Nearly 10% of the US population, or 29 million Americans - including 1 out of every four seniors over 65 - suffer from type 2 diabetes. Type 2 diabetes (T2DM) was once called adult-onset diabetes, but it's affecting an increasing amount of younger people, as well. T2DM is a chronic condition that develops when the body cells can no longer normally absorb and metabolize, or make energy out of, glucose (blood sugar).

Glucose is an important fuel for the cells, and it is regulated by many hormones, but the most important one is insulin, a hormone made in the pancreas. Insulin tells body cells to absorb glucose from the blood and turn it into fat. The basis of Type 2 diabetes is that cells resist insulin's signals and become "insulin resistant". Over time, if the condition is poorly controlled, and high glucose numbers continually occur in the blood, damage to the pancreas can result. This will result in no insulin being produced at all.

There's no cure for type 2 diabetes, but it can be managed very effectively with an integrative approach that includes diet, exercise, sleeping well, detoxification, stress management, healing the gut and appropriate supplements.

Contributing Factors
Several factors contribute to diabetes risk. These include:

- Being overweight
- Overeating
- Nutritional Deficiencies
- Environmental toxicity
- Tendency to store excess fat in the abdomen
- Lack of exercise
- Family history
- Race (African Americans, Hispanics, American Indians, Pacific Islanders and Asian Americans are at greater risk than Caucasians)
- Age

Integrative Treatment Options
Essentially, people with T2DM have lost the metabolic capability to handle carbohydrates. The following treatment strategies can all be useful in making carbohydrate processing more effective, thereby lowering the glucose levels.

- **Diet**
  People with type 2 diabetes should aim to consume no more than 30-45 grams of carbohydrate each day. High carbohydrate foods are found in grains (breads, pasta, rice, oatmeal, crackers, rolls, etc.), some vegetables such as potatoes, yams and sweet potatoes, desserts and candies, soda pops, most fruits and most junk foods. Another key goal is portion control; most people eat far more food each day than they need. A low carbohydrate diet relies on a high variety of protein (meat, poultry, fish, eggs, dairy, nuts, soy), vegetables, healthy oils, and perhaps some berries. By using seeds and cauliflower, it is possible to create innovative forms of tortillas, breads, rolls, pancakes, bagels, granolas, and so forth. For sweeteners, patients can use natural choices like stevia, erythritol, xylitol, and monk fruit.
Integrative Management of Type 2 Diabetes

- **Exercise**
  Exercise has countless benefits for people with type 2 diabetes. It can maximize weight loss, and losing that abdominal fat oftentimes enables physicians to reduce or even discontinue patients’ insulin and/or other oral medicines for blood sugar control. Exercise also decreases insulin resistance and lipids, lowers blood pressure, increases lean muscle, controls appetite, and improves sleep and mood. Exercise includes both aerobic and resistance training. Why resistance training? Because it burns glucose 19 times more effectively than aerobic exercise. Plus, by building lean muscle, which metabolizes a great deal of glucose, resistance exercise increases the ability to burn glucose even at rest.

- **Sleep and Stress**
  Adequate sleep is essential for weight control, which makes it essential for type 2 diabetes control. Getting 6-9 hours of sleep a night means hormones which control appetite and carbohydrate cravings are kept in normal levels. Anxiety, depression, worry, or overwhelm can both increase glucose and also make it hard to manage diabetes. If one’s mood is problematic, tell your physician. Also, consider counseling, support groups, massage, yoga, meditation, and other relaxing and enjoyable activities to feel at peace and in control of your disease and your life.

- **Supplements**
  Though no supplements can take the place of a healthy diet and exercise, some studies have shown various supplements to be of value in people with diabetes. Your integrative practitioner may recommend one or more of the following:
  - Multivitamin/mineral formula
  - Fish oil
  - R-alpha lipoic acid
  - Gymnema sylvestre (gymnema)
  - Berberine
  - Taurine
  - n-acetyl cysteine (NAC)
  - Herbal antioxidants like curcumin, cinnamon, bilberry extract, green tea extract, gingko biloba, and resveratrol

Before starting any treatment regimen for type 2 diabetes, work with your integrative healthcare practitioner. Each person’s situation is unique, and so will be every treatment plan. A diagnosis of type 2 diabetes can be overwhelming, but an integrative management plan will improve not only your disease, but your overall quality of life as well.