Scientists at the University of Copenhagen have discovered that without sufficient intake of vitamin D, the killer cells of the immune system—T cells—will not be able to react to and fight off serious infections in the body. For T cells to detect and kill foreign pathogens such as viruses, the cells must first be ‘triggered’ into action and ‘transform’ from inactive and harmless immune cells into killer cells that are primed to seek out and destroy all traces of invaders.

When a T cell is exposed to a foreign pathogen, it extends a signaling device known as a vitamin D receptor, with which it searches for vitamin D. This means that the T cell must have vitamin D or activation of the cell will cease. If the T cells cannot find enough vitamin D in the blood, they won’t even begin to mobilize.

Vitamin D also provides a myriad of other benefits including improved absorption of calcium, help warding off depression, and improved outcomes of breast cancer to name a few. Under the right circumstances, 10-15 minutes of sun on the arms and legs can generate nearly all the vitamin D we need. Unfortunately, the “right circumstances” are elusive. Except during the summer months, the skin makes little if any vitamin D from the sun at latitudes above 37 degrees north (the shaded region of the map). People who live in these areas are at relatively greater risk for vitamin D deficiency.

We recommend a good vitamin D supplement all year round, but it’s essential that you supplement during the winter months in Pennsylvania. Fortunately, vitamin D is relatively inexpensive. But remember, not any vitamin D supplement will do. Be sure to look for vitamin D3. Our favorite is Country Life’s Vitamin D3 (5,000iu). A 60-count bottle is just $12.99, and you need to take just one a day.

For more information, please stop by and ask Tracie, our nutrition specialist, or any of our knowledgeable pharmacists.
If your blood sugar goes up and down very extremely or very often, then you have an exciting blood sugar rollercoaster. An exciting rollercoaster likely will put you on the path to weight gain, diabetes, and complications (vision, heart, foot, kidney) later, whether or not you’ve been officially diagnosed as diabetic. Continuing to eat in a way that allows an exciting blood sugar rollercoaster leads to an even more exciting rollercoaster later (Richard Bernstein, MD, *The Diabetes Solution*).

Some symptoms of blood sugar imbalance are hunger, thirst, fatigue, confusion, distraction, and dizziness. These symptoms aren’t the problem; they are your body’s way of telling you to eat more whole food to take the place of simple carbohydrates like bread, cold cereal, and sweets. For example, eating 1 cup of apple slices (16g carbs), 1 cup of grapes (28g carbs), or 1 cup of banana slices (35g carbs), all whole foods, isn’t just about eating fewer carbs than 1 cup of fruit cocktail (47g carbs, a processed food). For another thing, naturally occurring fiber, nutrients, and protein in whole foods reduce blood sugar surges (Harrar, *The Sugar Solution*).

Even insulin-dependent diabetics will need less insulin and will feel better if they eat fewer processed carbs, more veggies and protein, and five mini-meals each day. Processed food nutrition labeling has a 20% margin of error, so taking less insulin calms your blood sugar rollercoaster by reducing inaccuracy, the variability, the uncertainty about insulin absorption, and the overall stress to the body (inflammation, irritation, immunity).

To balance your blood sugar:

- Eat whole food snacks between meals so that you eat every 2-3 hours all day.
- Eat fiber (veggies, beans, oats, brown rice) every time you eat. Fiber reduces blood sugar surges.
- Break your fast within an hour of waking up with protein (meat, beans, nuts, fish, eggs, cheese, yogurt), and eat it all day. Protein slows the absorption of carbs.
- Eat whole food carbs (root veggies, fruits, brown rice, oats) that you buy looking the way they grew, to take the place of pre-packaged carbs. This alone will lower your daily carb count, increase your nutrition, lower your insulin intake, balance your blood sugar, satisfy your appetite, and so lower your food and medical bills.
- Don’t believe that eating the typically large amount of processed carbs is a normal diet. Most people are getting overweight and diabetic too. Is that normal too? Your pancreas just can’t keep up with that many carbs.
- Take probiotics and 5000iu of vitamin D3 to help you recover from the reduced immunity that comes with an exciting rollercoaster.

Whole4Health is the carb addict’s rehab program, tailored to your whole food dietary preferences. Making dietary changes to balance your blood sugar to avoid diabetes and weight is really hard, but really worth it. Can I help with instructions, recipes, and support? How boring can your blood sugar rollercoaster become?
This month I’m excited to introduce something new in compounding: poloxamer 407 gel. I just got back from the 2011 International Compounding Symposium held this year October 19th-22nd in Houston, Texas. It seemed that in every lecture I attended someone was talking about poloxamer 407 gel and it’s new and exciting uses. It didn’t matter whether I attended a seminar on veterinary medicine, dental, OB/GYN, or wound care—everyone had an application for poloxamer.

So what is this new product? It turns out it is nothing new at all, but something old with a new use. Poloxamer 407 is the “P” in PLO creams of old. Poloxamer is a thermo reversible compound. What does that mean? At cold temperatures it is a liquid and at warm temperatures (i.e. body temperatures) it’s a gel. Poloxamer gel is nontoxic, tasteless, and most are odorless (some have a mild odor). It promotes the stabilization of drugs mixed into it, dissolves water soluble drugs, and then slowly releases the medication from the gel to the site of application as though from a reservoir (called a repository). Poloxamer will stick to injured skin or mucous membranes (they call this bioadhesive) thus maintaining contact with medication for a longer period of time. Poloxamer facilitates wound healing through collagen synthesis and microcirculation all by itself without the presence of any active ingredients.

Poloxamer gels can be given by various routes including oral, rectal, ophthalmic, topical, nasal, and injectable. So what does all this mean for you as a patient or practitioner? You can expect to see improved outcomes and resolutions in a shorter period of time with fewer applications, thus increasing patient convenience. Some example of formulas include:

- DHEA 1% in poloxamer vaginal gel could benefit vaginal atrophy and libido and sexual dysfunction with administration every four days.
- Clotrimazole 100mg/Clindamycin 22.7mg in poloxamer vaginal gel providing antibacterial and anti-fungal delivery this gel could present a useful treatment option for infections of mixed origin, yet require administration at bedtime every 3rd night.
- Boric Acid 600mg in poloxamer vaginal gel. Boric acid proven safe for long term treatment of vaginal yeast, placement in poloxamer vaginal gel requires administration only every 3rd night.
- Poloxamer 407 dental gel can be imbedded with antibiotics and agents to stop bleeding (hemostat) for dental work including extractions, periodontal work, and other dental procedures.
- Antibiotics like vancomycin, gentamicin, amikacin, cephalosporins, metronidazole, etc. can be incorporated into the gel for wound care. Antifungals, oncology drugs, and analgesics can be incorporated into this unique gel for delivery overtime.

As always, we encourage you to come in and talk to us about this old trick with a new twist, or have your physician call us to discuss innovative applications of poloxamer 407 gel.

**FREE SEMINAR**
**Tuesday, November 8th, 7-8pm**

**Natural Supplements for Diabetes**

Presented by pharmacist Wayne Myers, this seminar will cover natural supplements for treating the disease itself as well as supplements that will help protect against the complications of the disease. Join us to explore these supplements in detail and to get specific recommendations on what might work best for you.

Seating is limited, call today to reserve your spot: 217-6790.
Kill the Flu (& Colds) the All-Natural Way

If you’ve ever suffered the general malaise, the aches and pains, the raging fever, the trips to the bathroom then you know how devastating the flu can be.

You can lick the flu when it starts—perhaps even within 24 hours. You can even help prevent it. You need to address the real problem rather than concentrating on the symptoms.

We’re all exposed to the flu. Why is it, then, that out of ten people, five are totally knocked out with a bad case of it, three get a case of the sniffles, and two are completely unscathed?

The problem is the state of our immune systems. In the winter, especially, we put ourselves under a lot of stress, overindulge in food and drink, and just don’t live as healthily as we should. Our immune systems suffer. And so do we.

The answer? Take our special combination: Olive Leaf Extract (reg $34.98) and King Bio Colds & Flu Homeopathic (reg $18.99). Our special pricing for buying them together is just $39.99. It can help reduce the severity of the flu (if you’ve already got it). It can also help strengthen your immune system so you can be one of those few who doesn’t get it in the first place.

Ten Great Organizations

#9 - Maranatha Ministries

In thanksgiving to God for ten great years, we are giving back. From March through December we are giving 10% of our out front sales to ten great organizations (1% to each). Each month we will feature one organization.

November’s organization is Maranatha Ministries. The heart of Maranatha is to share the love of Christ with those who are searching for something in their lives that is more than just a need for food, budgeting, or housing. People need healing, freedom from prison, or just the opportunity to share their fears and disappointments in life. Maranatha Ministries offers a hand up, not just a hand out. For more information visit www.maranathaministries.net.

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