UOAA's National Conference

Medications And Your Ostomy: How Drugs React In Your New Plumbing

by Jody Jacobson RPh transcribed by Debbie Walde CWOCN

Editor's Note: It would be wise to save this article as a reference resource for understanding many symptoms that are unique to us as ostomates. Sincere thanks to Debbie for sharing such valuable notes.

The small intestine (ileum) consists of mucus which protects the gut wall, peptides which digest proteins, sucrases which digest sugars, and amylase which digests polysaccharides. Thus the small intestine is responsible for most of the digestion that takes place. There are pancreatic and intestinal enzymes as well as bile from the liver and gallbladder which reduces the food we eat into absorbable elements of proteins, fats, and carbohydrates.

The large intestine's (colon) main function is absorption of water. When a person has an ileostomy, the output is highly alkaline as well as more liquid than a colostomy. When the inner diameter of an ileostomy pouch leaks the alkalinity on an acid mantle skin results in a chemical burning. This is why it is so important to change the pouch when the feeling of burning is detected. Another way to avoid peristomal skin breakdown is to ensure the skin barrier wafer is not cut too large for the stoma. If you have problems maintaining a seal, please seek help from your ostomy nurse to see if you need another pouch or pouching technique. Do not ignore this problem as ignoring it will not make it go away – it only gets worse causing a vicious cycle. Poor Adhesion -> Leakage -> Skin breakdown -> Poor Adhesion.

Medication related issues:

Pharmacokinetics is the movement of a drug within the body. There are four parts to this: 1) absorption which is transit time, 2) distribution or getting the drug to the right place via circulation; this is also affected by nutritional status as many drugs are transmitted on proteins, 3) metabolism which is completed through the liver or kidneys, and 4) elimination in the form of sweat, tears, urination, and defecation. Most drug interactions occur at the stage of metabolism.

Injections of medications are absorbed through the subcutaneous tissue. Intravenous medications are the only medications that are not absorbed as they go directly into the blood stream (circulation). Some topical medications are absorbed such as blood pressure patches, pain patches, etc. Other topicals such as bacitracin that are only applied at the site of injury are not absorbed into the blood stream.

Ostomy friendly drug formulations are as follows:

- Immediate release (the dosage frequency may need to be increased due to transit time)
- Liquid oral formulation or gelatin capsules
- Topical formulation
- Mucosal or sublingual
- Injectable

Non-friendly formulations are enteric coated, extended release, and delayed release oral tablets. These tables don't dissolve in the stomach. They may not be a big issue for colostomates, but will generally not be absorbed by ileostomates. This is like flushing the medication straight down the drain. These tablets and capsules cannot be broken open or cut as they are toxic to the stomach lining. They can also lead to overdosing as there is too much drug absorbed too soon into the bloodstream.

For urostomates, there are no intestinal interferences with medication.

Fluids and electrolytes are affected by many different medications. This will affect all ostomates. Remember that everyone responds differently to medications. Following are some of the different medications and their effects:

Diuretics—electrolytes are also depleted with the increased urinary output.

Laxatives—increase motility/movement of contents within the bowel thereby decreasing reabsorption of water.

Antibiotics—alter both the good and bad bacteria in the gut; often leads to C-Diff diarrhea

and associated complications. It is usually advised to take a probiotic along with the antibiotic.

Corticosteriods—may increase sodium and thereby fluid retention, also increased blood sugar levels.

What to keep in mind when taking medications that could affect your fluid and **electrolyte balance i**s to remember to drink electrolyte/sports drinks and to get blood work drawn when advised by physician. What are some signs/symptoms of electrolyte imbalance?

Hyponatremia—low sodium level; Muscle twitching and weakness; fatigue advancing to confusion, seizures, coma; low blood pressure for you combined with fast heart rate; nausea, vomiting, severe stomach cramps.

Hypernatremia—high sodium; Agitation, restlessness, fever; muscle irritability and seizures; high blood pressure with fast heart rate; thirst; water weight gain and swelling.

Hypokalemia—low potassium; Dizziness, low blood pressure; nausea, vomiting, diarrhea; muscle weakness, fatigue, leg cramps; cardiac arrhythmias that can lead to arrest.

Hyperkalemia—high potassium; fast heart rate changing to slow heart rate which can lead to cardiac arrest; nausea, diarrhea, stomach cramps; muscle weakness.

Hypocalcemia—low calcium level; Anxiety, irritability, twitching around the mouth; low BP.

Hypercalcemia—high calcium; fatigue, headaches irritability, confusion, depression, tingling and numbness of fingers, muscle cramps, seizures; bone pain, can lead to pathological fractures; heart block; anorexia, nausea, vomiting, constipation, dehydration, stomach cramps.

Hypomagnesium—low magnesium; Nearly always coexists with hypokalemia and hypocalcemia; leg and foot cramps, confusion, seizures; heart arrhythmias, low blood pressure.

Hypermagnesium—high magnesium; Lethargy, depression, drowsiness; diminished reflexes, muscle weakness; heart block, slowed heart rate, low blood pressure.

The pharmacist spoke about **electrolyte based antacids.** These are basically comprised of magnesium, aluminum, and calcium which are all electrolytes. Magnesium based antacids can cause diarrhea. Aluminum leads to constipation. Calcium can cause kidney stones in those people who are susceptible including urostomates. Her take home point was that magnesium/aluminum based products are a good balance for most people if an antacid is actually needed. These are *Maalox* or *Mylanta*.

If you are taking an enteric coated drug, this is affected by the use of antacids. Other antacids mentioned were those in the categories of histamine blockers and proton pump inhibitors. These do not usually have an effect on bowel motility however recent evidence shows they can interfere with the absorption of some medications and can contribute to infections as they may interfere with the immune system. It is best to only use these as needed versus routinely. Most patients are given one of these in the hospital. If you are discharged with one of these medications, have a dialogue with your physician to make sure you really do need this medication. A great deal of the time dietary changes can decrease the need for an antacid especially on a routine basis. This is when keeping a food diary becomes important. If gas is the problem, either stop the intake of gas producing foods such as broccoli or sodas. Simethicone (Mylicon) in the form of drops or tablets is a good as needed intervention.