Importance of the gut microbiome for optimal health outcomes in metabolic diseases

Microbes existed on earth long before humans. Single-celled bacteria living in or on the human body outnumber human cells; the American Academy of Microbiology putting human cells at 37 million, compared to 100 trillion cells of the microbiome. This co-existence between the human self and his/her intestinal microbiota is vital for optimal health; the extensive population and diversity of the microflora playing a crucial role in one’s genetic expression, immune function, body weight and composition and even mental health. Ongoing research on the human microbiome reinforces the notion that humans live in symbiosis with a diverse microbial population; how this affects health and disease is an important question. The microbiome composition varies between healthy individuals and those afflicted with numerous diseases. A flurry of scientific research has implicated these microbes as having a significant role in digestive disorders as well as the development of obesity, diabetes, cardiovascular disease and even cancer. The role of inflammation in the pathogenesis of these diseases is well-recognized. Inflammatory markers and metabolic endotoxemia are increased in obesity, diabetes and insulin resistance, and cardiovascular disease and the gut is the primary point of entry for modifying these inflammatory states. The gut microbiota is being recognized as a separate endocrine organ capable of crosstalk with the host, thereby influencing health or disease. The human microbiome is now viewed to be a counterpart to the human genome. Important considerations in addressing dysbiosis to reduce or resolve the incidence of these diseases include toxic foods, overuse of antibiotics, environmental factors, pharmaceutical medications (PPIs, NSAIDs) and others. Developing a healthy gut flora begins with vaginal childbirth and breastfeeding. A healthy diet to reduce inflammation and oxidative stress, stress management and the use of probiotics are other essential factors that beneficially influence the internal ecology to improve health outcomes. The loss of microbial diversity is also linked to urbanized living and reconnecting with nature may play a significant role in health and disease outcomes.

Biography

Faryal Luhar, ND is a licensed Naturopathic Doctor and graduated from the Canadian College of Naturopathic Medicine in Toronto. She pursued this field of study after receiving her Bachelor’s degree in Psychology. She is a member of the Ontario Association of Naturopathic Doctors. Dr. Luhar is also registered to practice Naturopathic Medicine in South Africa and is a member of the Allied Health Professions Council of South Africa, as well as the South African Naturopathic Association.

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