False Hopes and Unwarrented Fears: Ethics in Medical News Reporting

False Hopes and Unwarranted Fears: Don’t let this get you down.

On a daily basis we are surrounded by sensationalized headlines in the media. Unfortunately this includes medical and health news. Journalists and bloggers need to get your attention in this age of mass media where information is rapidly distributed and then just as rapidly forgotten. A small study that is done on animals, or even just on the cellular level in a petri dish, gets reported as “Hope for a Cure: Insert Disease De Jour.” This spreads like wild fire on the internet causing false hope for many as only a small fraction of early research ends up leading to an actual treatment for human beings.

On the other side, another small study or a poorly designed one, might give an indication that a medical treatment or medicine currently in wide use may have a negative side effect. This also gets reported in a sensational way: “This might kill you…” with very little investigation being given to the story, no real world context, no discussion on the pros

and cons of treatment or the risks of the alternatives. People stop taking their medicine based on a sound bite and that might cause more harm.

An example this past year in what we would call “premature hope” was the various reporting on a study regarding a potential vaccine for **Type 1 Diabetes**. This was a small study done on just 80 people. The research is in the very early stages of the process and even if it pans out to prove to work and be safe it will be years and years, maybe decades before it would be available. Also, the study was just done on people very early on in the disease process. Yet there were headlines such as “A vaccine so you won’t have to take shots!”. In the comment sections of the articles with this type of headline were people asking how soon this will be available and people who had long term diabetes (who from the initial study detail would not qualify most likely for this treatment) stating they were anxiously awaiting the arrival of this vaccine. This same story has been bounced around all over the internet for the past year an a half! If this same study had occurred 10 years ago, few other than those in that field of research would have even heard about it. A more realistic headline was “Type 1 Diabetes Vaccine Shows Promise In Small Trial.”

Take time to study further what you saw in a tweet, read in a news media report, or heard in a TV news lead in. What was their source? What is the medical expertise of the reporter? Does this even relate to me right now? Is this information clinically relevant at this time? And remember, always talk to your medical provider before making any changes with your medications.

The Road Too Often Traveled – PreDiabetes to Type 2 Diabetes

Have you been told that you have "**Pre-Diabetes**"? What does that mean? The road from normal blood sugar to a level that would qualify you to be formally diagnosed with **Type 2 Diabetes** is a long one. Some can have pre-diabetes for years before reaching that point.

The levels of blood glucose that are used to diagnose Type 2 Diabetes are those in which the microvascular – small blood vessels – complications of diabetes can start to develop (causing damage to the kidneys, nerves, and the vessels in the eyes). However the macro-vascular – large vessels – complications such as heart disease start to occur during the "pre-diabetes" stage.

YOU can control the rate you travel down this road. YOU can even go into reverse! Healthy eating, exercising, and weight loss can improve your chances. It has been shown that losing just 7% of your body weight will lower your chances of developing diabetes by 58% in the next 5 years if you have pre-diabetes.

Learn more about pre-diabetes and insulin resistance here: National Institute of Health – Insulin Resistance

The Metformin and B12 Deficiency Connection

Do you have **diabetes** and experience tingling and pain in your hands or feet? Is it diabetic neuropathy or could you be suffering from B12 deficiency instead? The symptoms can mimic each other. Metformin is the first line pharmaceutical in the treatment for **Type 2 Diabetes** worldwide. The benefits of this drug have been established. However, a not often known fact is that it can cause malabsorption of vitamin B12.

Long-term use of metformin, as well as having a preexisting malabsorptive illness, can increase your chance of developing a deficiency. If you are on metformin, ask your doctor to check your B12 level annually. Taking sublingual B12 supplements or having an annual 1,000 mcg B12 injection can help prevent this risk. Taking calcium carbonate daily, 1200 mg, may also block the mechanism that is involved with the malaborption.

References: Metformin-induced Vitamin B12 Deficiency

Presenting as a Peripheral Neuropathy
David S.H. Bell, MD
South Med J. 2010;103(3):265-267.

Age Ageing. 2006 Mar;35(2):200-1.
Metformin-related vitamin B12 deficiency.
Liu KW1, Dai LK, Jean W.

Antibiotic Use and Diabetes Risk

We all know how the overuse of antibiotics can lead to antibiotic resistance and hard to treat infections, but unnecessary over use of antibiotics has also been linked to a significant increase in the risk of developing **diabetes**! Other studies have also shown a link between antibiotic use and obesity, inflammatory conditions, and autoimmune disease. Once again, the likely culprit may be the altercation of our normal gut micro-biome.

Source:

Repeated Antibiotics Raise Diabetes Risk on Live Science
Microbiome May Drive the Course of Diabetes and Obesity from Clinical Endocrinology News

Let’s Talk about Lipohypertrophy and Injecting Insulin

Injecting Insulin

Do you inject insulin? Repeatedly using the same area to inject can lead to **Lipohypertrophy** which is an accumulation of fatty deposits under the skin. This is not just a cosmetic issue. Lipohypertrophy can lead to poor and inconsistent insulin absorption and wreak havoc on your blood sugar control. It is estimated that 20 to 40% of people with **Type 1 diabetes** and 4% with **Type 2 diabetes** develop lipohypertrophy.

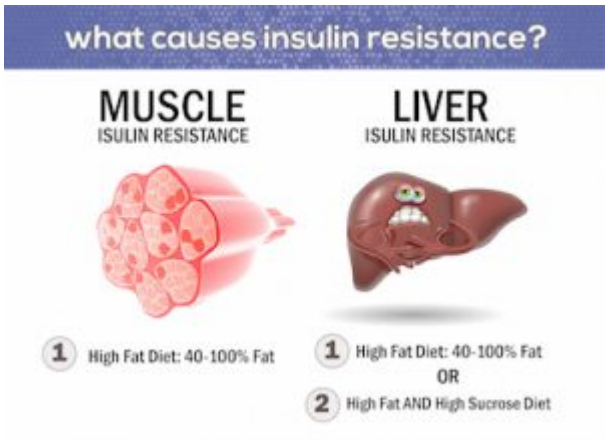
Please read this article on the problem of “Lipohypertrophy” from the British Medical Journal: Poor Glycaemic control caused by Insulin Induced Lipohypertrophy

Chowdhury TA, Escudier V. Poor glycaemic control caused by insulin induced lipohypertrophy. BMJ : British Medical Journal. 2003;327(7411):383-384.

Why Carbohydrate Counting Doesn’t Cut It

Your doctor and/or nutritionist probably has you “carb counting” to help dose your insulin with meals. However, even when you are good with carb counting you are frustrated with the variability in your sugars. Here’s why:

A high fat meal increases the amount of free fatty acids (FFAs) in the blood which causes insulin resistance. You will need more insulin to overcome this insulin resistance FFAs chronically elevated due to repeatedly consuming high fat meals, especially high in saturated fats, is associated with persistent skeletal muscle and liver insulin resistance. This is the same insulin resistance seen with obesity. Protein is slowly broken down and some of it is turned into carbohydrates. The higher the protein load in a meal, the greater impact in your blood sugars hours after a meal. The Glycemic Index (GI), or how rapidly a carbohydrate can impact your blood glucose, can cause a mismatch to the timing of your mealtime insulin peak.



Researches, as reported in the June 2015 issue of Diabetes Care, evaluated the effect of Glycemic Index (GI), protein, and fat composition in meals and effects on post prandial (after the meal) blood sugars in Type 1 Diabetes. They reviewed various studies that used continuous glucose monitoring (CGMS).

The researchers concluded that GI, protein, and fat can drastically affect glucose concentrations in individuals with type 1 diabetes. The effect on three hour postprandial glucose concentrations with the addition of 35 g of fat and 40 g of protein to a meal is equivalent to that resulting from the consumption of 20 g of carbohydrates without insulin. The addition of 50 g of fat to a meal can increase insulin requirements for by greater than two fold.

Study Source: Bell KJ. Impact of Fat, Protein, and Glycemic Index on Postprandial Glucose Control in Type 1 Diabetes: Implications for Intensive Diabetes Management in the Continuous Glucose Monitoring Era. Diabetes Care. June 2015. 38(6)1008-15.

Metformin safe in Mild to Moderate Kidney Disease

Do you have diabetes along with mild kidney disease and your doctor had you stop Metformin but now finding your diabetes hard to control?

Good news – a recent review has shown that Metformin is safe in mild to moderate kidney disease.

Metformin is the first line drug treatment for Type 2 diabetes and is the only treatment shown to decrease your cardiovascular risk (risk of heart attacks and stroke) and over all one of the safest drugs for diabetes.

The current guidelines are conservative. Over 100 diabetes experts have signed a petition to the FDA to revise Metformins prescribing guidelines.
Sources:
http://news.yale.edu/…/popular-diabetes-drug-may-be-safe-pa…
http://www.medscape.com/viewarticle/771401