FOODS TO PROMOTE
IMMUNE FUNCTION

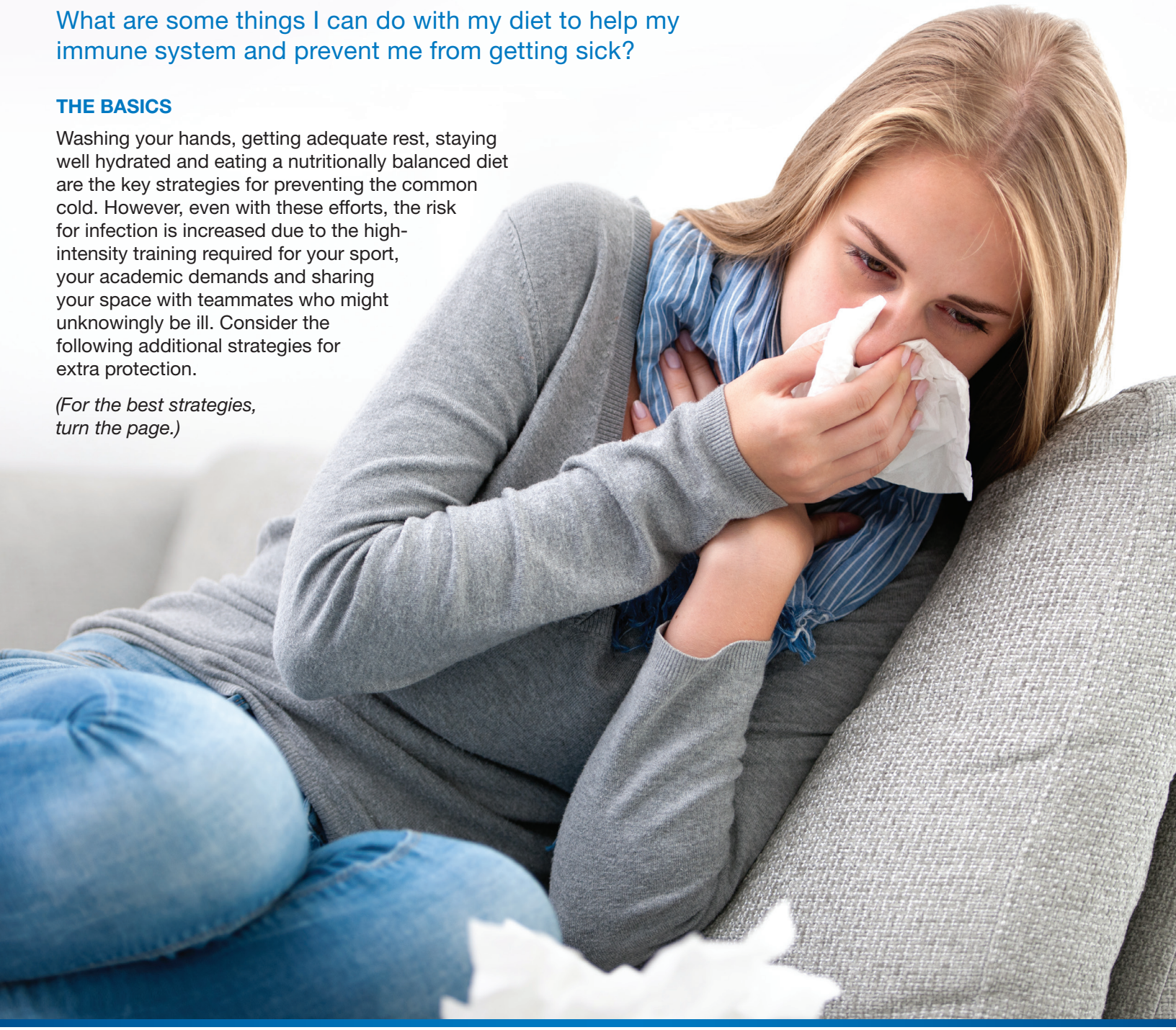
It seems as if every winter I get hit with at least one cold that sidelines my training and gets in the way of my studies. I take a multivitamin most days, but I could also improve my diet.

What are some things I can do with my diet to help my immune system and prevent me from getting sick?

THE BASICS

Washing your hands, getting adequate rest, staying well hydrated and eating a nutritionally balanced diet are the key strategies for preventing the common cold. However, even with these efforts, the risk for infection is increased due to the high-intensity training required for your sport, your academic demands and sharing your space with teammates who might unknowingly be ill. Consider the following additional strategies for extra protection.

(For the best strategies, turn the page.)



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BASIC STRATEGIES FOR ATHLETES

Consume enough calories to support your training needs. When you don't eat enough, your body responds by increasing stress hormone levels that have direct connections to lowered immune function.

Show up for training adequately fueled. Carbohydrates are critical for fueling immune cells. The most effective strategy for athletes to maintain immune function is to consume carbohydrates during exercise. Protein is also needed to synthesize key immune factors and to build and repair body tissues.

Maintain hydration. A dry mouth decreases the mouth's natural functions as a first-line immunological barrier. This means more susceptibility of the body to bacteria and viruses. Dehydration can also cause an increased production of the stress hormone cortisol, which is linked to immunosuppression.

Recovery nutrition. To lessen the effects a high-intensity or long-duration (longer than 90 minutes) training session has on immune function, consume a high carbohydrate snack or meal within 15 to 60 minutes after training, and a high carbohydrate snack again at three and six hours post-training.

Keep your gut happy and healthy. Seventy percent of your immune function arises from the healthy bacteria of your gut. A healthy gut is the result of a balanced diet, including consuming pre- and probiotic foods.

Micronutrients and antioxidants. Iron, Zinc, Vitamin D, Vitamins A, E and C, and phytochemicals including beta-carotene, play important roles in immune function. Use the table below to identify foods rich in these nutrients and include them regularly in your diet.

IMMUNE-BOOSTING MEALS

- Chicken and vegetable stir fry with rice
- Bean, rice and chicken burrito with salsa and cheese
- Black bean soup or low-fat chili with salad, whole-wheat crackers and fruit
- Fruit, yogurt and granola breakfast bowls
- Tuna sandwich on whole-wheat bread with carrots and fruit
- Pasta with lean ground beef and tomato sauce, and a vegetable salad

The role of diet in promoting a strong immune system begins before you get sick. Promoting a strong immune function through consuming a consistent, high-quality diet will make fighting off illness faster and easier.

Omega 3s	Antioxidants	Zinc	Iron	Vitamin D
Cold-water fish (salmon, sardines, fresh tuna, halibut), walnuts, flax seed, soybean and canola oils, brussel sprouts, kale, spinach	Oranges, cantaloupe, papaya, apples, berries, sweet potato, broccoli, carrots, spinach, kale, bell peppers, asparagus, onions, garlic, beets, red/yellow spices	Legumes (beans), 100 percent whole wheat, beef, pork, chicken, spinach, oysters, yogurt, pumpkin seeds, cashews, dark chocolate, mushrooms, fortified cereals	Red meat, dark-green leafy vegetables (spinach, collard greens), fortified cereals, slow-cooked beans, artichokes, black strap molasses, tofu, quinoa, prunes	Sunlight, fortified dairy and soy foods, salmon, tuna, mackerel, fortified foods (orange juice, cereals). Smaller amounts in beef and egg yolks

STILL GOT SICK?

Stick to the basics: rest, hydrate, eat smart and then rest some more. High-intensity training while you're sick can extend the duration of your cold and possibly increase its severity. You aren't achieving any benefits from training while you're sick and you risk spreading the infection to your teammates.

PUTTING IT INTO ACTION

Along with the basics, consider the following recommendations to help you stay healthy. Refer to the fact sheets covering nutrition before, during and after activity to help you maintain a healthy diet.

	Caloric Intake	Hydration	Before, during and recovery nutrition	Healthy Gut
Supporting a Healthy Immune System	Don't skip meals. Eat a well-balanced diet that includes carbohydrate, fiber, protein and healthy fats.	Drink water, choose non-caffeinated low-sugar drinks during the day.	Consume carbohydrate and fluids before, during and within an hour after training.	Consume adequate fluids and fuel during practice.
While Sick	Even if you're not hungry, eat small amounts throughout your day. Avoid sugary and high-fat foods.	Consume lots of fluids. Consider high water-containing foods such as soups/broth, yogurts and applesauce.	Steer clear of practice. Rest.	Consume yogurt with live active cultures, whole fruits, vegetables, and other fiber-rich foods.

Written by SCAN Registered Dietitians (RDs). For more information consult a RD who specializes in sports, particularly a Board-Certified Specialist in Sports Dietetics (CSSD). Find a SCAN RD at www.scandpg.org.