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VITAMIN D ARE YOU GETTING ENOUGH?

Vitamin D is known as the Sunshine Vitamin because the body makes it after the sunlight or ultraviolet light, hits the skin. Bioactive vitamin D, or calcitriol, is a steroid hormone that has long been known for its important role in regulating body levels of calcium and phosphorus, and in mineralization of bone. More recently, it has become clear that receptors for vitamin D are present in a wide variety of cells, and that this hormone has biologic effects which extend far beyond control of mineral metabolism. It is estimated that up to half of U.S. adults and 30 percent of children and teenagers have vitamin D deficiency, which is defined as a 25 (OH)D level of less than 20ng/ml. Low vitamin D levels activate the rennin-angiotensin-aldosterone system and in doing so, predispose patients to hypertension and a stiffening and thickening of the heart and blood vessels. Vitamin D deficiency also alters hormone levels and immune function, which can increase the risk of diabetes, a major contributor to cardiovascular disease. Vitamin D deficiency is more prevalent than once thought, and greater attention to its treatment is warranted. Although most of the body's Vitamin D requirements can come from sun exposure, indoor lifestyles and use of sunscreen, which eliminates 99

percent of Vitamin D synthesis by the skin, means many people aren't producing enough. The radiation that converts vitamin D in the skin is the same wavelength that causes sunburn, so careful application of sunscreen can inhibit vitamin D production. At northern latitudes, there is not enough radiation to convert vitamin D, especially during the winter. After the age of 70 the skin does not convert vitamin D effectively. Patients with malabsorption also may have vitamin D deficiency.

The term vitamin D is, unfortunately, an imprecise term referring to one or more members of a group of steroid molecules. Vitamin D₃, also known as cholecalciferol is generated in the skin of animals when light energy is absorbed by a precursor molecule 7-dehydrocholesterol. Vitamin D is thus not a true vitamin, because individuals with adequate exposure to sunlight do not require dietary supplementation. There are also dietary sources of vitamin D, including egg yolk, fish oil and a number of plants. The plant form of vitamin D is called vitamin D₂ or ergosterol. However, natural diets typically do not contain adequate quantities of vitamin D, and exposure to sunlight or consumption of foodstuffs purposefully supplemented with vitamin D are necessary to prevent deficiencies. For those who are housebound or have inadequate exposure to sunlight, vitamin D can be obtained from fortified foods. Most milk (including 2 percent and skim) is fortified with vitamin D, as are cereals.

Check the Nutrition Fact panels to see if vitamin D has been added.

In the absence of clinical guidelines, specific recommendations for restoring and maintaining optimal Vitamin D levels in cardiovascular patients exist. These patients should initially be treated with 50,000 IU of Vitamin D₂ or D₃ once weekly for 8 to 12 weeks. Maintenance therapy should be continued using one of the following strategies:

50,000 IU Vitamin D₂ or D₃ every 2 weeks;

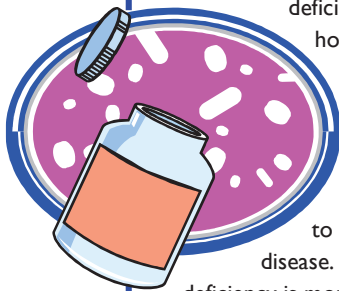
1,000 to 2,000 IU Vitamin D₃ daily;

Sunlight exposure for 10 minutes for Caucasian patients (longer for people with increased skin pigmentation: between the hours of 10 a.m. and 3 p.m.

Vitamin D supplements appear to be safe. However, some vitamin D supplements also contain high contents of vitamin A - and recent studies show that [vitamin A](#) can increase bone resorption.

Vitamin D has had a lot of focus recently in medical commentary. See your physician about testing if you think you may be deficient in this important vitamin.

*Submitted by Susan
Kimmel R.D.*



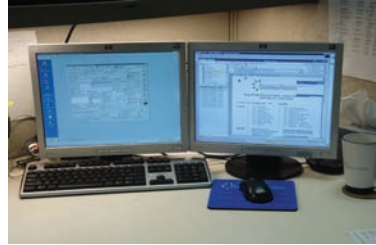
TO FAX OR NOT TO FAX... THAT IS THE QUESTION

ANSWER: TO FAX!

Have you ever faxed something that never arrived at its destination? Have you ever been waiting for a fax that doesn't come, even though the person sending it swears they have sent it 3 times? Have you ever waited anxiously for a fax, finally received it...and then can't read a word on it? These are common problems we have all experienced when using a fax.

PAL™ wanted to eliminate many of the fax issues we all have to deal with on a day to day basis and create a more reliable system for getting information where it needs to go. After all, medication orders are important. And NOT JUST getting them there, but in insuring they are legible so that the orders can be read correctly to dispense the medications. This is why Pharmacy Alternatives LLC™ uses a system called Docutrack™ rather than the usual paper fax system many of us have been using for years.

With Docutrack™, you still fax the medication orders in on your end, but the fax does not come through as a paper sitting in a stack of hundreds of other papers just like it. It goes directly into a computer list. What's even better, is that each fax that



comes in has a 'place in line'. Regular paper faxes can get stacked, restacked, thrown away, lost. Not Docutrack™ faxes. The medication orders come into the computer queue and wait in line until each order is 'triaged' by our staff. New

orders go to the pharmacist. Refills go to Order Entry staff. Each has a place in the system and cannot be removed from the system. It is there forever, date-stamped with the time received.

The Docutrack™ system looks like the picture above, with 2 computers sitting side by side on the pharmacist's or Order Entry Tech's desk. Any order that comes in is electronically enhanced so that it is clearer and easier to read than any simple fax would be. On the left is the consumer's medication and order history. On the right is the new order or communication that has been faxed in to Docutrack™ for initial ordering or refilling. When reviewing and ordering is completed, these 2 components (the consumer's history & their physician orders) are electronically stapled together...for all eternity. On top of that, all computer systems are backed up continually to guard against loss of valuable data. So...no worries.....FAX!

NEW
MED
NEWS

Trilipix™ FOR CHOLESTEROL ISSUES

Abbott's Trilipix™ is the new FDA-approved treatment option now on the market for the treatment of mixed dyslipidemia. It is the only medication of its kind indicated for use in combination with a statin medication to treat components of the lipid profile that may be stubborn in responding to only taking statin medication, requiring additional action. If you are already on a medication such as Zocor, Lipitor, Crestor, or Pravachol, you've seen some benefits from taking the medication, but you still have **high** triglycerides (fats that clog your vessels and heart), **low** HDL-C (good cholesterol), and **high** LDL-C (bad cholesterol)...Trilipix may be an option for you.

Trilipix is not only used in combination with these

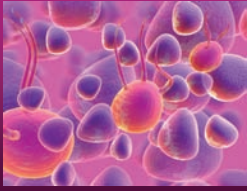
statin drugs, it can also be used alone with diet to treat these same abnormal components of the lipid profile to bring them back to more optimal levels.

Trilipix™ is contraindicated for people with severe renal impairment, active liver disease or abnormalities, gallbladder disease, or others with drug sensitivities. Nursing mothers should not take Trilipix™. The most common adverse event is upset stomach.

Trilipix™ is available in 45 mg and 135 mg oral-delayed release capsules, dosed once a day.

For full prescribing information, go to:

www.rxabbott.com/pdf/trilipix_pi.pdf



BLOOD GLUCOSE MONITORING FOR THE PERSON WITH VISUAL IMPAIRMENT

Assisting our consumers to maintain an optimal level of independence in all areas of ADLs (Activities of Daily Living) can be a challenge. One aspect we may not think about is in medication administration and related activities such as blood glucose monitoring. There are many disabilities that can affect one's ability to do his/her own blood sugar testing including a visual disability. It is not uncommon for people with diabetes to have sight problems related to their diabetes. There are glucometers with large print screens and for those with minimal change in their function. However, these screens may not be useful to those with more severe vision impairment due to the low contrast screens. If a consumer has quickly-failing sight, cannot read large print, or already is considered legally blind, the talking glucometers may be just the technology to help them maintain some of their independence for as long as they are able.

Medicare Part B and most private insurances will cover a talking glucometer for a person with legal blindness or severe visual impairment. This does require documentation from your ophthalmologist (eye doctor) to be completed and turned in prior to purchase of a blood glu-

cose monitor.

Several companies make talking meters as follows:

- Advocate and Advocate Redi-Code
- One Touch Basic and SureStep w/ attachable speech boxes (that must be ordered from the company separately)
- Prodigy Audio, Prodigy Autocode and Prodigy Voice
- Accu-Chek—new model being developed by Roche Diagnostics
- Advocate Duo—also has an attached wrist blood pressure cuff
- Prodigy Duo—new, also has an attached wrist blood pressure cuff

Evaluation of your consumers with diabetes and visual impairment for the benefits of a talking blood glucose monitor will help them to participate in their healthcare and continued understanding of their diagnosis.



DO I KNOW YOU ? THE CASE OF PROSOPAGNOSIA

Prosopagnosia is a disorder of the brain causing an inability to recognize faces. It is also known as 'face blindness' or facial agnosia. Some people with this condition are not able to recognize their own face when viewed in a mirror or picture. Some cannot tell people apart from one another by looking at their faces. And others cannot distinguish a face apart from an object.

Prosopagnosia is not a memory disorder or related to impaired vision or a learning disability. It is, however, often present in children with autism and Asperger's Syndrome and is believed to be central to the reason for these individuals' impaired social development. There are several developmental disorders that have an increased likelihood of Prosopagnosia components such as Williams Syndrome, autism spectrum disorders, and nonverbal learning disorders. It is be-

lieved that 2% - 10% of the population may carry at least mild cases of this disorder. Due to its difficulty in diagnosing in some people, such as individuals with DD, this number may be even higher.

Prosopagnosia is believed to be caused by abnormalities or damage to the right fusiform gyrus in the brain that controls facial perception. This damage to the brain could be due to a stroke, traumatic brain injury, or, they are now finding...it could be congenital (inherited). The rather baffling fact that scientists have revealed, is that from brain scans, they can tell that people with this condition appear to recognize other objects without a problem...it's only faces that confound them. They can "see" the face but are unable to put the pieces together into a complete picture that makes sense (recognition). Think of it like not being able

to figure out how a puzzle goes together.

Prosopagnosia can be a very disabling condition socially as the individuals who have this are unable to recognize family members, friends, coworkers, or others they may do business with. There are visual recognition tests that can be done to identify a potential problem in recognition. You can do these yourself at <http://www.faceblind.org/facetests/index.php>. People with this condition often complain that they can't follow TV shows because they can't keep track of the characters. In actuality, they don't recognize the characters each time they reappear in a scene and so, they cannot follow the story line of the show.

The Harvard Prosopagnosia Research Center continues to do research in this area and has information at: <http://www.faceblind.org/research/>



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All articles to be considered for submission to this newsletter should go to Georgia Swank at the above email address. We welcome your comments and ideas!

DD NURSE CERTIFICATION

It's time to stop talking about it...and just DO IT! Get Certified!

To apply for certification as a Developmental Disabilities Nurse, you must meet the practice requirements of 4000 hours within the previous 5 years in one of the following roles in a DD program:

- Practicing nurse, nurse administrator, nurse educator, nurse consultant, or nurse practicing in an expanded role in an institutional or community organization (such as a nurse practitioner).

Then you complete the application process and await National DDNA to contact you with approval to move forward and schedule testing. Testing can now be done at regional testing centers which are more convenient and can be scheduled at various times. So...you schedule to test. (If you're wondering, you have 2 hours to take the test, but it usually takes less than that to complete.) You take the test and within a few weeks, you will be notified that you passed (hopefully)! You will receive a certificate and certification card from DDNA stating that you are a CDDN (for RNs) or a DDC (for LPNs). This certification is good for 2 years and then must be renewed. **Fees: the best deal is to be a DDNA Member**, in which case the Application Fee is \$60 and the testing fee if taken locally at a testing facility, is \$150. Your company should gladly pay these fees to support certification in this specialty field of nursing. It benefits the company you work for. It benefits the consumers you support. For all the details about getting certified, including study resources, go to www.ddna.org. All forms are available and anything you need to know. **MAKE 2009 THE YEAR YOU BECOME A CDDN OR DDC. GET CERTIFIED!**

MEDICAL SCIENCE DISCOVERIES



Down Syndrome Detection

The current method for detection of babies who will be born with Down Syndrome is amniocentesis, a procedure whereby a long needle is inserted through the abdomen to retrieve a sample of amniotic fluid which envelops the fetus. The cells in the fluid are tested to determine if the baby has Down Syndrome. Although a useful test, it does not come without some risk. There is a 1 in 200 chance of causing miscarriage with this procedure. In addition, it is not particularly pleasant for the mother.

Very soon, it looks like a new genetic test will be available that requires only a simple blood test taken from mom. While the baby is developing, small amounts of DNA (the building blocks of all living things) get into the bloodstream and can be tested for this abnormality. Down Syndrome, also known as Trisomy 21 because of its characteristic 'extra' copy of chromosome 21 (3 instead of 2)...may be easier to detect by picking up on the elevated levels in the mother's bloodstream. The test is currently being developed and could become a common test in the future for pregnant women age 40 and over.

Breast Cancer Genetic Screening

There are several genetic tests either recently on the scene or in the development stages for the screening and use in determining treatment options with breast cancer.

The SPOT-Light genetic test is currently being used to determine which patients will respond to the drug Herceptin, a cancer fighting drug for a particular type of tumor found in some breast cancers. The test measures how many HER2 genes are found in a biopsy sample taken from the tumor. The more HER2 genes, the better the drug will work.

Another new gene test used in breast cancer is the OncotypeDx test. It identifies the potential for reoccurrence of breast cancer and which chemo agents will work best for a person's particular type of tumor.

Breast cancer is a hot area of research in recent years as women's health has become more of an area of interest. We will continue to see some unique discoveries that will directly pertain to women's issues in the future.

