## CONSTIPATION

Constipation is characterized by multiple abnormalities that can occur with bowel movements. These include abnormalities in stool consistency (with the stool typically harder in consistency), bowel movement frequency (patients can have either less frequent or more frequent bowel movements), the need to strain to have a bowel movement, increased amount of time taken to have a bowel movement and a sense of incomplete evacuation after a bowel movement. Constipation can be associated with signs and symptoms including abdominal bloating and abdominal pain.

In the majority of individuals, constipation is due to a functional disorder such as **slow transit constipation**. This refers to a disorder in which the frequency and/or strength of muscle contractions within the colon can be reduced. However, there can be abnormalities involving the pelvic muscles and/or anal sphincter muscles.

Inadequate water intake, inadequate fiber intake, inadequate cardiovascular exercise and medication side effect can all be contributing factors. Patients can have medical disorders which could be contributing including neurologic disorders such as Parkinson's disease. Anatomic abnormalities such as a polyp, a growth or narrowing of the colon are less frequent to rare causes of constipation.

Measures which typically result in improvement in constipation include adequate hydration with water, high-fiber diet, and cardiovascular exercise. Regarding a high-fiber diet, 25 to 30 g of fiber per day are typically recommended. The Cleveland Clinic has a high-fiber guide which I recommend reviewing for more detailed information on how to institute and maintain a high-fiber diet. Of note, a clinical study evaluating conservative measures to improve constipation found that green kiwi (eating 2 green kiwis per day), prunes, and Metamucil can all result in improvement in constipation. Of these, green kiwi resulted in the most significant improvement with the least amount of side effects such as intestinal gas, bloating and abdominal cramping.

Foods that are rich in B vitamins, particularly thiamine or vitamin B1, also result in improvement in constipation. Please type "foods rich in vitamin B1" into internet search engine of your choice for a list of foods that contain a significant amount of vitamin B1.

Regarding cardiovascular exercise, walking a minimum of 155 minutes/week total is recommended. The more vigorous the cardiovascular exercise, the better for constipation as well as for overall health.

When the above measures do not result in improvement in constipation, consider taking Metamucil, or psyllium husk, at 1-2 servings per day with adequate hydration with water.

Can also consider using a laxative such as MiraLAX at 17 g orally once daily. This medication can be used up to 34 g, or 2 doses, twice per day. You can titrate MiraLAX to the desired effect. As an example, Miralax can be taken 17 grams once every other day or every third day with the goal of achieving enough bowel movements to alleviate different signs and symptoms associated with constipation.

Other over the counter formulations that have been shown to help include Magnesium oxide (please do not use Magnesium oxide if you have a history of abnormal kidney function or are pregnant) at 400-500 mg once daily, Bisadocyl at 5 mg once daily and Senna at 8.6-17.2 mg once daily.

Prescription formulations are also available. If you are interested in undergoing a trial with a prescription formulation, please make an appointment to consult with Dr. Crenshaw.

If you have any questions or concerns regarding the above recommendations, please contact Dr. Ryan Crenshaw's office at 703-444-4799.