## GI DISTRESS IN RESPONSE TO SYNBIOTICS

Some patients respond with extreme (though usually temporary) GI distress to even the highest quality prebiotic and probiotic combination. Not only are these unpleasant symptoms more common than we would like them to be, but also they can derive from several different causes such that the cause in any particular case can be difficult to identify:

Sometimes the GI distress results from a <u>die-off reaction</u>. In your typical patient who has been on a high processed food intake since infancy, there is certain to be massive colonization of undesirable microbiota. As the prebiotics and/or probiotics cultivate a microbiota teeming with beneficial critters, there is a "war" between the firmly entrenched bad guys and the good critters that are becoming established. As the bad guys are destroyed, their cell membranes breakdown releasing large quantities of lipopolysaccharide (endotoxin). The result can be not just GI irritation, but systemic <u>Immuno-NeuroEndocrine</u> stress as well.

In some cases the unpleasant gut reaction can result from the opposite of a die-off reaction --- excessive microbiota <u>proliferation</u>. The prebiotics are the ideal food for a healthy microbiota, but until that healthy microbiota is established, the massive colonies of bad critters can feed on those prebiotics just as well.

Sometimes the unpleasant reaction will be principally expressed as <u>diarrhea</u>. Often the excessive gut motility is nothing more than the stimulation from undigestible fiber. These are the same patients who experience a loose stool from eating any high fiber food --- such as fruits and raw vegetables.

## Here are some specific recommendations:

If a patient's adverse reaction is mainly expressed as <u>diarrhea</u> --- then temporarily stop the supplement. Instead, have the patient eat a raw carrot at the beginning of each meal for 3 days. If the patient experiences a loose stool during or within a day after the 3 days of raw carrots, then you know the reaction is simply due to the presence of fiber in the 3 prebiotics. Have the patient restart the supplement taking just 1, twice the first day, and if no reaction, then increase to 2, 2 times daily, and continue adding unless/until there is a negative reaction. If there is a negative reaction, then stop the supplement entirely for 1 day, and then resume on the following day at half the dose that precipitated the reaction.

If a patient's distress includes primarily <u>constipation</u> --- then the cause of the reaction is not the prebiotics, but rather one of the probiotics. In that case, have the patient continue the supplement, but eat a raw carrot twice daily.

(Carrot fiber, unlike the fiber in lettuce and bran and cruciferous vegetables, gives all the advantages of bulk fiber, with none of the irritating effects.)

If a patient's distress includes <u>bloating</u> &/or <u>cramping</u> &/or <u>gas</u> --- then stop the supplement entirely for at least 1 full day and then resume at a dosage of 1 less than the previous dosage. If symptoms reappear, then again stop for 1 day then restart with a dosage reduced by 1. Once symptoms have abated for 3 consecutive days, then begin increasing the dosage by 1 daily until the patient is up to the full recommended supplementation.