



GLOBAL WELLNESS
INSTITUTE™

Mind, Mood & Your Microbiome: A Healthy Gut at Work (& Why It Matters)

By Gloria B. Treister, HHP, APFS, Board Certified Holistic Health Practitioner & Coach,
Advanced Physical Fitness Specialist, Certified Corporate Wellness
Specialist/Consultant
Global Wellness Institute, Wellness at Work Initiative

“All disease starts in the gut.” - Hippocrates

Hippocrates made this profound statement more than 2,000 years ago and we are just now beginning to understand how right he was.

Research over the past two decades has revealed that gut health is critical to overall health and that an unhealthy gut contributes to a wide range of diseases including diabetes¹, anxiety², depression², weight gain², autism spectrum disorder³, hypertension⁴, skin conditions⁵, chronic fatigue syndrome⁶, irritable bowel syndrome⁶, and arthritis⁷. Many researchers believe that supporting intestinal health and restoring the integrity of the gut barrier will be one of the most important goals of medicine in the 21st century.⁸

Healthier employees are more productive, have less absenteeism, are more present, bring more energy to their work and contribute to a positive culture in the workplace. A healthier workforce results in lower healthcare, workers compensation and disability costs and potentially produces higher profits.

Healthier people tend to be happier. There is growing evidence that happy employees are up to 20% more productive. When it comes to sales associates, happier employees raise sales by 37%.⁹ According to the Centers for Disease Control (CDC), an investment in better employee health may lower health care costs and insurance claims. Employees with more risk factors cost more to insure and they have to pay more for health care and pharmaceuticals than people with fewer risk factors.^{10, 11}

What is the Microbiome?

A community of trillions of microorganisms living in and on the human body symbiotically, the microbiome consists of around 1,000 different species of bacteria, viruses, fungi and other microscopic living things, also known as microbes. They are a part of us and we are their host. People generally view

bacteria as disease-causing, but these microbes protect us from opportunistic organisms that may harm us. Promoting a healthy microbiome is a critical factor in getting and staying well.

An imbalance of unhealthy versus healthy microbes, or a lack of diversity of these microbes in the intestines, for instance, can contribute to many chronic health challenges as referenced above. Many of the health problems associated with poor gut health are the most costly to treat. They tend to increase sick days, presenteeism and lost productivity. Yet, these conditions are widely known to be preventable. By ensuring that the microbiome stays balanced and diverse, people can avoid many costly, chronic illnesses, pain, unnecessary drugs and surgeries.

Why now?

Established in 2007, The Human Microbiome Project, an extension of the well-known Human Genome Project, is a research initiative to map the human microbiome. It has produced some very compelling results about how the gut impacts disease. It is where more than 70% of our immune system resides. It is where we manufacture many of the neurotransmitters that impact our brain chemistry and therefore, our mind, mood, memory, stress and sleep.

Studies from the past decade alone suggest that the gut microbiome is as complex and influential as our genes when it comes to health and happiness.

What do mind and mood have to do with it?

The gut, aka our “second brain,” is where a number of neurotransmitters are produced. These chemical messengers, such as serotonin, dopamine and GABA, play a key role in mood and regulate countless functions and processes in the body via the gut-brain connection. Antidepressant drugs are designed to increase levels of these compounds but have their drawbacks. Through healthy lifestyle choices, we can better affect our mood and eliminate the need for potentially harmful, side effect producing, costly pharmaceutical interventions. Antidepressant drugs can cause a wide range of unpleasant side effects that contribute to more sick days, low energy, weight gain and dependence.

A microbiome imbalance is also thought to increase the pain response, which can increase absenteeism, decrease productivity and can also negatively affect sleep. Lack of sleep can then disrupt the microbiome and create more dis-ease.

Stress management and the microbiome.

Managing, or better yet reducing, chronic stress in the workplace can have a positive effect. In the absence of stress, a healthy microbiota produces short-chain fatty acids that exert anti-inflammatory and anti-tumor effects. During stress, an altered gut microbial population affects the regulation of neurotransmitters mediated by the microbiome and gut barrier function. By reducing stress in the workplace, employees will have less psychological and

physiological conditions that affect performance, thus creating a more productive and profitable environment.^{12, 13}

When people save money by avoiding illness and therefore paying less for health insurance premiums, it can relieve financial stress. High deductible plans can leave a large number of American adults with unpaid medical bills. Cancer survivors, for instance, have higher-than-average rates of medical financial hardship. People having to treat other chronic illnesses can also wind up with the burden of paying for their care. Psychological stress, like intense worry over unpaid bills, can result in behavioral issues and can delay needed care because of cost, resulting, again, in lost performance. Financial stresses have been linked to migraines, cardiovascular disease, stroke, absences from work, and insomnia.¹⁴

What is good for employees is also good for the employer.

Health is the foundation for happiness and productivity. If you don't have a healthy mind and body, you can't work at peak capacity.¹⁵

Keeping employees happy and healthy has become critical for employers and it is not easy. Making the workplace a healthy and happy place helps employers attract and retain the best and brightest workers. Theoretically, happier employees will also have better job satisfaction.

Part of accomplishing this is to embed wellness into the culture. In this case, providing opportunities to strengthen the microbiome during the workday has the potential to produce a variety of positive results.

What can an employer do?

There are many options when it comes to worksite wellness. The reviews on the effectiveness, and therefore the value, of conventional corporate wellness programs are mixed and the question remains, how are we going to be able to keep people well so they can enjoy a happy life and success in the workplace?

Providing education and healthy choices that positively affect the microbiome can be impactful. Ways to accomplish this include:

- Offer healthy, organic food choices at work and eliminate pro-inflammatory foods
- Organize farmers' markets on a regular basis
- Bring in onsite services that help reduce stress including yoga, meditation, massage, reiki
- Provide opportunities for exercise
- Provide wellness education
- Provide smoking cessation support
- Bring natural health coaches and doctors onsite for easy access to care

- Avoid the overuse of antibiotics
- Encourage outdoor activities
- Encourage socialization
- Get involved in a community garden and get your hands dirty
- Discourage overuse of hand sanitizers¹⁶
- Avoid junk food and soda; provide healthy vending
- Limit exposure to heavy metals and other toxins
- Avoid unnecessary chemicals; use eco-friendly, non-toxic supplies

By implementing some of the ideas above, people will know their company is forward-thinking and supports them. They will be encouraged to maintain a healthy microbiome, which, in turn, will improve their health and vitality. When people feel good, their productivity improves leading to a more robust bottom line.

Because of all of the benefits a healthy microbiome can bring to people, it is worth considering including in the corporate wellness strategies of the future. A root cause approach to wellness that honors biochemical individuality will help engage our workforces to be healthier through a better understanding of what's in it for them.



Gloria B. Treister, HHP, APFS

Board Certified Holistic Health Practitioner & Coach

Advanced Physical Fitness Specialist

Certified Corporate Wellness Specialist/Consultant

Founder/CEO - Wellness Evolution

Author - Wellness 101® A Guide to Healthy Living

Founder - WELLCleveland Project

Member - Wellness at Work Committee, Global Wellness Institute

US Ambassador - Global Wellness Day

gbtwellness@gmail.com

Resources:

[Mental Wellness: Pathways, Evidence and Horizons. Whitepaper](#) by the Mental Wellness Initiative, 2018

References:

1. Tilg, H; Grander, C. Microbiota and diabetes: An increasingly relevant association. *Pol. Arch. Int Med.* 2018, 128, 333-335. [Google Scholar] [CrossRef].
2. Karolina Skonieczna-Zydecka, Wojciech Marlicz, Agata Misera, Anastasios Koulaouzidis and Igor Loniewski. Microbiome—The Missing Link in the Gut-Brain Axis: Focus on Its Role in Gastrointestinal and Mental Health. *J. Clin. Med.* 2018, 7(12), 521; <https://doi.org/10.3390/jcm7120521>.
3. De Angelis, M.; Francavilla, R.; Piccolo, M.; De Giacomo, A.; Gobbetti, M. Autism spectrum disorders and intestinal microbiota. *Gut Microbes* 2015, 6, 207–213. [Google Scholar] [CrossRef][Green Version].
4. Richards, Elaine M., Pepine, Carl J, Raizada, Mohan K., Kim, Seungbum. The Gut, Its Microbiome, and Hypertension. *Curr Hypertens Rep.* 2017 Apr; 19(4): 36. doi: 10.1007/s11906-017-0734-1
5. Grice, Elizabeth A. PhD. The skin microbiome: potential for novel diagnostic and therapeutic approaches to cutaneous disease. *Semin Cutan Med Surg.* 2014 Jun; 33(2): 98–103. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4425451/>
6. Columbia University's Mailman School of Public Health. "Chronic fatigue syndrome linked to imbalanced microbiome: Scientists identify abnormal levels of specific gut bacteria in individuals with chronic fatigue syndrome, including those with and without co-morbid IBS." ScienceDaily, 26 April 2017. www.sciencedaily.com/releases/2017/04/170426092351.htm.
7. Gilbert, Jack A PhD, Flynn, Jennifer. Reduce the Risk of Arthritis by Improving the Microbiome. <https://www.arthritis-health.com/types/general/reduce-risk-arthritis-improving-microbiome>.
8. Kresser, Chris. ebook. "Gut Health" ebook. <https://irp-cdn.multiscreensite.com/edf87f6a/files/uploaded/PHR-Gut-Health.pdf>; chriskresser.com
9. Preston PhD, Camille. Promoting Employee Happiness Benefits Everyone. Forbes Magazine, December 13, 2017
10. Yen L, Schultz A, Schnueringer E, Edington DW. Financial costs due to excess health risks among active employees of a utility company. *J Occup Environ Med.* 2006;48(9): 896-905.
11. Goetzel, RZ, Anderson DR, Whitmer RW, Ozminkowski RJ, Dunn RL, and Wasserman J. The relationship between modifiable health risks and health care expenditures: an analysis of the multi-employer HERO health risk and cost database. *J Occup Environ Med.* 1998;40(10): 843-854.

12. Ferreira, Stacey, The Happiness Value of Work-Life Balance. Inc Magazine. inc.com Feb 16, 2018
13. Edward S. Chambers,¹ Tom Preston,² Gary Frost,¹ and Douglas J. Morrison, Role of Gut Microbiota-Generated Short-Chain Fatty Acids in Metabolic and Cardiovascular Health. Curr Nutr Rep. 2018; 7(4): 198-206, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6244749/>
14. [Househam AM](#), [Peterson CT](#), [Mills PJ](#), [Chopra D](#)., The Effects of Stress and Meditation on the Immune System, Human Microbiota, and Epigenetics. PubMed. 2017 Fall;31(4):10-25.
15. Rapaport, Lisa. Cancer survivors face stress from steep medical bills. Reuters. Health News. January 21, 2019
16. Maldarelli, Claire. Is hand sanitizer bad for my microbiome? Don't lose your good bacteria just because someone sneezed. Popular Science Magazine, December 15, 2017.