

DR. LISA O. BALLEHR DO Functional Medicine Orthopedic Sports Medicine / Radiology

MODIFIABLE LIFESTYLE RECOMMENDATIONS FOR COVID

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Food & Nutrition Recommendations

There is a direct connection between diets based on:

HIGH SATURATED FATS LOW IN DIETARY FIBER HIGH IN SUGAR

CHRONIC INFLAMMATORY DISEASES

There is significant evidence that suggests that fruit and vegetable intake can reduce the risk of chronic diseases.



Plant foods can also lead to health changes through their antioxidant and antiinflammatory activities. They can change your gut microbiome and evidence even suggests that a plant-based, diverse, nutrient-dense diet can be helpful in maintaining a robust immune system- which is critical for fighting COVID.

FOOD AND NUTRITION RECOMMENDATIONS

Plant based foods high in micro- and phyto-nutrients, as well as dietary fiber, can help improve functioning of the immune system.

Specific recommendations for patients:

1. Eat fruits and vegetables (raw or cooked). Aim for 9-13 servings daily.

2. Aim for dietary diversity with rotation of foods every 3-4 days.

3. Ensure adequate dietary fiber (28-35 grams) from whole foods

4. Eat fermented vegetables or other probiotic-containing foods to maintain epithelial health and gut barrier function

5 Reduce or avoid immune offenders (e.g. added sugars, salt, high-glycemic foods, excessive saturated fat)

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Sleep Recommendations

DID YOU KNOW?

- Even one night of reduced sleep can lead to innate immune dysfunction.
- Medications such as corticosteroids and analgesics may interfere with sleep.
- Better sleep quality is associated with less inflammation.
- Perception of quality of sleep is essential to how the immune system is affected.

DO THIS:

- Get good quality, sufficient quantity (7-9 hours), and adequate deep phasic bouts of sleep as part of immune system maintenance and restoration.
- Practice good sleep hygiene (e.g., consistent sleep time, turning off technology, dark, cool room).



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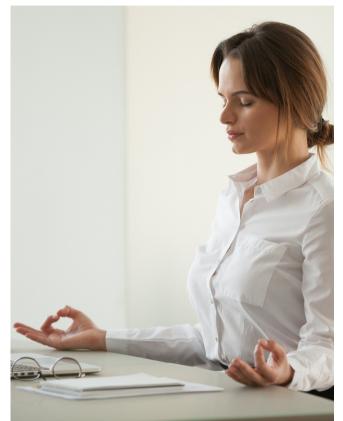
Stress Reduction Recommendations

DID YOU KNOW?

- Being in a stressed state for long periods of time can heighten inflammation and lead to a dysregulated immune states such as autoimmune disease, asthma and allergy
- Chronic stress is immunosuppressive and is associated with increased risk of infection of COVID-19
- Those with higher cortisol levels have greater mortality from COVID-19

DO THIS:

- Monitor stress levels through subjective or objective (e.g., HRV) measures
- Practice stress-modifying techniques on a daily basis



Social Factors/Connection Recommendations DID YOU KNOW?

- Social isolation, loneliness and conflict have all independently been associated with upregulated inflammatory markers and downregulated immune function.
- Those who are socially isolated have heightened response to stressors.
- Having a sense of interconnection results in favorable responses: decreased stress, increased antibodies, and better health outcomes.

DO THIS:

- Reduce exposure to interactions perceived as hostile or unsupportive
- Emphasize relationships with those who are affirming or positive
- Participate in group activities to reduce loneliness or isolation

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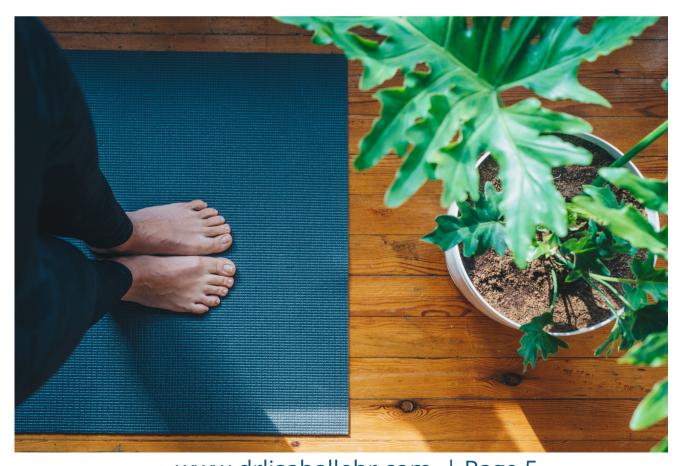
Exercise Recommendations

DID YOU KNOW?

- Physical activity is essential to the immune system for its effects on circulation and oxygenation.
- A single bout of physical activity can stimulate immune function; regular exercise is most important for consistent effects.
- Those unaccustomed to strenuous or prolonged activity are advised to refrain from it due to the potential to reduce immune function.

DO THIS:

- Engage in moderate, regular physical activity
- Develop a personalized exercise program that suits your body type and personal interests



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