

Chip Keister N5RTF has been recommended to take over the CW net held each Sunday morning at 10:30 am EST on 14.140 that the late Bob Morgan ran. It has also been mentioned to call the net the "Bob Morgan Memorial CW Net." This will be determined at the annual meeting in Myrtle Beach in April.

Coax cable is for the purpose of transferring RF energy from the transmitter to the antenna.

Many are familiar with Ladder Line, 2 wires in parallel from the transmitter to the antenna. If the 2 wires are spaced very carefully with little variation, one side will be of a positive value (voltage or current) and the other will have a negative value exactly equal. The 2 RF fields cancel each other. This does not take away the RF energy, but keeps it from radiating into the atmosphere and follow the wires. In affect it makes a very high resistance to the atmosphere and a low resistance along the Ladder Line.

The draw back with Ladder Line is it is affected by nearby objects. Something close to the Ladder Line will unbalance it. Therefore coax was developed to reduce that problem.

Coax is doing the same thing as Ladder Line electrically. The center conductor has one polarity while the shield has the opposite. The same principal of cancellation is taking place. The shield is not really a shield in that RF is contained inside of it. There is just as much RF energy on the shield as the center conductor.

Due to the physical shape of the coax, the shield can be kept at a zero voltage in respect to your grounding. So if you had an RF volt meter you would in theory measure zero voltage from the shield to your grounded installation such as radio chassis, tower or mast, walls of your home and so on. Now a nearby object has little affect on the balance of the coax.

At times this balance can be disrupted slightly. The result is RF feedback, interference to other electronic equipment, common mode currents or voltages higher than normal SWR readings and more.

The problems with coax is not severe, but aggravating.

(The above was written by Ralph WD0EJA of BILAL Co., in Florissant, CO. *****)

A LANGUAGE OF FEW WORDS

CW (continuous wave—Morse code) contains abbreviations many of which have been carried over to phone radio. Listed below are some of the more common abbreviations:

AGN	again	QRT	Time to quit?
ANT	Antenna	QRZ	Who is calling?
BCI	Broadcast interference	QSB	Signal fading
BK	Break	QSL	Acknowledge
BUG	Semi-automated key	QSY	Change frequency
C	Yes	QTH	Your location?
CUL	See you later	RFI	Radio interference
DE	From	RX	Receive
FB	Fine Business	SK	Finished message
GM	Good Morning	SRI	Sorry
GN	Good night	TNX	Thanks
HW	How	WX	Weather
OP	Operator	XYL	Wife
PSE	Please	XL	Young lady
QRL	Are you busy	73	Best regards
QRM	Human interference.	88	Love & Kisses
QRN	Noise interference		
QRS	Shall I send slower?		

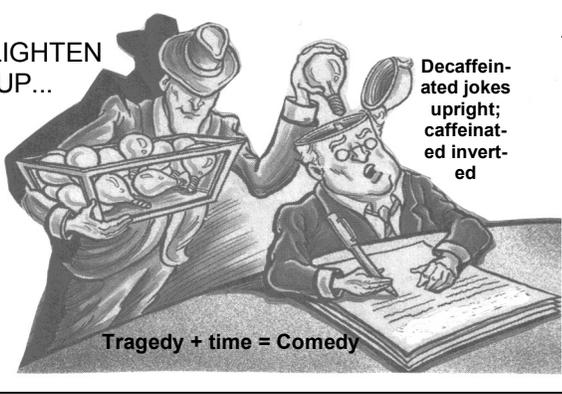
MEDISHARE REPORT

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

This month we've had several very nice donations for MediShare. N5RTF, Terry & Chip; KDSQHV & KE5BQK, Linda & Bernie; WB6OJM, Arnold Kalan, and KD4GUA, Warren Brown. All the donations were in memorium for Lou Wiederhold and Bob Morgan.

Tax-deductible donation to MARCO's MediShare International are utilized to assist the less-fortunate. They should be sent to our Secretary, Danny Centers, 2712 Bryant Dr., Cleveland TN 37311. The Board of Directors thanks you for your compassion. *****

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.

TRUE STORY...A lesbian couple got married and decided to have a child. A male donor donated his sperm and a normal baby was born. Later, the lesbian couple divorced and the sperm donor was sued for child support.



After a first date, with both parties splitting the cost of dinner and a movie, the young man was rebuffed at the door by his date. "Since we've gone Dutch on everything else," she said, "you can just kiss yourself good-night."

One day a golfer accidentally overturned his buggy. Elizabeth, a very attractive and keen golfer, who lived in a villa on the golf course, heard the noise and called out, "Are you okay, what's your name?" "It's John, and I'm OK thanks," he replied. "John forget your troubles. Come to my villa, rest a while and I'll help you get the buggy up later." "That's mighty nice of you," John answered, "but I don't think my wife would like it." "Oh, come on," Elizabeth insisted. "Well Okay," John finally agreed, and added, "but my wife won't like it." After a restorative brandy, and some driving and putting lessons, John thanked his host. "I feel a lot better now, but I know my wife is going to be really upset." "Don't be silly!" Elizabeth said with a smile, "She won't know anything. By the way, where is she?" "Under the buggy!" he explained.

I would like to share an experience with my closest friends about drinking and driving. A couple of nights ago I was out for an evening and had a couple of drinks. Knowing full well I may have been slightly over the limit, I did something I've never done before—I took a cab home. Sure enough, I passed a road block but, since it was a cab, they waved it past. I arrived home safely without incident, which was a real surprise; as I have never driven a cab before and am not sure where I got it or what to do with it now that it's in my garage.

Too many Generals are taking orders from their Privates these days!

Man vs. Woman: To be happy with a man you must understand him a lot and love him a little. To be happy with a woman you must love her a lot and not try to understand her at all. A woman always has the last word in any argument. Anything a man says after that is the beginning of a new argument. A man is a person who will pay two dollars for a one dollar item he wants; a woman will pay one dollar for a two dollar item that she doesn't. Women live longer than men because women aren't married to women.

A successful man is one who makes more money than his wife can spend; A successful woman is one who can find such a man. A woman worries about the future until she gets a husband; A man never worries about the future until he gets a wife. A woman will always cherish the memory of the man who wanted to marry her. A man cherishes the memory of the women who he didn't marry.

Remember any of these guys? We got a lot of chuckles out of these fabulous Jewish comedians of the Catskill Vaudeville days, and there was not one single swear word in their comedy.: Red Buttons, Totie Fields, Joey Bishop, Milton Berle, Danny Kaye, Henny Youngman, Buddy Hackett, Sid Caesar, Groucho Marx, Jackie Mason, Woody Allen, Lenny Bruce, George Burns, Jerry Lewis, Shelley Berman, Georgie Jessel, Alan King, Mel Brooks, Phil Silvers, Rodney Dangerfield, Don Rickles, Jack Benny...and many others. Here are a few samples of their jokes:

The Harvard School of Medicine did a study of why Jewish women like Chinese food so much. The study revealed that this is due to the fact that "Wonton" spelled backward is "Not Now." We always hold hands. If I let go, she shops! Patient: "I have a ringing in my ears." Doctor: "Don't answer." The Doctor called Mrs. Cohen saying, "Mrs. Cohen, your check came back." Mrs. Cohen answered, "So did my arthritis!" A drunk was in front of a judge. The judge says, "You've been brought here for drinking." The drunk says, "Okay, let's get started." Why don't Jewish mothers drink? A. Alcohol interferes with their suffering. **BRING THEM BACK, no one is taking their places !!!!!**

Hi, I'm Bruce



MEMORIES OF YEARS AGO IN

MARCO

Our History Book

Bruce Small, KMTL

Marco Webmaster

25 Years ago in MARCO... President Fred Simowitz led off this Jan-Feb. 1988 MARCO NL with an eclectic set of observations noting that he had difficulty writing his column "each time I got back to the typewriter." *What is this thing called a typewriter??*

The Annual Meeting will take place at the Dayton Radisson. We had a host of new members: Glen WB5OMZ, Marvin N3FJO, Steve KR9R, Charles KA6NDX, Vincent KA5UMH, Eleanor N3DUT, Dwight WB0GUA, Gerald K8AFP, Chuck WA9AMQ (now N8CL), Richard WT6J, Michael W0KIE, Gaylord N0IJL, Charles KA2NWP, "Doc" K4KSI, Daniel NM3A, Bruce KA2ZGW, John WB2LLLB, Barry W2UP and William KA1Z.

Two excellent technical articles appeared. The first was a continuation of WB5IIR's antenna series. In this article the myths about coaxial dipoles were explored. The second article by W2UP, described the workings of Net/Rom in improving the efficiency of packet communications.

20 Years Ago in MARCO

The January 1993 Marco NL proudly announced the birth of the 40-metre West Coast net under the leadership of Harold Gilbert K6KK. The 27th annual meeting of Marco, was scheduled for March at the Excalibur Hotel in Las Vegas. Events were talks by Smitty W6JZU on "Utilization of diagnostic technology in third world sites" and by Dick Shoupe W8QP on "Consultations via digital and analog radio communication and the legal and malpractice considerations of same." Chris Haycock W82YBA retired from practice and was lauded in a resolution passed by the New Jersey General Assembly. Smitty contributed a column titled Joy is a partnership, grief weeps alone in which he described the working of Direct Relief International. Among the advertised equipment needs at the time were a sterilizer for the Mugonero Hospital in Rwanda and colposcope for Waldo Community Hospital in Quito Ecuador.

15 Years Ago in MARCO

The January 1998 edition of the Marco NL urged members to plan for Marco's 32 annual meeting in Dayton. This was the first year that we based ourselves at the Holiday Inn North. Smitty W6CS graced our pages with a report of our involvement in the donation of equipment and supplies to the St. Luke's Hospital in Kaloleni, Kenya. The manifest for this shipment included stethoscopes, sphygmomanometer, IV stands, examination tables, gurneys, Mayo stands, instrument tray, etc. Newsletter Editor Ed Griner WA3TVVG complained about flagging participation in the nets, poor propagation and his failing eyesight. He also noted that about 100 members were dropped from the rolls for failure to pay their dues.

10 Years Ago in MARCO

The February 2003 Marco NL contained a report on the status of marijuana in America and the medical issues associated with its use. The information was originally broadcast as a talk by Bert Breland Ka7LOT and Chip Keister N4RTF during Marco Grand Rounds on Nov. 17, 2002. Arnold WB6OJB reviewed the health benefits and risk of fish consumption. The 2003 Annual meeting will be held in Philadelphia in June. MediShare Directors and meeting hosts Gene N3HG and Judy N3MBW urged all member to attend and provided an extensive list of activities. On Jan. 5, 2003 the Grand Rounds topic was a review of the ALLHAT hypertension study. The Newsletter included a summary of that discussion plus additional comments from Marco members.

**FINAL 2012 CME RANKINGS :
BOB CURRIER MARCO GRAND ROUNDS OF
THE AIR .**

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

credit.

Corrections: warenbrown.aol.com

CALL	HRS	NAME	QTH
W1BEW	44	Bobbie	Tennessee
KD4GUA	44	Warren	Largo, FL
KC9CS	43	Bill	Largo, FL
WB5BHB	42	Bob	Vancleave, MS
NU4DO	40	Norm	Largo, FL
N4TSC	40	Jerry	Boca Raton, FL
N6DMV	39	Paul	Torrance, CA
WB6OJB	39	Arnold	Pacific Pal. CA
KG6DQF	39	Glenn	Palo Alto, CA
KE5BQK	38	Linda	El Paso, TX
N5RTF	38	Chip	New Orleans, LA
VE3OQM	38	Bob	Hamilton, Ont.
N2OJD	38	Mark	Sidney, Ohio
KM2L	37	Bruce	Clarence, NY
KK1Y	37	Art	Seminole, FL
N3JBA	36	Ed	Amenia, NY
N4MKT	35	Larry	St. Petersburg, F.
W4DAN	34	Danny	Cleveland, TN
N9YZM	32	Mike	Crystal Lake, IL
WB9EDP	31	Harry	Chicago, IL
KA4JWA	31	Jim	West Virginia
W3FYA	31	Doug	Baltimore, MD
WB1FFI	29	Barry	Syracuse, NY
KNOS	28	David	Virginia
WA9HIR	28	Bill	Berwyn, IL
K9CIV	28	Rich	Knox, IN
KD5QHV	26	Bernie	El Paso, TX
N6DOV	26	David	Ft. Lauderdale, F
K4WFP	25	Wayne	Ocala, FL.
K0FS	23	Fred	St. Louis, MO.
W4RDJ	22	Doug	Cape Cod, Mass.
N9GJ	22	Greg	Cleveland, TN.
K6JW	20	Jeff	Palos Verdes, CA
W5SK	20	Wave	Lawton, OK
WA3QWA	19	Mark	Chesapeake, VA
W8LJZ	18	Jim	Detroit, MI
WA1EXA	18	Mark	Cape Cod, Mass
AE4BX	18	Mary	Myrtle Beach, SC
K3IK	16	Ian	Shavertown, PA
KG6JLE	16	Paul	Atherton, CA
W3DRB	16	Miles	Francestown, PA
N0ARN	13	Carl	Colorado
KC6ARN	13	Ellen	Chicago, IL
W9JPN	12	Wally	Champagne, IL
W0RPH	12	Tom	Denver, CO
KD8IDW	12	Mary	W. Virginia
K4RLC	11	Bob	Raleigh, NC
WB2MXJ	11	Joe	New Orleans, LA
N8GMB	11	Chuck	Willoughby, Ohio
N9RIV	10	Bill	Illinois
KE8GA	9	George	Fairview, NC
W5AN	8	Bud	Lafayette, LA.

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

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

**SMITTY'S
CORNER**

Robert Smithwick W6C
Los Altos Hills, CA



Are humans getting dumber? As a species, we're not as smart as we used to be. That's the theory of a Stanford researcher who believes that human intelligence started to decline when civilization made life easier and allowed dimmer individuals to survive and pass on their genes. "I would wager that if an average citizen from Athens of 1000 BC were to appear suddenly among us, he or she would be among the brightest and most intellectually alive of our colleagues and companions." Stanford geneticist Gerald Crabtree tells the world.

The world is fat...2/3 of Americans are overweight or obese. Developing countries are catching up. In China nearly 30% of adults are too wide. In 2013, policymakers around the world will realize that something must be done, But what? One response is to do nothing. A second response is to punish those who are overweight. Japan has set a specific limit to citizens' waistlines. If workers do not slim down, their employers face fines. A third response is to lower the price of good foods and impose a hefty tax on sodas. *(Another response is to put mirrors in all the rooms of a home and require tubbies to walk around naked!)*

An optimist...Warren Buffet says, "It is because capitalism and market systems work. It's been working since 1776. And it wasn't because we had stimulus programs in 1794. Our system unleashes people's potential. And we've got 312 million that want to do better tomorrow than today. Over time, that works. This country goes forward, and it'll continue to go forward. The luckiest person in history on a probability basis is the baby being born in the United States today.

Within the next 25 years, scientists will create a revolution in bio-enhancement—from drugs that boost your memory, to brain implant that enable you to drive your car using only your mind. But the coming age of enhancement will present troubling ethical questions. When parents are asked if they would give their child a brain-boosting pill guaranteeing straight A's, most say no. But if you tell them that all the other kids will be taking the pill, almost all say yes. We might see super human eyesight or incredible strength. Surgeons, pilots, even presidents might be expected to get neural implants to "optimize" their job performance. Mind shattering—oops, may need an implant!

If you couldn't stop watching the scenes of destruction after Hurricane Sandy, you're not alone. "*Disaster porn*," some care call it: cars floating down streets, boardwalks smashed into splinters and car tunnels turned into underground rivers. Why won't we look away? Psychologists say we never feel more alive than in times of distress, danger, and calamity. We feel a cathartic rush, in other words, from observing the suffering of others at a safe distance. "Oh, the horror! Pass the popcorn." By watching together we insulate ourselves from the trauma of these images. That's why we couldn't stop watching the World Trade Center towers burn and fall. If you've found it difficult to stop watching don't be too ashamed. The only thing worse than looking too much is not looking at all.

You're driving along the highway and the car in the lane beside you doesn't have a driver! Don't be too alarmed. It's just another sign that the cars of tomorrow are already starting to arrive. Google and others have started testing cars that drive themselves. Using a sophisticated combination of laser range finders, radar, GPS and other technologies, the cars navigate the roads carefully in sync with other vehicles and their surroundings. Human drivers can assume control with a tap of the finger and what's really interesting is that the "auto pilot" might actually be a better driver. The cars are programmed to yield, they don't knife in and out and they use directional signals.

THE PREZ SAYS:

By Dr. Mary Favaro, President of Marco

Looking forward to seeing everyone in Myrtle Beach, South Carolina for the MARCO Annual Meeting, April 25-28, at the Breakers Hotel located right on the Atlantic Ocean beach. Phone your reservations in now, phone 843 444 4444.

Mary Kaye Favaro

AE4BX



WHO INVENTED THE INTERNET?

No, it wasn't Al Gore! On Dec. 16, 1997, President Clinton presented the U.S. National Medal of Technology to Vinton G. Cerf and his partner Robert E. Kahn, for their founding and developing the internet. In 1974, Cerf and Kahn, both Ph.D's, co-published "A Protocol for Packet Network Interconnection." Their TCP/IP communications protocol is the language that gave birth to the internet.

The Internet grew out of an experiment begun in the 1960's by the US Dept. of Defense. The DoD wanted to create a computer network that would continue to function in the event of a disaster—if part of the network were damaged the rest still had to work. That network was ARPANet which linked US scientific and academic researchers. The World Wide Web, a media of the internet was developed in 1989 by English scientist Timothy Berners-Lee to enable information to be shared among international teams of researchers at the Europe Lab for Particle Physics.

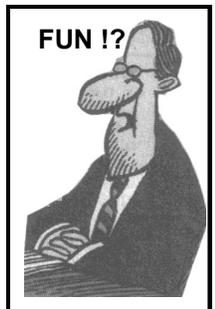
MARCO HAM \$ STOCK DERBY

BACKGROUND: In order to drive up more interest in Aether, we are asking you to divulge your favorite winning stock and submit it to help our fellow ham-investors. We will keep bi-monthly score of your stock and reward you with points in our new "Stock \$ Derby. If you have not joined the group, simply send us your favorite stock and we will grade your stock against the others. Email: warenbrown@aol.com or write P.O. Box 127, Indian Rocks Beach, FL., 33785. Costs nothing, no lawyers or brokers involved, just plain fun.

Member	Stock	Price \$	% Change	Pts
1. WarrenKD4GUA	DDD	60.35	+59.7%	7
2. Danny W4DAN	CAT	95.19	+17.1%	8
3. Mary AE4BX	PFE	26.52	+ 9.3%	12
4. Bruce.KM2L	IR	49.60	+ 9.3%	14
5. Rich K9CIV	Gold	1677	-4.79%	15
6. Bob K4RLC	YUM	66.87	-5.96%	15
7. Chip N5RTF	SWHC	8.33	-10.1%	18
8. Lou WA1HGE	YORW	17.99	+6.63%	19

Interpretation: Points are determined by your place in the above list, each listing, i.e., First + 5th place = 6 points. The goal is to have the fewest points, i.e., closest to #1 place.

"Three D" a 3-dimensional printer company; YUM is a fast foods chain; YORW is a water company in York, PA; CAT is Caterpillar, manufacturing company; PFE is Pfizer Pharmaceuticals; SWHC is Smith & Wesson guns and IR is Ingersoll Rand Company.



"IS THERE A DOCTOR ABOARD THIS FLIGHT? WE HAVE AN EMERGENCY!"

Presented on Marco Grand Rounds, Dec. 30, 2012

The provision of medical assistance to passengers during flights aboard commercial aircraft is a matter of concern to most physicians. Determining the incidence of in-flight medical events aboard commercial aircraft is difficult, because there are currently no regulatory reporting requirements but it is estimated that 1 in every 40,000 passengers is a problem. This figure rises to one in 15,000 when you include overseas flights usually of more than 8 hours.



Most in-flight events are not serious. Vasovagal episodes of fainting, dizziness and hyperventilation the most common events. Cardiac, neurological and respiratory problems make up the most serious events and account for the majority of diversions and unscheduled landings.

According to physicians' accounts it appears that doctors are comfortable providing voluntary assistance during in-flight events. Fear of liability is cited as a major reason for physicians' reluctance to offer assistance. However, in 1998 the Aviation Medical Assistance Act was signed into law. The act provides limited "Good Samaritan" protection to any medically qualified passenger who provides medical assistance aboard an aircraft. In addition to being medically qualified, the assisting passenger must be a volunteer, render care in good faith and receive no monetary compensation. The assisting passenger must also render medical care similar to the care that others with similar training would provide under such circumstances. There has been no known litigation brought against physicians who rendered assistance to date.

Does a physician who is a passenger have a duty to volunteer medical assistance? In the U.S., Canada and the UK, physicians do not have a legal duty to render assistance unless there is a preexisting physician-patient relationship. In many European countries and Australia they do impose such a legal obligation.

The incidence of disruptive behavior or "air rage" is on the rise and places flight crew and passengers at high risk for injury. Alcohol was implicated in 25% of all such incidents. The use of air marshals has helped.

The Air Carrier Act of 1986 prohibits airlines from discriminating against passengers with disabilities, but airlines still have the right to refuse passengers who are not medically fit to travel on commercial aircraft. A patient with special needs, such as a need for supplemental oxygen, may require a medical certificate from a physician stating that the passenger is medically fit for commercial air travel at a cabin pressure equivalent to that at an altitude of 2500 meters. FAA security directives established since the terrorist acts of Sept. 11, 2001, allow syringes and needles if the passenger has a documented medical need for such equipment.

A simple test to assess a person's fitness for air travel is to determine whether he or she can walk 50 meters (150') or climb one flight of stairs without severe dyspnea or angina.

Any passenger with a partial pressure of arterial oxygen of less than 70 mm Hg at sea level at rest requires supplemental oxygen during air travel. Supplemental oxygen for in-flight medical use can be arranged with carriers but requires at least 48 hours advance notice and a prescription for oxygen. Passengers cannot use their own equipment during flight, because oxygen is considered a hazardous material. Passengers are responsible for arranging for their own oxygen supply at their departure and arrival terminals.

Since 1986, the FAA has required all commercial aircraft with more than 30 passenger seats to carry an emergency medical kit. All aircraft traveling with at least one flight attendant must also carry an automated external defibrillator.

Many airlines no longer rely on the chance that a physician will be on board their aircraft if a medical event occurs. Flight crews on most

The factors doctors and passengers should be aware of are: The effects of decreasing pressure of the atmosphere with increasing altitude; the role of temperature reduction, turbulence, noise, drug, alcohol and smoking in flight.

The weight of the atmosphere is heaviest, 14.7 lbs per square inch at sea level, and the heavier the air the more oxygen is forced into the blood stream. As we rise into the air the weight of the atmosphere decreases and less oxygen is forced into our blood stream. Therefore at altitude we have to breathe 100% oxygen, not the 20% in the atmosphere at sea level and if we go higher than 25,000' we need pressure to force the 100% oxygen into our lungs.

Gas expansion occurs as the atmosphere becomes lighter and we should refrain from beans, sauerkraut, carbonated drinks which forces us to unbuckle our belts at altitude as the gas in our gut expands. Keep in mind, aircraft are pressurized to 8,000' NOT sea level so a person having breathing problems in 5,000' high Denver will have problems in airliners.

Alcoholics and pack-a-day smokers are automatically at 3,000' altitude before they step into an airliner at sea level.

Diseases affected by altitude are: 1. Sinus disease, middle ear infections, dental cavities, glaucoma—pain is caused by expansion of air at altitude. 2. Asthma, emphysema, history of pneumothorax, lung cancer. 3. Those with heart attacks within 30 days. 4. Those with recent surgery should wait 2 weeks to prevent suture lines from blowing. 5. Those with history of ulcers. 6. Those with hernias and bowel problems. 7. Those in their last month of pregnancy. 8. Those with a hemoglobin less than 8.5 grams and a rbc below 3 million should not fly; 9. Those with uncontrolled epilepsy, behavioral problems, motion sickness, vertigo and hyperventilation.

Why do airplanes fly high? Because they can gain favorable tail winds, they can top most bad weather by 35,000 feet, they can avoid mountains and can achieve higher speeds using lesser fuel because of lower air density and lower drag. There is improved radio navigation at altitude and decreased turbulence.

A rough rule of thumb is: **If the patient can walk a city block, climb a flight of stairs and smell normal usually they are safe to fly.**

In the Andes mountains of Peru, there are over one million people living at altitudes of 18,000 feet or higher. But they have adjusted to the higher altitude by developing physiological polycythemia—high red counts over a long period of time.

major airlines now have direct lines to some form of ground-based medical assistance. Several companies provide 24-hour, ground-to-air medical consultation and are staffed by physicians who are board certified in emergency medicine and have additional training in aviation medicine. Ground based medical assistance has reduced the number of unscheduled landings or diversions by 70%.

The flight crew is responsible for responding to a passenger who becomes acutely ill. The role of any passenger who is a health care professional who volunteers to assist the flight crew is to assist the flight crew and not to be allowed to take control.

The goal of in-flight medical assistance is to stabilize the condition of the ill passenger until the aircraft has landed. Unresponsiveness in a patient warrants application of the automated external defibrillator, use of oxygen, establishment of i.v. access and administration of 50% dextrose. Angina should be treated with ASA and nitrates. A bronchodilator should be considered for shortness of breath. Vasovagal syncope can usually be managed simply by raising the legs and applying cold compresses to the forehead.

Humidity in cabins is typically low at 10 to 20%. This low humidity has the propensity to exacerbate reactive airway disease and trigger other minor problems, such a dryness of the eyes.

The risk of cross-infection with airborne pathogens appears to be determined by the duration of the flight and the proximity of the sick passenger with seating within two rows indicating an increased risk.

A recommendation to divert the aircraft should be considered if a passenger has chest pain, shortness of breath, or severe abdominal pain, that does not improve with use of the initial intervention.

From "Agent 146", Erich Gimpel's fine book, St. Martin's Press, ISBN 0-312-30797-7
(Continued from last issue by request)

BACKGROUND: Erich Gimpel, who died in Brazil this summer at age 100, was a former German agent and ham radio operator, who was put ashore from U-1230 with co-conspirator William Colepaugh in Maine on Nov. 29, 1944. The FAHS news editor met him & has known him as a friend since 1991. In previous issues we learned 25 year old Gimpel was sent to Lima, Peru as a radio engineer. Here he was advised by Nazi diplomats to prepare for war as every German is a soldier and must do his duty wherever he is. Upon returning to Germany Gimpel was trained in an attempt to blow up the Panama Canal but this was cancelled because of a security leak. Now he and Billy Colepaugh (*an American turn-coat*), have arrived in America to find and destroy the atomic plant at Oak Ridge, Tennessee. The pair arrived in New York City and were holed up in a down-town hotel. Billy had left the hotel and had not returned. Gimpel was worried he had defected or was picked up only to find he had found a new girl friend. After failing to make a N.Y. contact Gimpel returned to the hotel only to find his partner had left—and with all the luggage and money! He finally located his baggage at Grand Central Station only to be surprised by an old friend from Peru! He was invited to stay at his friend's apartment which is already occupied by an American young lady. Billy, meanwhile, had let the cat out of the bag while drunk with a longtime friend. The friend went to the FBI and they are now looking for Gimpel alias "Edward Green" who is still unaware of Billy's actions. Gimpel after contacting a nuclear-physicist collaborator in N.Y. relaxed with his American girl friend in the N.Y. apartment. It was on Times Square, New Years eve, 1944, while buying a South American newspaper that he was picked up by the FBI. After a military trial Gimpel was sentenced to be hung on April 14, 1945. On that date President Roosevelt died suddenly and a moratorium of 30 days was conducted during which no executions were performed...

GERMANY'S CAPITULATION SAVES MY LIFE

The truth of what the officer had said, I was saved by the President's death was confirmed on the morning appointed for my execution. It did not take place. A few hours later, relayed by all American radio stations, the ceremonial obsequies for Franklin Delano Roosevelt began. I listened to everything and understood nothing. I had to get used to the idea that I was still alive. I had to thank pure chance that I was not already hanged, and adjustment to the new situation came slowly. The congratulations of my wardens were almost overwhelming. They all wanted to shake me by the hand. A sergeant said laughing: *'We'd rather have you alive than dead.'*

Four weeks postponement! What an eternity it seemed, and at the same time how short a respite! The war in Europe was approaching its end. You could almost work it out on your fingers when the last bomb would be dropped, capitulation was imminent. But how imminent? My counsel were confident, I wanted to be confident too, but one day I ran into my hangman in the yard at Fort Jay, and once more I became anxious and unsettled.

Germany's capitulation happened and once more I received congratulations. I waited impatiently for my final pardon, but it did not come. Still, there was no talk about hanging. It seemed as if they had simply forgotten all about me.

Then I was moved. In American style, I was dragged through half America in handcuffs, the handcuffs being required by regulations, for which my escorts apologized at least three times a day. There were some remarkable scenes: people stared at me, schoolboys ran after me, and shoppers in the streets stood to watch me go by.

My journey took me by long-distance express train through the States of New York, via Pennsylvania, Ohio, Indiana and Illinois to Missouri. At St. Louis we had to leave our comfortable train for a six-hour wait. My escorting officer said: *"I want to look up some friends here, and I can't take you with me, so I'll put you in the city jail for a few hours but I don't know what the food's like there so I think we'd better eat out."*

In the station restaurant my handcuffs were removed, but my guard was not going to miss an opportunity for a piece of real American showmanship and he placed four tall military policeman around the table with their machine guns trained straight on my plate. They looked very warlike standing with their arms at the ready while I ate my steak.

I ate my ice-cream and then they took me to the city jail in a jeep. Upon arrival I read in large letters a sign in the jail: *If you don't like it, tell us. If you do like it, tell your friends."* I had to laugh.

I was put in a cell for a few hours, and then I was fetched. My journey continued by car right across Missouri to Kansas. I was then delivered to Leavenworth prison and my escorts took friendly leave of me.

I was put into the Fort at the outset. I was later to be transferred to the

civilian penitentiary, but during those first few days I came into contact with death in the most horrible way. Five German soldiers were executed. It was all quite senseless. Just because they had declined to petition the American President for pardon.

Leavenworth penitentiary houses more than 2,400 prisoners. I was given number 62008. I was now among the men who were to be my constant companions for the next ten years of my life—murderers, procurers, thieves and bank-robbers. At the top of the tree are the bank-robbers, but murderers are outsiders. Petty thieves rank as small fry while burglars are well regarded. As for the procurers, no one can abide them. Spies occupied no defined place in the criminal hierarchy. They were assessed according to the way in which they conducted themselves in captivity. I succeeded in achieving good rank and high prestige.

First I entered the quarantine block where I had to stay for four weeks. It was a sort of training to accustom the prisoner to discipline, drill and the changes with wearing striped clothing.

There were twenty of us and we were isolated. The Inspector lectured us: *Smoking is not allowed, anyone found smoking will be sent to the "house."* The house was solitary confinement with bread and water and no exercise. *"We want no laughing here, no walking; everything at the double. If a warden speaks to you, you must stand at attention and answer, 'yes' or 'no.'* *"You may go to church if you wish on Sunday. You may take a shower once a week. If you behave you can go to the cinema once a week, but there won't be any crime films or love films. You already know how criminals carry on and you don't need love in here."* An American prison has a devilish resemblance to a German barracks.

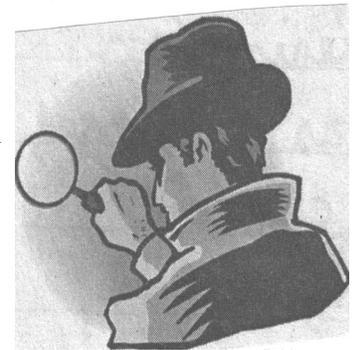
At first my fellow convicts were very reserved in their attitude towards me. I was an outsider. It was true that I had the distinction of a life-sentence, but the deeds of a spy were appraised with some discrimination in the penitentiary. I succeeded in gaining the full acclaim of my fellow prisoners and was received into the society of old lags. I managed to get through my four weeks of quarantine without a visit to the "house." I was promoted to the rank of a "proper" convict, and moved to the main section of the prison and became eligible for the usual privileges.

My fate remained uncertain. Technically I was still under sentence of death. My counsel had presented a second petition to Mr. Truman. Actually this was unconstitutional as the decision to reject it had already been made by Truman's predecessor.

One September evening in 1945, I was listening to my favorite band Tommy Dorsey on the radio. The program ended and the news followed. There were political reports, then came the news from Washington. Suddenly I sprang from my bed as if electrified. I had heard my own name. The news reader went on slowly. *"President Truman has today commuted the death sentence of the German spy, Erich Gimpel, to one of life imprisonment."* A warden stuck his head in the window, and said: *"Did you hear Gimpel—you can keep your head."*

President Truman held a press conference at the White House. *"Why have you pardoned Gimpel?"* He was asked. *"Gimpel was a spy,"* replied Truman, *"and a spy is a man who fights for his country. No country in the world fights a war without spies. We, of course, had our own spies in Germany. It is customary to hang spies during a war, but it is also customary to pardon them when the war is over."* *"For that reason I decided to commute the death sentence to one of life imprisonment."*

I was to feel the influence of the governor of Leavenworth for some time. I heaved coal there for four years. I wondered, was my father still alive? What was it like in Germany now? Would I ever leave prison? Would this eternal waiting, this unchanging hopelessness, this life in which a few cigarettes or a bit of chocolate could be of paramount importance, would this ever come to an end? Would I ever again hold a woman in my arms? Would I ever again enter a restaurant as a free man and choose what I wanted to eat?



7-11

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