CLINICAL RELEVANCE OF OBESITY AND DIABETES IN COVID-19

The COVID-19 pandemic has presented us with many health concerns for which we do not yet have clear answers. What does appear to be clear is that obesity does pose a significant risk of infection and mortality and is present in almost half of hospitalized or deceased COVID-19 patients. Some research suggests that for this pandemic to run its course, 60-70% of the population will need to be exposed to the virus. With the current isolation practices in place, already overweight and obese patients are exposed to additional stressors. Stressors such as emotional eating can result in higher intake of processed foods, refined carbohydrates and alcohol. Especially with fitness centers and public parks (initially) being closed, there was/is little opportunity to participate in healthy activities.

So, what is the connection between obesity and increased mortality rate specific to COVID-19? It is important to understand that obesity is not only a risk factor itself, but it is also a contributor to other metabolic diseases like diabetes (type 2) and hypertension. Evidence points to infected obese patients as possibly being more contagious and more likely to spread a virus due to longer periods of viral shedding. Obese patients are also more likely to experience a delayed immune response. How can we reduce the impact of obesity on the risk of viral infection? Sleep-disordered breathing such as sleep apnea and obesity hypoventilation syndrome have been shown to reduce the function of natural killer cells. These cells are involved in acute responses to viruses. Handling and controlling any breathing issues would be important. Regular physical activity has been shown to have many positive effects on health. These include improving metabolic markers, BMI, lipid profiles and immune response. I always encourage clients to start where they are, whether it be walking one block or cycling or even adding in some resistance training. Controlling inflammation would be an important clinical consideration also. Since the COVID-19 virus, by itself, does trigger an aggressive inflammatory response and our immune system can trigger inflammation in adipose tissue, the combination of these two actions can be deadly. This can damage lung tissue, cause systemic inflammation and multiorgan damage. In functional medicine, we handle inflammation with things like curcumin (Metagenics Inflavinoid) and omega-3 fatty acids/fish oil (Metagenics EPA-DHA 1000 or 720). Other bio-actives like EGCG, NAC, vitamin C and zinc (Metagenics Immune Booster) also work to control inflammation within the cells. Lastly, using specialized pro-resolving mediators (Metagenics or Designs For Health SPMs) to actually promote inflammation resolution without causing immunosuppression has been shown to increase activity in immune cells.

What else should we consider to improve immune activation and decrease chronic or acute inflammation? Moving away from a typical Western diet which is high in saturated fats, sugars and refined carbohydrates. Better to adopt an eating plan (Mediterranean) that includes high amounts of fiber, unsaturated fats and antioxidants and minimal whole grains.

As we know it's still too early to know the clear connection between metabolic disease and COVID-19, however, we can all start to control some of these possible risk factors now.