

Seth Coombs, MD

Personalized Medical Practice

HEALTHWISE

News to enrich your lifestyle

Fall 2013

There's an App for That...Is it Right for You?

Apps (short for "applications"), are pieces of software that you can download and utilize on your computer, phone or other electronic device. The initial explosion of apps in 2010 has grown exponentially each year, with more than 40,000 medical and health ones now available to users of iPhones, iPads, Androids and others.

These apps offer the opportunity to do everything from counting calories to calculating cardiac risk and managing diabetes. Clearly, the potential for patients is enormous, but as you might suspect not all apps are created equal. How to sort through the myriad offerings and select the most trustworthy and reliable? Although many consider this industry the "new Wild West," there are some outstanding apps with proven value. However, it is very important to remember: no app, website, or online discussion can take the place of a phone call or office visit with your own personal physician.

Because of the growing availability of online medical resources, the Food and Drug Administration (FDA) has divided apps into two categories—those that assist with healthful lifestyles and those that turn your phone into a medical device for recording vital measurements such as blood pressure and then send those readings to a doctor. Some approved medical device apps are available only with a physician's prescription. For example, smart phone apps which link to cardiac devices, record the signals and forward the data. There are also mobile diabetes management systems.

Conversely, there are medical apps to beware of; at the top of the list would be those that claim to detect skin cancer. In a study published in the January, 2013 issue of *JAMA Dermatology*, three out of four smartphone apps used to detect melanomas incorrectly defined 30% of melanomas as insignificant; one app missed 93% of all melanomas. Studies like these are why the FDA will be issuing regulations for mobile medical apps in the near future.

According to a recent study by *Medical Economics*, apps for managing diabetes and cardiovascular disease which are recommended most frequently by physicians include:



Diabetes, iCookbook Diabetic, Diabetes In Check, and Glucose Companion, which enable patients to monitor their condition, track food consumption, access diabetes-friendly recipes and plan meals, track blood sugar and weight, and share tracking results with the physician's office.



iCalcRisk app encourages healthier lifestyles by calculating your cardiac risk; *Blood Pressure Monitor* and *Heart-Wise Blood Pressure Tracker* help monitor blood pressure, resting heart rate, and weight.

Numerous health and fitness apps are also available. We have highlighted a few:



iTriage allows you to check symptoms and easily locate a physician or hospital in the event of an emergency.



Tummy Trends helps you track irritable bowel syndrome symptoms, exercise habits, water intake, fiber intake, stress levels and share results with the physician.



Couch-to-5K by The Active Network for those just beginning to get in shape.



Fooducate works with you as you shop—scan the barcode on packaged food items and each receives a grade from A to D, with healthier alternatives offered.



Lumosity Brain Trainer sharpens the mind with memory and attention games.



Epocrates Rx provides a handy drug reference with photos of pills and how they interact.



Sleep Cycle gauges your movements as you sleep, waking you while you're in your lightest sleep cycle during a preset 30-minute window.



Drink Tracker lets you know when it's time to hand over the car keys after a night out by tracking your blood alcohol concentration.

You may want to try some of these apps and discuss with your personal physician what you have found most helpful.

From the desk of Seth Coombs, MD

Dear Patient:

I remember in the not too distant past as people aged a favorite topic of discussion was their aches and pains related to a specific "ailment." Now the conversation with my friends, colleagues and certainly my patients centers on a recommended diet or exercise "regime" to stay healthy! What an exciting phenomenon and paradigm shift.

In this issue of *HealthWise*, we explore another growing phenomenon...the abundance of "smart phone" applications available to supplement personal health and wellness activities. Another continuing topic of interest is what we eat and the increasing prevalence of genetically modified organisms. I feel certain you will be enlightened by this article in our Nutrition Corner. Finally, we examine neuropathy and the many symptoms of this often undiagnosed condition.

Enjoy this Fall season,

Seth Coombs, MD



Seth Coombs, MD

8 Commons Street
Rutland, VT 05701

Office: 802.770.1806

Service: 802.747.1318

Fax: 802.773.4876

Email: mail@SCoombsMD.com

Seth Coombs, MD

Personalized Medical Practice

Peripheral Neuropathy: A Little Known Common Chronic Condition

It can start as “pins and needles,” as if your hand or foot has fallen asleep, followed by burning, feelings of electric shock, muscle weakness, or extreme sensitivity to the lightest touch. Peripheral neuropathy (PN) is a chronic and painful condition which involves damage to the nerves outside the brain and spinal cord. This condition is more common among older adults.

There are over 100 known types of neuropathy, a third of them are idiopathic, meaning the cause is unknown. Neuropathy is often difficult to diagnose, is frequently mistaken for other disorders, or even dismissed as something that is imagined. Increased awareness of neuropathy is important, because early diagnosis can result in effective treatment which will allow peripheral nerves to slowly regenerate. Also, pain can be managed, restoring quality of life. If ignored, symptoms may intensify to include loss of sensation, lack of coordination, weakness, dizziness, digestive disorders, unremitting pain and disability.

Who is at the greatest risk of developing peripheral neuropathy? Consider the risk factors which could cause the onset of this disease. They include traumatic injuries, infections, autoimmune disease, repeated nerve pressure, metabolic disorder and exposure to toxins. But by far the greatest risk factor exists for those with diabetes. Approximately 60 to 70 percent of all diabetics develop diabetic peripheral neuropathy (DPN), and that risk rises with age and longer duration of diabetes, reports the National Diabetes Information Clearinghouse.

As a result of the increasing number of diabetics in the United States, as well as chemotherapy survivors, another high risk group, the incidence of peripheral neuropathy continues to climb. Awareness of this disease, however, remains at a very low seven percent. Many more people are affected than the 1-in-15



currently reported, according to Tina Tockarschewsky, president and CEO, The Neuropathy Association. Previously, 20 million Americans were diagnosed with the condition, but another 79 million people with pre-diabetes are also at risk for developing DPN. “We are all gravely underestimating the millions of people struggling and suffering with neuropathies,” contends Tocharshewsky.

The severity of the condition varies depending on the location and type of the affected nerves, according to *Medical News Today*. Motor nerve damage can leave patients with muscle weakness, cramps, spasms, a loss of balance and coordination, and heaviness of the lower extremities, making it difficult to walk or run. Damage to arm nerves may make it difficult to do routine tasks such as opening jars or turning door knobs. If your legs are affected, a walking stick or hiking poll is recommended. Sensory nerve damage can cause tingling,

numbness, pinching and pain, and frequently patients report a sensation of wearing an invisible glove or stocking. Autonomic nerve damage affects internal organs and involuntary functions which can lead to abnormal blood pressure and heart rate, reduced ability to perspire, constipation, bladder dysfunction, diarrhea, incontinence, sexual dysfunction and thinning of the skin. If you experience any of these symptoms, it is of utmost importance to discuss them promptly with your physician. A referral to a neurologist for a complete workup may be indicated.

Even if the underlying cause cannot be identified or corrected, there are fortunately a number of highly effective ways to control pain and restore function. Not surprisingly, one of the top recommendations from Mayo Clinic is a healthy lifestyle: a diet rich in fruits, vegetables, whole grains and lean protein, especially foods with vitamin B-12 (meats, fish, eggs, low-fat dairy foods and fortified cereals), regular exercise, drinking only in moderation, and no smoking at all. For diabetic patients, management of blood glucose levels is essential, along with the same healthy lifestyle choices listed above.

Current research projects funded by the National Institute of Neurological Disorders and Stroke (NINDS) are exploring the implication of genetics, biological factors in diabetes-associated neuropathies, and how the immune system contributes to peripheral nerve damage. Developing more effective therapies for neuropathic pain is also under the microscope at NINDS.

This new research is encouraging for the millions afflicted with any form of this disease. If you are experiencing symptoms or have questions, please consult your personal physician.



Nutrition Corner

Genetically Modified Organisms... Are They Part of Your Daily Diet?

Although we have been ingesting them for the last two decades, foods that are Genetically Modified Organisms, (or GMOs...also referred to as GE, for genetically engineered) are currently the subject of intense scrutiny.

GMOs were introduced 20 years ago as a possible solution to world hunger, by modifying wheat, for example, to withstand drought. The process consists of scientists removing a gene from one food organism and transferring that gene to a different organism. In most cases, this engineered gene produces a new protein that provides a trait such as resistance to pests and viruses.

By 2011, more than 170 million acres of genetically modified crops were grown in the United States. This accounts for almost 90 percent of all field corn, soybeans, sugar beets and cotton, used for everything from canola oil to high fructose corn syrup. Although it appears as if eating foods with GMOs is inescapable, experts at the Center for Science in the Public Interest (CSPI) contend that the process of producing the oil, sugar and corn syrup from the crops eliminates virtually all of the

genetically engineered gene and its protein product, exposing us to very little engineered product. If a person has food allergies they are most at risk for a negative reaction. However, to date, there have been no documented ill effects from GMO foods.

However, questions around the safety of food made from GM crops continue to grow. At last count, 26 states have bills pending to require GMO labeling of food. While the FDA regulates GMOs, it is a voluntary notification process, and even CSPI admits that “FDA oversight is not as rigorous or independent as it should be, and the FDA often does not get all the data it needs to perform a fully informed safety review.” Further, Dr. Thierry Vrain, former research scientist for Agriculture Canada says scientific studies proving their safety have been done for companies with a vested interest in the products.

Like many consumers, you may be concerned. A recent *New York Times* poll showed 93 percent of respondents favor GMO identification of foods; 61 countries already label. Respected voices for sustainable foods have also voiced concern. Whole Foods will require suppliers to identify products containing GMOs within five years, and last summer, Chipotle became the first restaurant company to voluntarily label GMOs on their menu, and committed to eliminating them completely.

The only certainty is the uncertainty. In the meantime, if you want to avoid GMO foods, buy certified organic products. Federal standards ensure that products from organic crops will contain either no or only inadvertent trace amounts of genetically engineered ingredients.

