

THE POST SCRIPT

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The **CUTTING EDGE** of Science & Medicine

What's new in the world of Science and Medicine? A lot has been happening in all arenas and these discoveries will lead to better healthcare for many people. Read on....

1. A study on **AUTISM** at Columbia University has identified a significant trend that could lead to decreasing the risk of having children with autism, as reported in *Pediatrics*, the February issue. A review of 660,000 birth records of 2nd children born over a 10-year period showed that children born within 1 year of the birth of their older sibling were 3 times as likely to have autism as children born three years or more apart. It is not known why children born closer together appear to have this increased risk. It could be that the mother's womb has not had enough time to recover fully. Or, it could relate to a depletion of certain nutrients that have not been replenished such as folate and iron. Closely spaced pregnancies have been the trend in the past 15 or so years, so this is something to consider. This is most likely only one factor that is affecting an increase in autism and more research must be done to evaluate it further.
2. **FIBROMYALGIA**, a lifelong condition that causes major fatigue and ongoing pain, was not even believed to be a real medical condition just a few years ago. 90% of sufferers of Chronic Fatigue Syndrome (CFS) or Fibromyalgia are women whose full-body symptoms of aches and pains, memory loss, headaches, sleep problems, and extreme fatigue were negated or attributed to psychological or other factors by many medical practitioners. A 2nd study was recently published by the National Academy of Sciences confirming results of a first study published by Lombardi et al. in Oct. 2009 in *Science*. These studies show that there is a strong association between Chronic Fatigue

Syndrome/Fibromyalgia and a group of mouse *retroviruses*. These viruses originated in mice and evolved to the point that they can no longer infect mice, but can infect humans and they are being found in a high percentage of CFS sufferers. Another recently detected retrovirus, has evolved to the point that it can infect both species...mice and humans. So, Fibromyalgia IS a real condition. Now, scientists need to do further research to treat it more effectively.

3. The FDA approved only 21 **NEW DRUGS** in 2010 and only 25 new drugs in 2009, so if you've got a Drug Manual from 2008, it's still applicable...you aren't missing much.
4. A rare genetic syndrome, **COWDEN SYNDROME** correlates to an increased risk of colon cancer according to new research at Cleveland Clinic's Lerner Research Institute. These patients usually also have a larger than normal head size (more than 58 centimeters for men, more than 57 centimeters for women), so this can be used as an initial screening marker. Cowden Syndrome is also associated with other cancers.
5. **TRICYCLIC ANTIDEPRESSANTS** are associated with a 35% increased risk for cardiovascular disease (CVD), according to a University College of London study of 14,000 adults which was published in the December 1st, 2010 issue of *European Heart Journal*. If you or your consumers are on these medications (amitriptyline, clomipramine, imipramine, nortriptyline, etc.) and other CVD risk factors exist, you need to talk to the doctor about switching to a different class of antidepressant.
6. **LIFE EXPECTANCY** dropped in the U.S. by about one month overall. Women's average life expectancy is 80.3 years, while men's average life expectancy is 75.3 years of age.





Alzheimer's Disease: CURE Getting Closer All the Time

Alzheimer's Disease is a disease of memory and eventually affects daily functioning in all areas of life. It is thought to be a disease of the elderly by most people however it afflicts people in their 40s and 50s as well. It is a progressive disease, getting worse as time goes by and is thought to have a familial connection. 50-70% of all dementias are the Alzheimer's type. Researchers are fervently studying many aspects of the disease to determine root causes and treatments that will delay or improve functioning in the person with Alzheimer's. In the past year or so, Alzheimer's disease research has made some significant leaps that will lead to earlier diagnosis and more effective treatments.

Development of 'neurofibrillary tangles' and beta amyloid plaques, the architecture of Alzheimer's disease in the brain, have been the focus of research for many years. One new study, published in *Circulation Research*, Dec. 2, 2010, identifies that there is an endothelial dysfunction in the blood vessels of the body due to a loss of nitric oxide in these cells, which they believe, causes the amyloid plaques in the brain. In the past year, new studies have shown that a certain immunization therapy will reduce the amount of a protein that

causes these plaques to form. Four of these studies have targeted this aspect of how Alzheimer's affects the brain and shows promising results for the future, according to the Alzheimer's Association.

Other new developments in the field of Alzheimer's research include exciting findings. Until now, the disease could only be positively diagnosed AFTER death upon brain biopsy showing the amyloid plaques and tangles. Now, a new imaging compound called AV-45 has been found that "sticks to" the amyloid plaques so an MRI-type imaging can be done that can identify existing plaque formation many years *before* symptoms even show up. This is phenomenal news! Treatment can begin sooner and with some newer treatments focusing on dissolving plaques, a brighter future for Alzheimer's patients is coming. Additional treatments for Alzheimer's are being developed. One study has identified intranasal insulin use for those with mild cognitive dysfunction and has shown benefits to memory and functioning in study participants. It seems we are getting closer to solving the puzzle of Alzheimer's Disease and that, in the not-too-distant future, optimal treatment or even a cure may be within reach.

ORAL CARE CONSIDERATIONS

Good oral hygiene is a part of maintaining our health that is often performed at a less-than-satisfactory level with our consumers. This can be due to a variety of reasons such as behavioral issues of the consumer, insufficient staffing at times of hygiene performance, lack of training of staff and consumers on the importance of good hygiene and in techniques that create favorable outcomes, or other reasons unique to the individual.

It is not uncommon for some of our consumers to have halitosis (bad breath) or even for ourselves to have this condition on occasion. Halitosis can be caused by a variety of problems such as:

- * Dry mouth
- * Poor brushing routine

- * Not using mouthwash
- * Insufficient Vitamin C
- * Insufficient Zinc
- * Other metabolic conditions such as diabetes



The act of brushing your teeth, gums, and tongue will produce saliva and kill germs which helps eliminate halitosis. The addition of mouthwash to your consumers' oral hygiene routine will take this up a level as the chemicals in mouthwash kill more germs that cause odor. Chewing gum or sucking on a breath mint will also stimulate saliva to decrease any dry mouth problem. Adding Vitamin C and Zinc to the diet has also been shown to decrease or eliminate bad breath.

Work on those smiles! Our consumers need your help with this one.

HELICOBACTER PYLORI : BETTER KNOWN AS *H. PYLORI*

Years ago, the medical community believed that stomach ulcers were caused by too much stress, drinking too much alcohol, or eating spicy foods. Since the 1980s, when *Helicobacter pylori* was discovered, research has shown that this little bacterium and its thousands of *H. pylori* buddies, are the major cause of ulcers.

It is not an uncommon diagnosis to see for some of our consumers.... "History of *H. pylori*" or "*H. pylori* infection". And there are most likely many more consumers who are not diagnosed with the infection but they have it. It can masquerade as many other conditions and may require some detective work and getting the physician to order some diagnostic tests to be sure *H. pylori* is the culprit of the array of symptoms you are observing.

What symptoms are common with an *H. pylori* infection?

Generally, people with *H. pylori* may experience flu-like symptoms of nausea, vomiting, bloating, stomach ache, lack of appetite and even repeated belching. Over time, due to these uncomfortable symptoms, they will experience weight loss which can even progress to malnutrition if not addressed effectively. Symptoms can be mild, severe....or there may be no tangible symptoms at all. If the infection progresses over time to eat away at the lining of the stomach causing a peptic ulcer, burning and pain can occur. This usually occurs when the stomach is empty, between meals or early in the morning before a person has eaten. If the ulcer worsens, bloody stools, black stools, or coffee ground vomit can occur. Anemia can occur with excessive blood loss and this can be one of the diagnostic tests that leads to figuring out that *H. pylori* is the culprit. These are reasons to seek immediate medical attention. They signal that an emergency medical situation may be occurring such as bleeding, perforation of the stomach or bowel, or an obstruction of the stomach from the ulcer.

In our DD population, symptoms can present in a different way. If there are communication disorders, behavioral issues, or psychiatric diagnoses at play along with the DD diagnosis, it can construe what is going on to the point that you may or may not even know something

is wrong until it has progressed to a very serious situation. Symptoms commonly observed with our consumers could include increased irritability, a change in eating patterns, weight loss, self-injurious behavior, head banging, punching self in the stomach, stuffing the fist in the mouth or sucking on fingers or other objects. The nurse can do a physical head-to-toe exam being careful to check each body system's function in the assessment. Palpation of the abdomen and listening to bowel sounds may evoke a pain response in the consumer with *H. pylori*, however, it may not. Any behavioral response that the individual exhibits when he or she is in pain may occur. Then it is up to you to figure out where the pain is. Look at the whole picture of the individual and compare each area (sleeping, eating, medications, change in the housemates or home environment, etc.) to 1 month ago, 6 months ago, and 1 year ago. Then, evaluate the differences.

There are other causes of peptic ulcers, including taking too much of certain kinds of medications, or tumors in the stomach. Even over-the-counter medications can be dangerous. Taking too many of a category of drugs called NSAIDs (non-steroidal anti-inflammatory drugs), which includes aspirin and ibuprofen, is another major cause of stomach ulcers.

Diagnosis of *H. pylori* is done by;

One of these 3 tests is used to diagnose the presence of the *H. pylori* bacteria.

1. **Blood test**—probably the most common way physicians check for *H. pylori*. The presence of *H. pylori* antibodies which are the immune system cells that fight against *H. pylori* when it is present. If they exist, *H. pylori* must be present.
2. **Urea breath test**—the consumer swallows a substance (could be a pill, liquid, or food) that contains urea with an attached special carbon atom (fancy stuff!) The person is asked to exhale several times. If the carbon atom is found in the exhaled breath, this signi-

fies *H. pylori* is present.

3. **Stool antigen test**—the consumer provides a stool sample which is tested for *H. pylori* antigens (the proteins that are *H. pylori*). This is the least invasive test and works well for our consumers. They don't have to get stuck by the lab and have blood drawn. They can provide the sample at home, then staff take it to the lab appropriately labeled.
4. Other diagnostic procedures that the physician may perform are more invasive. These include an endoscopy or an upper GI series.



Treatments for *H. pylori* include a triple therapy approach which is most common;

Combining clarithromycin (Biaxin, an antibiotic known to specifically kill *H. pylori*), a proton-pump inhibitor (Prilosec, Prevacid, Aciphex, etc.) to decrease acid in the stomach, and another antibiotic that works differently such as amoxicillin (Amoxil) or metronidazole (Flagyl) are the 3 components. Some physicians will add a 4th therapy, bismuth salicylate (Pepto-Bismol) to coat the ulcer and protect it from more acid deterioration.

Total elimination of the bacteria is difficult even with this regimen. At least 4 weeks after treatment has ended, the consumer should be tested again using the breath test or the stool test to make sure *H. pylori* is gone. A blood test can test positive for *H. pylori* even after the bacteria has been eradicated....so that is not a definitive test at this point.

Information for this article was borrowed from;

- National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health at <http://digestive.niddk.nih.gov/ddiseases/pubs/hpylori>
- The Helicobacter Foundation at http://www.helico.com/faq_diseases.html



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MEDICATION INFORMATION RESOURCES

Need to find comprehensive information on the medications you or your consumers take in language you can understand? You don't need a drug manual! Look them up on the internet! There are many websites that are reputable that have Drug Monographs ready to print that include the drug, available dosages of the drug, indications for use, side effects, interactions, nursing considerations and more. Some good sites are Medicine Net (www.medicinenet.com) and Medline Plus (www.nlm.nih.gov/medlineplus/druginformation). These websites also offer free videos, Facts Sheets, and Tools for training staff. So, the next time you're wondering about a medication or maybe you need to train some nurses, or staff, or consumers about their medications, sit down at your computer and look them up. It's EASY!

NEW GENERICS CHECK THEM OUT!

Generic medications provide a low-cost option for many people for the Brand Name medications that they are taking. Medicaid and Medicare require that a generic medication be dispensed if it is available unless the physician has ordered and provided supporting documentation for why a patient should be on the Brand Name of the drug. Here are some NEW GENERIC DRUGS available to you now (the short list). You can get the complete list at www.fda.gov

- * Zolpidem Tartrate extended-release 12.5 mg, generic for Ambien CR 12.5 mg for sleep
- * Dutasteride, generic for Avodart 0.5 mg for enlarged prostate
- * Ibuprofen & Diphenhydramine 200mg/25mg, generic for Advil PM Liqui-gels for sleep with pain reliever
- * Donepezil Hydrochloride, 5 mg, 10 mg, generic for Aricept for dementia
- * Levocetirizine Dihydrochloride 5 mg, generic for Xyzal for allergies