The Medical News Report

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Last month, I reported on fibromyalgia, and will discuss chronic fatigue syndrome this month, since it overlaps frequently with many of the diseases reported on in the past months.

Kiss Somebody!

Subjects this month:

I. Asthma and COPD
II. Chronic Fatigue Syndrome
III. Bipolar Disorder
IV. Head Injury and its consequences (update on Hiliary Clinton’s injury) Concussion Part 1
V. Brief information on recent medical issues
   a. Picking the right surgeon!
   b. Eating fish vs. taking supplements to prevent stroke
   c. Dense breasts need additional screening for cancer
   d. Statins can help you more than lowering cholesterol

I. Asthma and COPD (chronic bronchitis and emphysema)

A. Asthma

Last month, I reported on upper respiratory and lower respiratory infections, including acute bronchitis and pneumonia. Asthma is about the worst manifestation of allergy a child can have, usually starting at age 2-4. In adults, it usually occurs before 40. This disease involves the tiny muscles in the bronchi and minor bronchioles without involving the alveoli (little sacs that exchange oxygen and carbon dioxide). With the photo below, one can see what the minor bronchioles look like, which are tinier branches of the bronchi.

Lungs with the bronchi and bronchiole with the air sacs (alveoli).
Alveolus where oxygen exchange.

The mast cell secretes histamine!

When an allergen is inhaled or ingested, a chemical, histamine, is released from a special white blood cell (mast cell), which is released into the blood system making the segmented bronchioles constrict. This creates a wheezing sound. The first sign may be coughing and wheezing, but the end result is lack of oxygen getting into the alveoli (photo) of the lung tissue and the release of carbon dioxide. This process results in shortness of breath, more rapid breathing, and the lips can turn blue (cyanosis). If this spasm in these tubes is not relieved, death can occur, called status asthmaticus The management of asthma includes education of the parents or spouse and patient regardless of age).
This disease can be mild, moderate, or severe. Pulmonary lung function studies (spirometry), and allergy testing are necessary.

Asthma is divided into Extrinsic (90% of patients and almost all children) and Intrinsic (10%-mostly adults). Most of the extrinsic cases have documented allergies, whereas the intrinsic type usually does not. Prevention of trigger events, foods, seasonal inhalant allergens that initiate asthma must be analyzed. Keeping a diary is not a bad idea. Home proofing of dust mites, insects, dander from animals, HEPA filters on the central air system, and a HEPA filtered vacuum cleaner are all a must. I will discuss allergy diagnosis, testing, and management next month when talking about allergy in general. This will include skin manifestations (atopic dermatitis).

15 million Americans suffer from asthma, and create 2 million emergency room visits a year. 1 in 15 children have asthma, and 5% of adults. Children can grow out of this, but 75% will reappear at some time in their future. Asthma deaths have doubled and hospitalizations have increased 30% over the past 30 years. In adult-onset, the patients are usually under 40, smokers, more likely if pregnant, taking hormone replacement therapy, after a bad virus, secondary smoke, and occupational hazards. The treatment includes anti-inflammatory meds, such as inhaled corticosteroids, even oral steroids when acute, and bronchodilators.

Bronchodilators are short or long acting. These inhalers must be used correctly, and come in a metered dose inhaler, dry powder, or used in
a nebulizer as at-home treatments. (see photo). There are 4 types: beta-2 agonists, anti-cholinergics, cortisone, and cromolyn (if you want more info on these meds, log on to WebMD).

NEBULIZER

Home testing of peak flow breathing can be measured with a simple device. Secondary infections and other overlapping diseases (co-morbidities) like diabetes, heart disease, and use of tobacco must be addressed. The type of inhalers used will depend on your doctor, severity, and response to treatments. Immunizations are a must to prevent other viral infections that can be more severe in asthma patients.

With education, cooperation, prevention, compulsive house cleaning, house proofing (more next month), limiting pet and other allergen exposure with good medical management, most patients can live a fairly normal life, but it takes dedication, and persistence with a keen eye on prevention.

B. COPD

COPD (chronic obstructive pulmonary disease) includes chronic bronchitis and emphysema. Think of these 2 diseases as a continuum in many cases. Chronic bronchitis comes from continuous inhalant of irritants, very commonly cigarette smoke, secondary smoke or hazardous occupational inhalants, or allergens. This creates continuous inflammation in the bronchi, loss of the functioning lining of the bronchi, so that mucous is not easily removed from the airway
The bronchi and bronchioles are like a branching tree. Smoking cessation (90% are smokers) is the most frequent requirement to reverse this disease. If chronic bronchitis is left unchecked, it can be permanent and lead to destruction of the alveoli (see photo), which begins the process of emphysema. As this process continues, the air sacs of the lung rupture and combine to form bigger sacs (blebs), and as that continues, the function of the lungs diminishes resulting in serious oxygen deprivation.

The diagnosis of chronic bronchitis is made clinically using a medical history, lung function tests (spirometry). Most patients present with a chronic hacking cough, waking with a cough, productive of mucous or not, in a smoker, who may or may not have a raspy voice (an ENT doctor needs to look at the vocal cords). Shortness of breath and some mild wheezing can occur when worse. Chest X-rays are frequently not helpful in uncomplicated disease. The treatment includes the same type of treatment as asthma, with anti-inflammatory meds, bronchodilators, nebulizer treatments, and avoidance of infection, which is common. Immunizations are critical for these patients.

The diagnosis of emphysema is made the same way. X-rays of the chest in either of these diseases are not very helpful until in the late stages, or there is pneumonia present. Emphysema can literally steal...
your breath, requiring oxygen therapy (continuous), and physical therapy to strengthen the patient. These patients are suffocating.

Emphysema blebs!

Blebs do not function! There is loss of breathing capability.

With heavy breathing, this exhausts the patient to the point that they can become house bound and have increasing trouble walking many steps. Pneumonia is waiting around every corner, and death can occur with any an infectious episode, even the flu. President G.H. Bush was in the hospital with chronic bronchitis. Older patients just can't handle the stress of chronic lung disease.

If there is any group of patients that needs the annual flu shot and pneumonia shot, it is these patients. With continued deterioration, heart failure will occur, creating fluid build-up in the lungs. These patients literally suffocate to death, and the best treatment is PREVENTION. QUIT SMOKING! I will address lung cancer soon.
II. Chronic Fatigue syndrome

This disorder is perfect to follow up from fibromyalgia (from last month), because it also overlaps with so many other diseases just as fibro does. In fact, it is defined as a syndrome, which is a group of symptoms creating chronic fatigue. Just like fibro, there are several symptoms that are common, and to diagnose this debilitating complex disorder, 4 or more of these symptoms need to be present, including symptoms for at least 6 continuous months.

1. Profound fatigue not relieved by a good night's sleep
2. Post-exercise weakness (malaise)
3. Muscle pain
4. Difficulty concentrating
5. Tender lymph nodes
6. Chronic sore throat
7. Multiple joint complaints
8. Short term memory loss
9. Headaches (a new type, pattern, or severity than before the onset)

Obviously, you have seen these symptoms before with many of the autoimmune illnesses I have reported on in past reports. The most important ones to rule out is fibromyalgia, neurasthenia, multiple sclerosis, sleep apnea, infectious mononucleosis, Lyme's disease, narcolepsy, low thyroid, hormone problems, depression, other psychiatric illnesses, eating disorders, cancer, reaction to medications, and other autoimmune diseases. The workup is very important, and we call this disorder a rule-out syndrome (rule out everything else and the doctor is left with CFS).

There are other symptoms, which include every symptom in the book.

There are approximately 1 million Americans diagnosed with this disorder. Like Fibro, this disorder requires a doctor who believes in
this problem and will work with these patients and support them, since management is all about treating the symptoms. The good news is this disorder does **resolve** to some extent in 40% of the patients, but full recovery occurs in only 5-10%.

The bad news is these patients suffer for a long time before being adequately diagnosed. Just like all autoimmune diseases, this occurs more commonly in **women** usually in their 40s and 50s.

**Management** includes lifestyle changes, prevention of over-exertion, diminishing stress, and (questionable) dietary restrictions, gentle stretching, (questionable) nutritional supplements, and monitored exercise. The natural advocates have all kinds of recommendations that are unproven. These, plus treatment of specific symptoms, will give significant relief to the majority of patients. Diet and supplements, and other alternative treatments (acupuncture) are **unproven**, as is most of what you will read on the internet or buy at a health food store. The **placebo effect** is clearly working in treating this disorder. However, if you follow your doctor’s orders, you can improve and learn to cope with this syndrome. (Ref. Ask.com, WebMD, Wikipedia)

### III. Bipolar disorder

There are many **mood disorders** that interfere with quality of life, but if you live with a person who is bipolar, you will be tested every day until they are properly diagnosed and treated. This is a syndrome of many characteristics, and will likely go undiagnosed for years. Previously called manic-depressive disorder, it implies there are 2 types of psychologic issues that in play. The **mania** stage may be much more prominent and the **depressive** phase may be far less apparent, especially to people outside the home, but any amount of mania and depression suggests the diagnosis.

**Classic characteristics of mania** (there is hypomania also, which is just less overt) : a) extremely talkative and have trouble speaking
slowly b) extraordinarily active, productive, and energetic c) never seems to get tired d) irritable about others (spouse) unable to keep up e) sex drive varies widely f) flirtatious g) center of attention h) self confidence varies widely i) hostile for no reason and can occur suddenly j) unnecessary social reactions k) obsessive-compulsivity with excessive spending and buying binges l) a “show off” m) 60% have substance abuse n) pursues unrealistic grandiose plans o) self-abusive (hits or cuts themselves), and 10% attempt suicide.....you get the picture. This stage of the disorder can be very useful to certain driven people, but usually is very difficult to tolerate the highs and lows by those around the person.

The depressive stage may account for most or very little. Bipolar disorder is due to a chemical imbalance in brain chemistry (serotonin/norepinephrine, dopamine, and glutamates), which accounts for the swings in behavior. In the depressive stage, which is characterized like any depression: a) tired b) sleeps a lot although the quality is not good c) withdrawn d) angry e) feels sick and makes it an excuse to withdraw f) cancels engagements g) mood swings h) easily provoked h) anxious at times.....in other words depressed.

Bipolar usually starts in the teen years, and can be overlooked as “just going through a stage” in youth. School work suffers, with trouble focusing. Suicide and “cutting” can occur. It is reported that this disorder is increasing in childhood with no real reason. Many are not diagnosed properly, being diagnosed as an anxiety or depression disorder or ADHD. (ADHD will be discussed next month)

2.5% of the population is affected, and this disorder has been mentioned as a possible disorder in violence cases. It can run in families, and is frequently not diagnosed until midlife. Mania can last for a few days, weeks, or months. And the person can be “normal” for extended periods of time or rapid cycling can occur. Catherine Zeta-
Jones was recently diagnosed, and I wouldn’t be surprised if this disorder exists in many successful people.

**Triggers** include sleep deprivation, drug or alcohol abuse, stress, or there may not be an obvious reason.

The diagnosis should be made by a **psychiatrist**, as this is a difficult but treatable disease. There are some subtle MRI changes, but it is not diagnostic. The classic medication was Lithium, but there are newer treatments with less side effects: Seroquel XR, Depacote, Zyprexa, Abilify, or a combination of anti-depressants that won’t create mania when the person is depressed. Anxiety meds (Valium, Xanax, Ativan) may be also necessary, but just like the anti-depressants, these need to be directed by a psychiatrist, as these meds may aggravate the disorder. Each phase may require adjustments of dose. Careful monitoring and drug adherence (very important) are crucial to success with these patients.

Probably the most difficult task for the family is to convince the person to agree to be evaluated for this and then achieving patient acceptance and compliance with the medications, keeping appointments with their psychiatrist.

**III. Head Injury and Concussion** (Hiliary’s head injury)

Head injury occurs in 0.3% of the population. There are 1.6-3.8 million sports related head injuries, 1.7 million in car accidents, and there are
40,000 youth-related concussions per year, 10% of which are sports caused. 25,000 die each year from head injuries. Hiliary Clinton added one more person to the statistic by falling because of dehydration from a stomach virus. The most common effect of these injuries is a concussion with or without other more serious effects of the injury.

Most commonly concussions occur from a closed head injury. But to understand all the injuries to the head and the consequences, a look at the anatomy is in order.

With a closed head injury, the brain bounces back and forth inside the skull (contra-coup injury), causing damage inside the skull depending on the force of the head injury with or without neck or facial injury.

Concussions can be isolated or just the “tip of the iceberg”. The skull has an outer layer, a middle layer (marrow), and an inner layer. Inside the skull lies the covering of the brain: dura mater, which is made up of 3 layers. Inside the dura lies the brain (white matter and gray matter).
Veins drain the brain into what is termed venous sinuses and flow into the jugular and vertebral veins. (see below) Arterial supply comes from 2 sources (carotid and vertebral arteries). The second two photos show the venous drainage of the brain to the jugular vein in the neck, and down the vertebrae.

Hiliary hit her head so hard she had a tiny tear in one of those veins (the lateral venous sinus) behind the ear just before draining into the jugular vein. I feel she had a basilar skull fracture (fracture of the
mastoid portion of the temporal bone) (see photo below). A bruise behind the ear is common (Battle’s sign), indicating this type of fracture.

![Image of mastoid and ear bruise]

She was seen wearing Frenzel glasses (special thick lens to make the eyes track equally) at the Benghazi hearing and 60 Minutes. She was vague on 60 minutes and minimized her injury. Any type of intracranial bleeding is a very dangerous condition, because if the vein clots and blocks one of those veins, it can cause pressure to back up in the head with severe consequences (seizures, even death). She remains on blood thinners today. I suspect Hiliary had a basilar skull fracture where the vein tore. She obviously had a much more serious head injury than a simple concussion. Politicians sure can minimize when it is convenient. Having spent some time in Neurosurgery before switching to ENT-Facial Plastic-Head and Neck Surgery, I have had a great deal of experience with all these injuries.

**Concussion** refers to a mild injury usually reversible. It implies some type of electrical short-circuiting of the brain. **Symptoms** include loss of consciousness, clumsiness, fatigue, confusion, nausea, blurry vision, headaches, and loss of memory for the event. This leaves the brain very vulnerable to re-injury. Her clarity of speaking on 60 minutes tells us that her higher brain functions are intact.
A physical examination should include looking for bleeding from the nose, mouth, or ear and facial injury. 2-3 days later, there will be bruising around the eyes. Testing the eyes for a jerky movement (nystagmus), unequal pupils or eyes that don’t tract together, bruising behind the ear (Battle’s sign) should be ruled out (implies a basilar skull fracture), extremity weakness, neck injury etc. and a full neurological exam.

A neuro-psychologic assessment is mandatory at the time of the injury to determine the diagnosis and determination of next steps making sure there is no evidence of a more serious nature. Repeat assessments will allow a trained individual to determine recovery time, usually at least 2 weeks. Because of faulty assessments, it is estimated that 40% of high school athletes return to action prematurally. Grading is important to estimate the seriousness of the concussion:

I—confusion only lasting less than 15 minutes

II—confusion only lasting longer than 15 minutes

III—loss of consciousness, subtypes A—brief B—prolonged

Permanent brain damage can occur with Grade II and III. Slight injury can have amnesia going forward (antegrade) or backward (retrograde). In all cases, there is a post-concussive syndrome (memory problems, dizziness, tiredness, sickness, and depression are common. Concussion is the most common result of a head injury in children. Anyone with Grade II or III should be assessed by a doctor and subsequent testing which may include the possibility of x-rays, and scans. The legal system creates many more studies than clinically indicated, and yet no legal reform to go along with healthcare reform. Assuming no serious damage (skull fracture, hematoma, etc), the patient may be discharged to be monitored closely by friends or
relatives. Making sure the patient can be aroused is important, among other tests.

**Prevention** is the key to this problem. Proper-fitting head gear, proper training, and education of our children about injury is a must! **Mandatory training of coaches**, volunteer doctors at sporting events, and caution about benching kids and adults might prevent the “second concussion syndrome” and catastrophic consequences. Next month, I will report on more serious head injury consequences (fracture, hemorrhage, contusion, hematoma). CDC, Wikipedia, American Journal of Neurosurgery

V. Brief information on recent medical issues

A. Pick Your Surgeon Wisely!

There are over 4000 surgeries performed each year with a complication in the US, either from surgery or anesthesia. 234 million surgeries per year are performed world-wide, but it is still an unacceptable number in our country. Many of these surgical mistakes are preventable. Operating on the wrong patient, wrong part, wrong side, leaving instruments or sponges in the abdomen, poor or wrong technique, etc. is inexcusable (they are working on a scanner that will detect any foreign material left behind before the patient is awakened). Hospitals, doctors, and nurses work very hard to prevent problems. There are recognized checklists that have been proven to drop the complication rate from 11% to 7% and drop death rates from 1.5% to 0.8%. Preoperative antibiotics are now known to cut infection rates considerably if given within 1 hour of the incision (not the time when you are sent to surgery).

Breaching sterile technique, not being prepared for unforeseen circumstances, recognizing and fixing complications, operating in an outpatient facility without backup should serious complications occur are all important considerations when you pick a surgeon. Surgeons,
who are well trained, have very few complications, unless they accept high risk patients. Some surgeries are very difficult and increase the risk of trouble, so be sure you are picking the best around. Write your questions down, and be sure they are answered in your pre-op visit.

Picking the best surgeon and the best hospital is important. Don’t be afraid to ask for a second opinion. Trust your primary care doctor in most cases. Do your research, ask how often a surgeon performs the operation, are they board certified, is your surgeon going to perform the surgery or is his resident in training? Ask to talk to other patients, be informed, know the possible complications, alternatives to surgery, and success rate, cost, and what if reoperation (revisions, etc.) is needed. Having the best doesn’t usually cost more. DO YOUR HOMEWORK.

There are 3 critical periods for surgery 1) prior to anesthesia 2) immediately prior to incision 3) prior to a patient exiting the OR.

Anesthesia is most dangerous during the induction (first being put to sleep) and at the end of the anesthetic. I will discuss anesthesia in the future.

B. Eating Fish NOT supplements cuts stroke risk!

Consuming fish has been proven to cut stroke risk compared to Omega 3 fatty acids supplements. Eating fish means you are skipping red (or white) meat, which is good. Don’t be deluded into thinking that taking supplements without eating the right foods, cutting calories, managing your weight, diabetes, heart and vascular diseases will keep you safe. You are wasting your money. The British Medical Journal (2012) reviewed 26 studies and 12 randomized trials (794,000 patients). The study stated that you must eat 2-4 servings of fish per week to get the protection.

C. Dense Breasts need Special Screening! A new ultrasound!
As a member of the American Cancer Society’s Screening Guidelines Committee, we are currently reviewing the latest data on breast cancer screening including the issue of dense breast screening (for current guidelines log on to www.cancer.org).

10% of women have dense breast tissue, and a standard mammogram is not as valuable in these women. 10% have fatty breasts and the rest are in between. Women with dense breasts are 4-5X more likely to have breast cancer than those with fatty breasts. There is a breast density scale determined by the Breast Imaging Reporting and Data System. It is recommended that those with dense breasts be considered for digital mammography, supplemental ultrasound and/or MRI, depending on clinical findings, including prior studies. Family history is very important. For instance, women with ductal carcinoma are more likely to have cancer in the opposite breast. There are BRCA genes in some families, which increase the risk of breast and ovary cancer. These family members should be screened with scans, and once a patient has cancer, an MRI is recommended annually regardless of density.

A new ultrasound (somo-V-ABUS) has been approved which automatically screens the entire breast in one minute, and increases detection by 30% with only a 4% false positive. Our national ACS committee will have updated guidelines for the public later this year. When that happens, I will tackle the entire subject of breast cancer.

D. Statins lower mortality rate of many cancers!

Statins are well known to be valuable in lowering cholesterol, which they do, along with a good diet, exercise, and weight control and will reduce your risk of heart attacks and stroke. The New England Journal of Medicine in 2012 has reported that there is a 15% reduction in deaths from many of the common cancers. There is even some recent discussion about all diagnosed cancer patients taking a statin.
Regardless of dose, this study shows the reduction is real when all other factors are controlled.

That does it for February. I will continue next month with a complete look at allergies from an allergist’s standpoint, Part II of head injuries, and a look at irritable bowel syndrome including gluten and lactose problems. If you want me to report on any subject in the future, let me know.

As always, I am reporting information out of the medical literature, not trying to recommend any treatment. It is between you and your doctor how you are diagnosed and treated. I hope I am giving you good information to empower you to read more and make more informed decisions about your health.

In an email I sent you today, I asked for you to take the time to call and leave a voice mail on a dedicated line through the American Cancer Society. Please take one minute and do so to voice your concern about the Congress considering to decrease cancer research funding. This just can’t happen, when the research that is coming out right now is so exciting with real breakthrough discoveries. Please help, and don't forget to support The American Cancer Society. Thank you!

Stay healthy and well, my friends! Dr. Sam

Happy Valentine’s!