and looks at a range of other considerations, including familial or genetic trends that are the most relevant. Using the FM Matrix, practitioners can identify patterns to more effectively guide them through the detox sequencing.

SEQUENCING THE METABOLIC DETOX

Stage 1. Preparation for Metabolic Detox and Adequate Support

In order to adequately prepare for a safe and healthy detox, patients must reduce daily toxic exposures due to food, personal products, and environmental chemicals. Major goals include an emphasis on specific healthy food choices and inclusion of adequate phytonutrients to support systemic detox. It is also important to improve hydration status while gently shifting the diet in preparation for a supported liquid fast. The fast can last for one to five days, and often includes the use of a medical food to provide balanced detoxification, macronutrients, and calories.

Reducing toxic exposures. The first step involves reducing and removing primary toxins to which the patient has been exposed. Detox could focus on clearing alcohol, caffeine, artificial sweeteners, or unhealthy fats and sugars in the diet. It might mean identifying and eliminating highly allergenic foods or environmental toxins. Stress is also a toxin, and the patient may have toxic emotional relationships – people in his or her life who feel toxic from an energetic perspective.

Hydration. In a healthy weight-loss program, it is helpful to determine hydration status and to assure that the patient is consuming adequate clean water. This may involve the use of bioimpedance technology to evaluate the patient's total body water and fluid distribution both within and outside the cells. We can certainly ask patients how much water they are consuming and encourage them to drink about half their weight (in pounds) in ounces of water. For example, a 200-pound person should drink 100 ounces of water, which is about 12 cups (8 oz. servings) a day.

Fiber. During this step in sequencing it is important to provide adequate dietary fiber in conjunction with high volumes of water while encouraging the body to flush using a purified food approach. Healthy bowel elimination will be essential once we start to increase the liver and kidney detoxification pathways through nutrition. Healthy bowel excretion is necessary to avoid auto-toxicity.

Juice fasts. Fasting and liquid nutrition are appropriate; however, it is always wise to use these approaches in conjunction with supportive medical foods or emulsified or juiced fruits and vegetables. Water fasts are no longer recommended from a nutrition perspective because they do not provide adequate protein intake for the patient to fuel phase II detoxification enzymes.

Protein. Balanced amino acids and quality protein sources are key requirements frequently overlooked in detoxification. Protein is now recognized as necessary for a sustained state of fasting. Fad diets that emphasize low fat have a tendency to lower protein intake as well. Naturopathic protocol incorporates adequate protein levels to support the physiology of the detox organs. This approach is in contrast to radical fasts and rapid weight-loss diets, which carry the risk of caloric deficiencies, macronutrient deficiencies, and hydro-nutrient deficiencies.

Health care providers need to be aware of potential side effects that can occur with fasting or detox, particularly an excessive release of toxins if the body burns fat deposits too rapidly. It is important to prescribe adequate calories and nutrients to support ATP (adenosine triphosphate) production given the high energy requirements and dependence on ATP during phase II detox in which compounds are packaged and removed. This is particularly important in patients with exhaustion or chronic fatigue and those with genetic risks or polymorphisms involving the detox systems.

Adequate phytonutrients. One of the simplest, most beneficial approaches to improve detox status is to encourage the patient to eat a colorful array of fruits and vegetables every day, sometimes described as "eating a rainbow" of food choices. Foods in red or green hues are often very beneficial in supporting the release of key antioxidants because they provide phytonutrients that improve detox enzymes. Delicious fruits such as cherries, pomegranates, and raspberries, and greens such as broccoli, kale, and spinach are at the top of the list of healthy detox foods.

Stage 2. Clearing Toxins Completely Rather than Quickly

Effective detoxification is not about how fast the detox occurs; rather, the clinician must assure that there is adequate time to sequence detox and to support the detoxification pathways. Naturopaths are well trained in sequencing patients safely through excretion and elimination, mitochondrial rehabilitation, and liver detoxification to ensure effective release of toxins, while minimizing the risk of re-toxifying the body. These are all considerations before starting a patient on a weight-loss program.

Excretion and elimination. While the initial phase of sequencing focuses on hydration status, the next phase emphasizes effective internal cleansing through excretion and elimination. We want to assure that the patient is moving their bowels, and that bile is effluxing properly from the liver. It is also important that the patient is sweating to discharge toxins through their skin and that their urinary

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