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Immune-Supportive Habits to Include in Your Daily Routine

Healthy habits, including food choices, sleep patterns, and stress management techniques, all play an important role in supporting immune health. Part of the influence of these lifestyle choices is related to the impact on our circadian rhythm.

The circadian rhythm is an internal biological clock that runs on a 24-hour cycle. Controlled by the brain, this rhythm helps regulate sleep, energy, and food cycles.¹⁻⁴ Several factors can throw off this rhythm, interfering with sleep, disrupting the microbiome, and contributing to an increased risk of disease, including diabetes, obesity, and cardiovascular disease.³⁻⁶



Supporting a healthy rhythm with food cycles

Not only what we eat, but just as importantly when we eat, has tremendous impact on our circadian rhythm. Studies show consuming more than six meals per day may increase disease risk, while eating only one or two meals per day has been associated with reduced stress and antiaging benefits.⁵

Artificial light has contributed to the opportunity to be awake (and therefore to eat) for longer periods of time during a 24-hour cycle.² The overconsumption of food can lead to a disruption in our natural eating cycles and has an impact on sleep quality. This creates a vicious cycle, as even just one or two nights of disrupted sleep can increase appetite and trigger cravings.⁴

This disruption in our circadian rhythm can also impact the microbiome and, as a result, immune function.^{1,2} The microbiome is made up of trillions of bugs that live in the gut.¹ A diet rich in fiber and fermented foods contributes to a healthy, balanced microbiome.⁷ However, it appears that not eating, or at least timing when we eat and when we fast, also impacts the microbiome's rhythm.⁸ This has led to a concept known as intermittent fasting (IF) or time-restricted feeding. Various examples of intermittent fasting protocols are listed in the table below.⁹⁻¹⁵ Speak with your healthcare provider about a personalized approach.

Intermittent Fasting (IF) ⁹⁻¹⁵	Description
Time-restricted feeding (TRF)	Meals ideally consumed within 6–8 hour eating window each day, allowing at least 16 hours fasting.
Alternate-day fasting (ADF)	Fast (no caloric intake) every other day and consume a habitual diet on nonfasting days
Modified ADF (mADF)	Very limited caloric intake (500–600 kcal) on fasting days and habitual intake on feeding days
5:2 protocol	Restricted caloric intake (500–600 kcal) two consecutive or nonconsecutive days per week with generally unrestricted intake on the other five days of that week
Prolonged fasting	No caloric intake (food or drinks) for \geq 72 hours
Short-term fasting	No caloric intake (food or drinks) for \leq 72 hours
Intermittent restriction or “diet breaks”	Repeating blocks of daily caloric restriction followed by energy-balanced conditions (e.g. caloric intake is 65% of weight maintenance requirements for two weeks followed by return to energy balance)

Tip #1. Follow the sun.

Get into a rhythm of eating only during natural daylight. Consider dusk to dawn as fasting time. This allows time for the digestive system to rest and insulin levels to drop, contributing to immune and metabolic benefits!

Tip #2. Get into a rhythm with your sleep patterns.

Support healthy sleep cycles by avoiding late-night eating and minimizing exposure to artificial light close to bedtime. To get the most out of your sleep, set a consistent bedtime and aim for 7-9 hours every night.

Daily routine

Establishing a healthy daily routine during natural daylight can have a profound effect on your health and wellness. Being mindful about food quality and timing, implementing stress management techniques, and making sleep a priority are important activities to help support immune health. Here are a few additional ways to help benefit your immune health:

Abdominal breathing

Abdominal breathing is a powerful way to decrease stress and activate relaxation. Keep in mind, breathing practice can be done at any time during the day and only takes a few moments. One such technique is the 4, 7, 8 method, which is a form of Pranayama, an ancient Indian practice in yoga for breath control.¹⁶

How to do a 4, 7, 8 breathing technique:

- Find a comfortable place to sit or lie down, with your feet slightly apart, one hand on your abdomen near the navel, and the other hand on your chest.
- Gently exhale the air in your lungs through your mouth, then inhale slowly through your nose to the count of 4, pushing out your abdomen slightly and concentrating on your breath. As you breathe in, imagine warm air flowing all over your body. Hold the breath for a count of at least 4 but not more than 7.
- Slowly exhale through your mouth while counting to 8. Gently contract your abdominal muscles to completely release the remaining air in the lungs.
- Repeat 1–5 times.
- Once you feel comfortable with your ability to breathe into the abdomen, it is not necessary to use your hands on your abdomen and chest.



Journaling

Spend five minutes daily making a list and reflecting on three things you are grateful for. This is a very powerful practice that has been linked to decreased levels of stress, improved sleep, stronger immune system, and increased feelings of joy and happiness.¹⁷

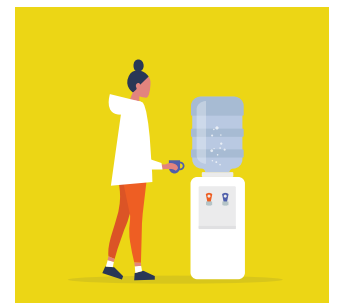
Exercise

A regular exercise program helps to generate a greater sense of wellbeing, supports healthy energy levels, improves sleep,¹⁸ and lowers stress.¹⁹ Gentle exercises such as yoga, tai chi, bike riding, or daily walking are a great way to incorporate movement in your day.

Hydrate^{20,21}

Water is essential to health. Adequate hydration has many health benefits and has been shown to positively impact the health and appearance of skin, improve gastrointestinal health, support kidney function, and help with weight management. Dehydration contributes to many neurological symptoms including fatigue, poor mood, reduced alertness, and headaches.

- Aim for 8 or more glasses of water per day.
- Increase water intake in warm weather and after exercise.
- To counter the dehydrating influence of caffeine, consider drinking one glass of water for every cup of coffee or tea.



References:

1. Zheng D et al. Circadian influences of diet on the microbiome and immunity. *Trends Immunol.* 2020;1678:1-19.
2. Longo VL et al. Fasting, circadian rhythms, and time-restricted feeding in healthy lifespan. *Cell Metabolism.* 2016;23:1048-1059.
3. Greco CM et al. Circadian blueprint of metabolic pathways in the brain. *Nat Rev Neurosci.* 2019;20(2):71–82.
4. Bechtold DA et al. Hypothalamic clocks and rhythms in feeding behavior. *Trends Neurosci.* 2013;36(2):74-82.
5. Paoli A et al. The influence of meal frequency and timing on health in humans: the role of fasting. *Nutrients.* 2019;11(719):1-19.
6. Oike H et al. Nutrients, clock genes, and chrononutrition. *Curr Nutr Rep.* 2014;3:204–212.
7. Zarrinpar A et al. Diet and feeding pattern affect the diurnal dynamics of the gut microbiome. *Cell Metab.* 2014;20(6):1006-1017.
8. Mindikoglu AL et al. Impact of time-restricted feeding and dawn-to-sunset fasting on circadian rhythm, obesity, metabolic syndrome, and nonalcoholic fatty liver disease. *Gastroenterol Res Pract.* 2017;2017:3932491.
9. Harvie MN et al. The effect of intermittent energy and carbohydrate restriction v. daily energy restriction on weight loss and metabolic disease risk markers in overweight women. *Br J Nutr.* 2013;110(8):1534-1547.
10. Harvey J et al. Intermittent energy restriction for weight loss: Spontaneous reduction of energy intake on unrestricted days. *Food Sci Nutr.* 2018;6(3):674-680.
11. Harvie MN et al. The effects of intermittent or continuous energy restriction on weight loss and metabolic disease risk markers: a randomized trial in young overweight women. *Int J Obes (Lond).* 2011;35(5):714-727.
12. Trepanowski JF et al. Effect of alternate-day fasting on weight loss, weight maintenance, and cardioprotection among metabolically healthy obese adults: A randomized clinical trial. *JAMA Intern Med.* 2017;177(7):930-938.
13. Sutton EF et al. Early time-restricted feeding improves insulin sensitivity, blood pressure, and oxidative stress even without weight loss in men with prediabetes. *Cell Metab.* 2018;27(6):1212-1221. e1213.
14. Aronson TG et al. Effects of intermittent fasting on health markers in those with type 2 diabetes: A pilot study. *World J Diabetes.* 2017;8(4):154-164.
15. Byrne NM et al. Intermittent energy restriction improves weight loss efficiency in obese men: the MATADOR study. *Int J Obes (Lond).* 2018;42(2):129-138.
16. Kuppusamy M et al. Effects of Bhramari Pranayama on health-a systematic review. *J Tradit Complement Med.* 2018;8(1):11-16.
17. Smyth JM et al. Online positive affect journaling in the improvement of mental distress and well-being in general medical patients with elevated anxiety symptoms: a preliminary randomized controlled trial. *JMIR Ment Health.* 2018;5(4):e11290.
18. Wang F et al. The effect of physical activity on sleep quality: a systematic review. *Eur J Physiother.* 2019.
19. Childs E et al. Regular exercise is associated with emotional resilience to acute stress in healthy adults. *Front Physiol.* 2014;5:161.
20. Akdeniz M et al. Does dietary fluid intake affect skin hydration in health humans? A systematic literature review. *Skin Res Technol.* 2018;24(3):459-465.
21. Liska D et al. Narrative review of hydration and selected health outcomes in the general population. *Nutrients.* 2019;11(1):70.

