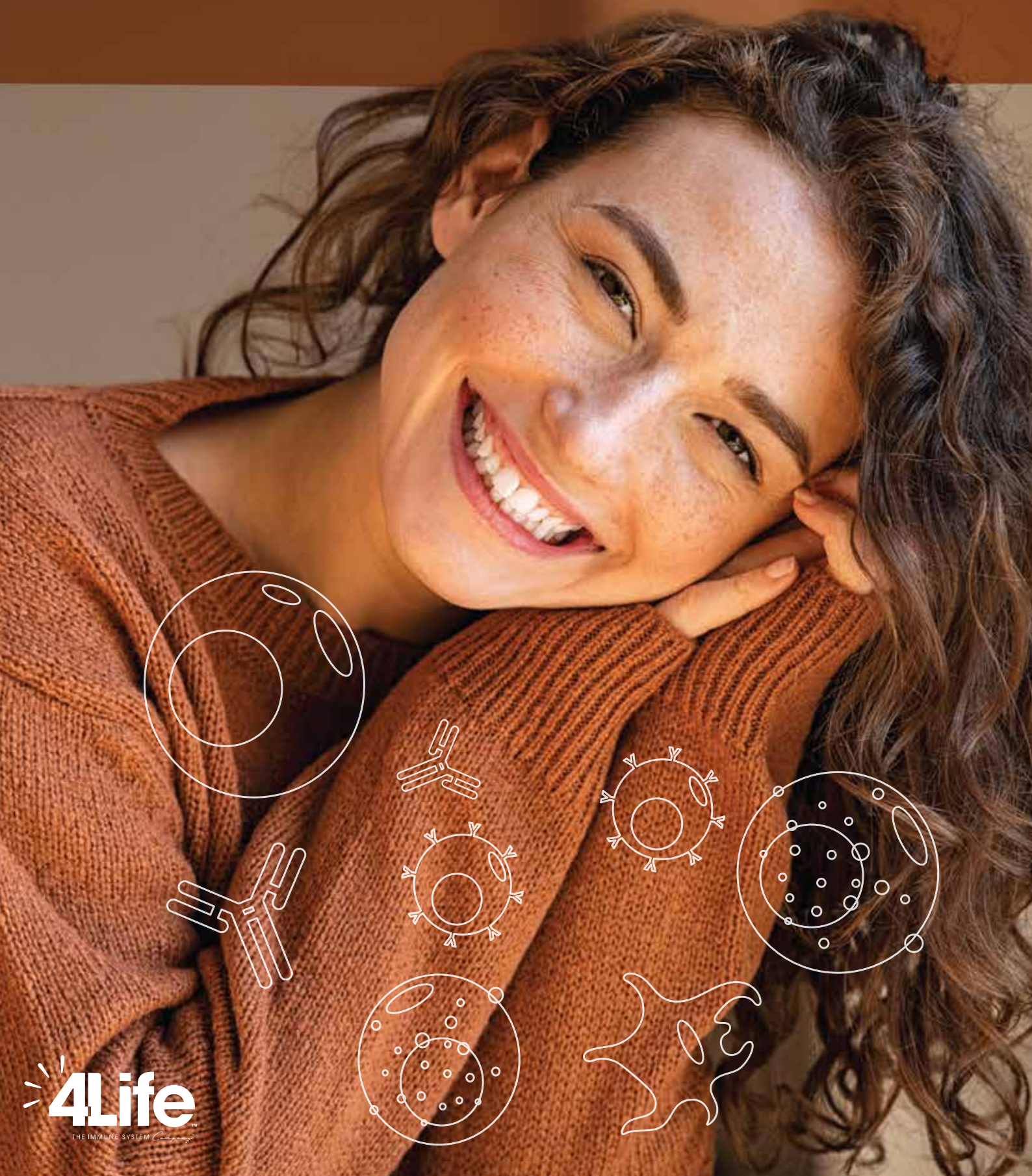
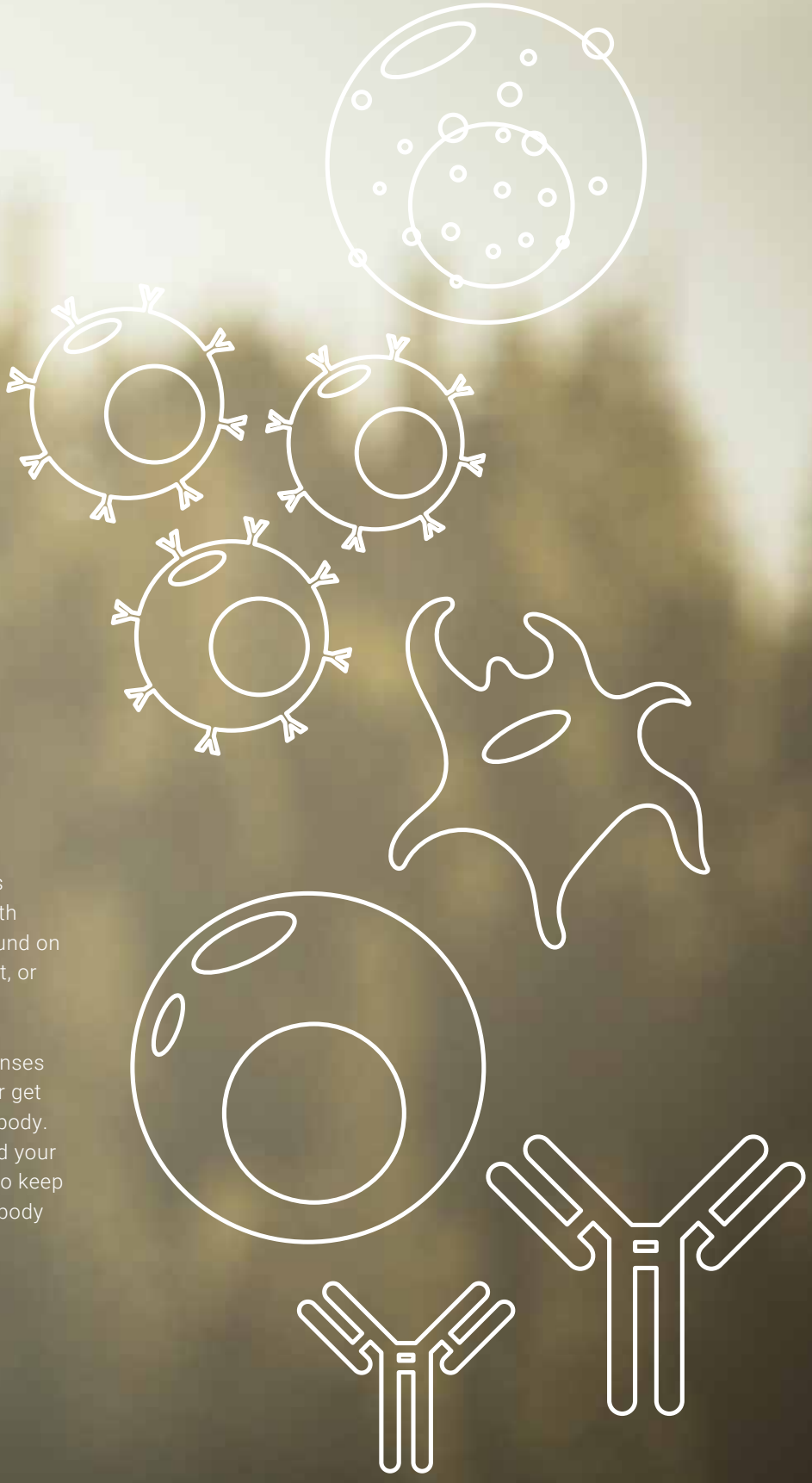
THE IMMUNE SYSTEM

Your Built-In Battalion



4Life™
THE IMMUNE SYSTEM Company

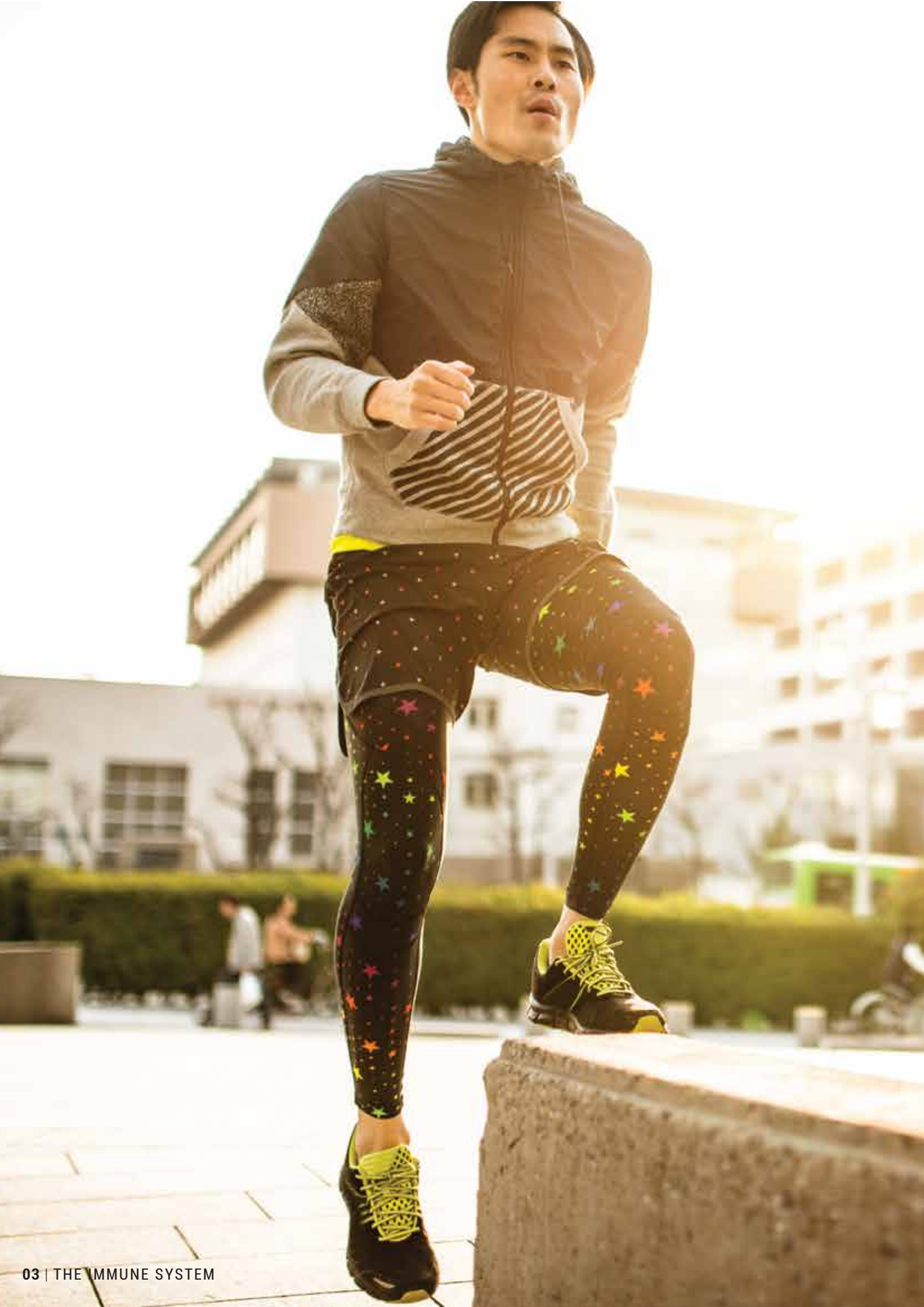
Built-in Battalion



Your immune system army

From the moment you're born, your body is constantly bombarded with countless health threats. These invisible invaders can be found on the surfaces you touch, on the food you eat, or even in the air you breathe.

Luckily, you are equipped with natural defenses to keep these unwanted attackers at bay or get rid of ones that have already entered your body. This inborn, bodily defense system is called your immune system, and its entire function is to keep you healthy and strong so the rest of your body can function at its best.



How does the immune system work?

Think of your immune system as an army—a built-in battalion of cells, each with a unique and important role to play in order to win the war against the enemy. In this case, the enemy is all the health threats your body encounters. When an enemy is detected in your body, your immune system army quickly reacts and activates a complex network of cell types that, together, fend off these intruders.

Let's explore the key players in your immune system army and how they work to maintain your physical health.

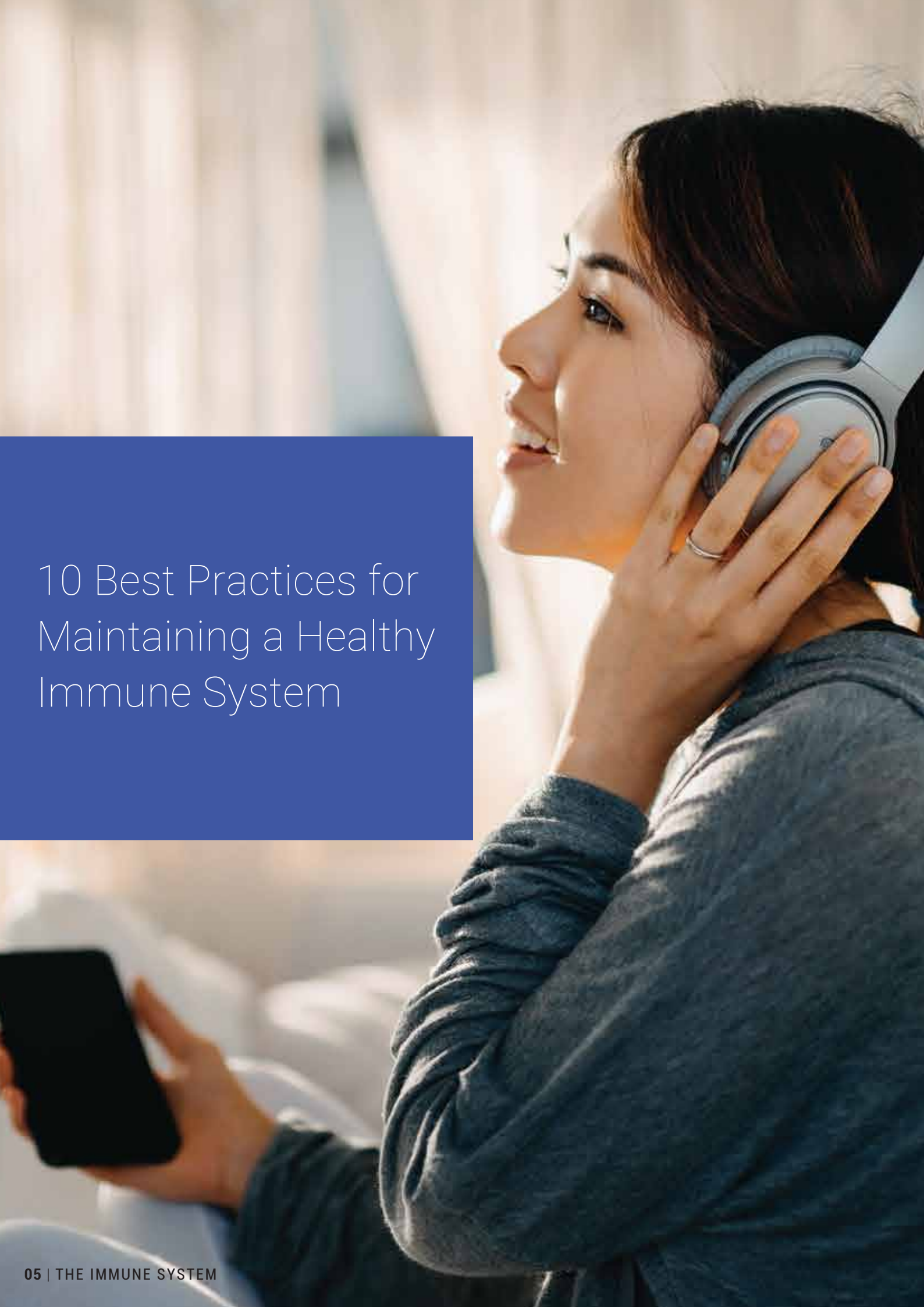
NK Cells
The job of Natural Killer Cells (NK Cells) is right in their name: they kill harmful invaders. NK Cells are the special forces of your immune system. They are the first soldiers sent in after a health threat is detected within your body, and their main job is to destroy specific types of defective or infected cells.

T Cells
Like NK Cells, T Cells kill threatening cells; the difference lies in which cells they target. Consider T Cells to be your general infantry—a large quantity of soldiers that do most of the fighting. While NK Cells are more specialized in their approach, T Cells, for the most part, aren't trained to seek out particular cellular invaders. Their strength lies in their numbers as they overthrow any attackers that enter their territory.

Macrophages
Cue the tanks! Macrophages can be best described as the cleanup crew—larger cells that swoop in and decimate invading organisms. The word "macrophage" actually means "big eater" in Greek. Why? Because these cells, sometimes called "swallowing cells," ingest the debris around them.

B Cells
Every sophisticated army has spies whose sole purpose is to find enemies, and your immune system is no different. B Cells identify and mark invaders so the other immune system cell types can detect and destroy the threat.

Antibodies
B Cells also produce antibodies—proteins that help slow down the spread of an infection and prevent future infections by latching onto invaders. Antibodies are akin to experienced army soldiers or veterans. They remember the specific makeup or qualities of harmful cells in order to fight off future attacks.



10 Best Practices for Maintaining a Healthy Immune System

1. I get enough sleep

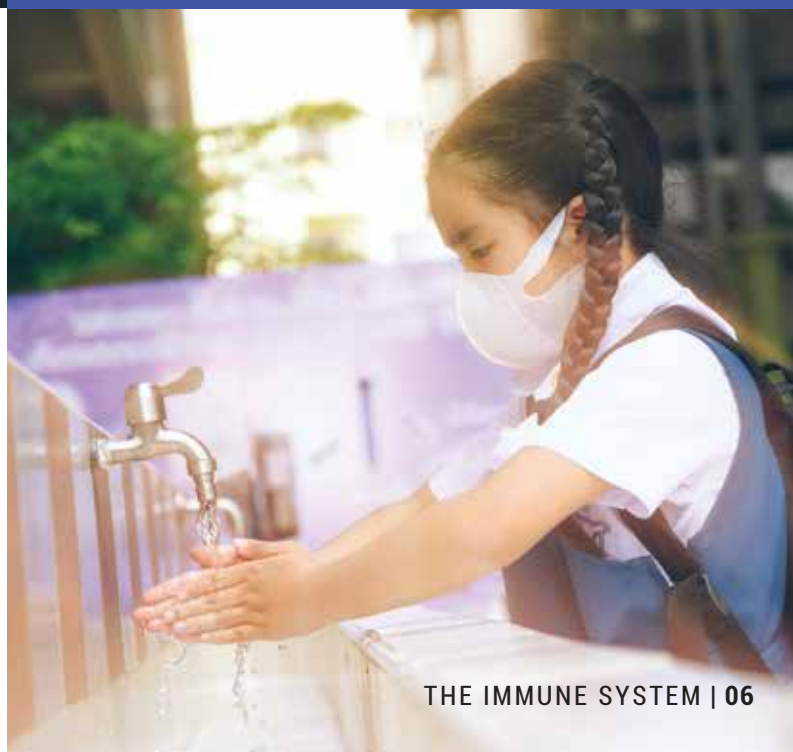
Research shows that adequate sleep is paramount for a high-functioning immune system. Sleep allows the immune system to do its work while the body is at rest. Lack of sleep can lead to more than just fatigue. It can also lead to a less effective immune system.[1,2]

2. I consistently eat a nutritious diet

Consuming a high amount of fruits and vegetables is important, since these foods are generally rich in vitamins C and E, and green vegetables contain B6. These three nutrients contribute to healthy immune system function.[3,4,5,6]

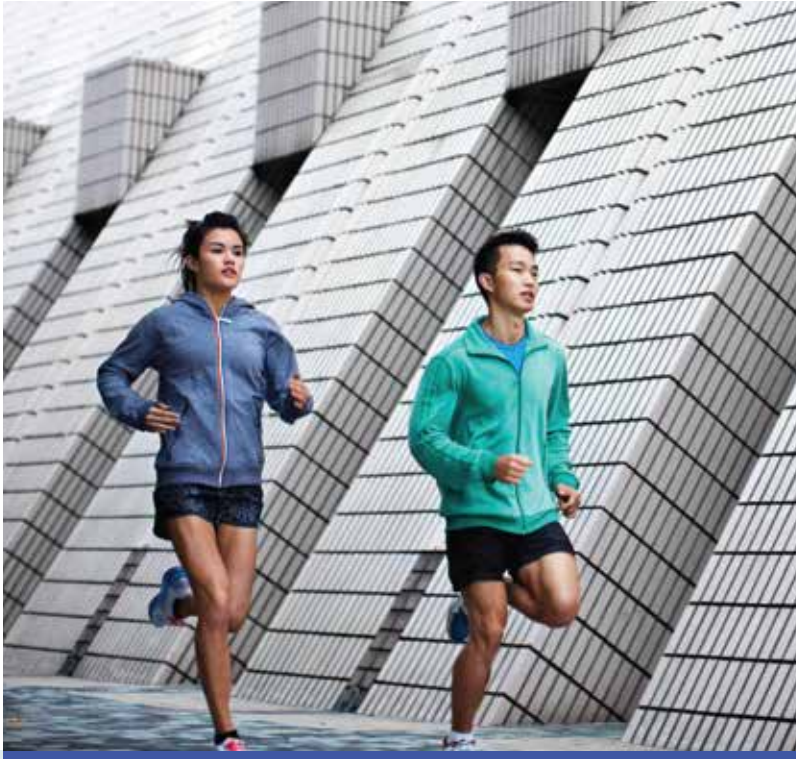
3. I practice good hygiene

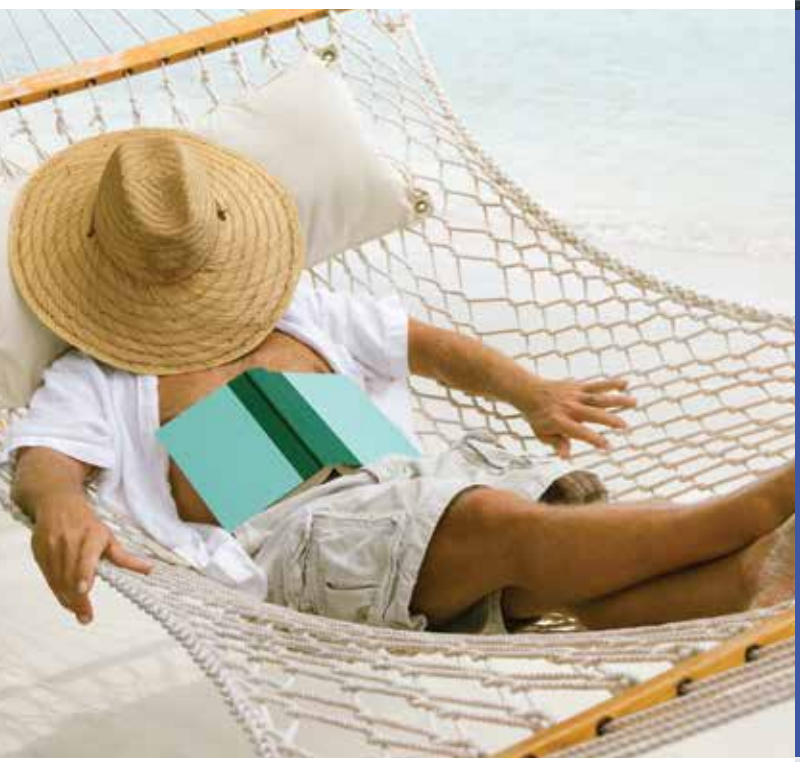
Wash your hands frequently and avoid touching your face—especially after visiting a public place.



4. I exercise

Exercise is key to immune system health for many reasons. Not only does it keep you physically healthy, but it can also help reduce mental stress and even improve your quality of sleep. Moderate exercise is a great way to support a healthy immune system.[7,8]





5. I dedicate time to total body recovery

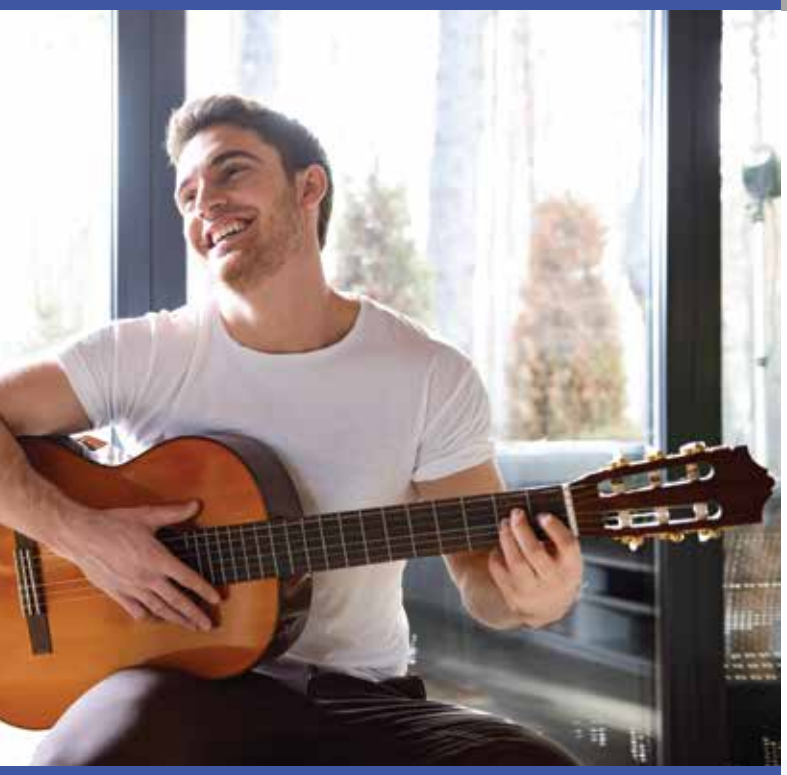
Exercise is important, but resting after exercise is just as important. Give your body time to recoup after strenuous exercise with a day off and avoid overtraining, since it may wear you and your immune system out.[9]

6. I limit exposure to illness

It's no secret that viruses are contagious. Avoid being in close contact with people who are ill or who have been exposed to an illness.

7. I practice nourishing supplementation

Sometimes it's not easy to nourish your body solely from the food you eat. A daily multivitamin or an immune system–boosting supplement can help you reach the daily requirements for vitamins specific to good immune system health.[10]

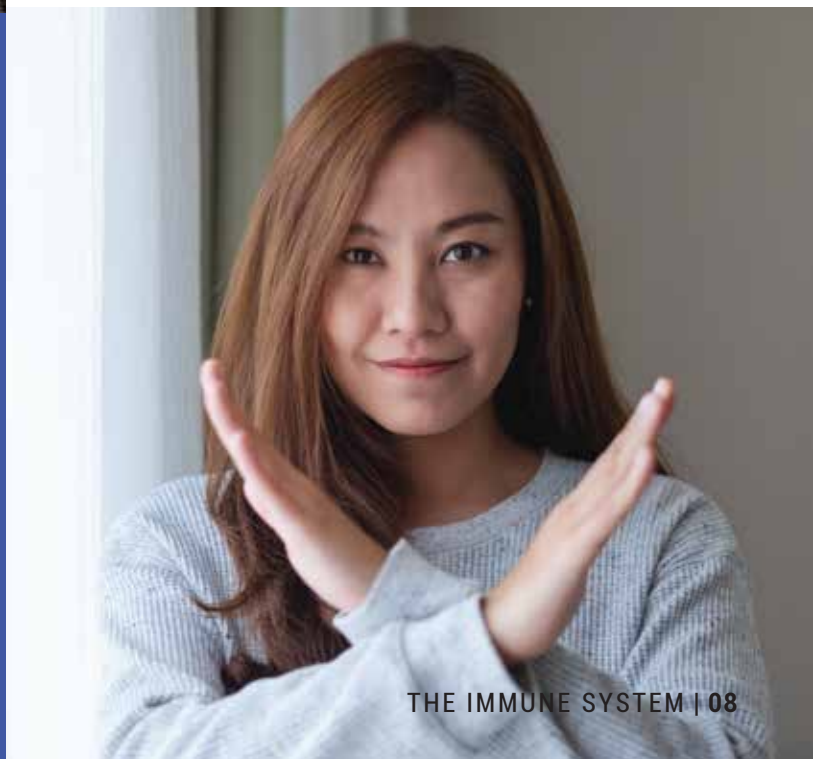


8. I minimize mental and physiological stress levels

Mental stress can have a biological effect on your immune system. Your physical reaction to stress can chip away at your immune system health. Manage stress to avoid impairing your immune system.[11,12,13]

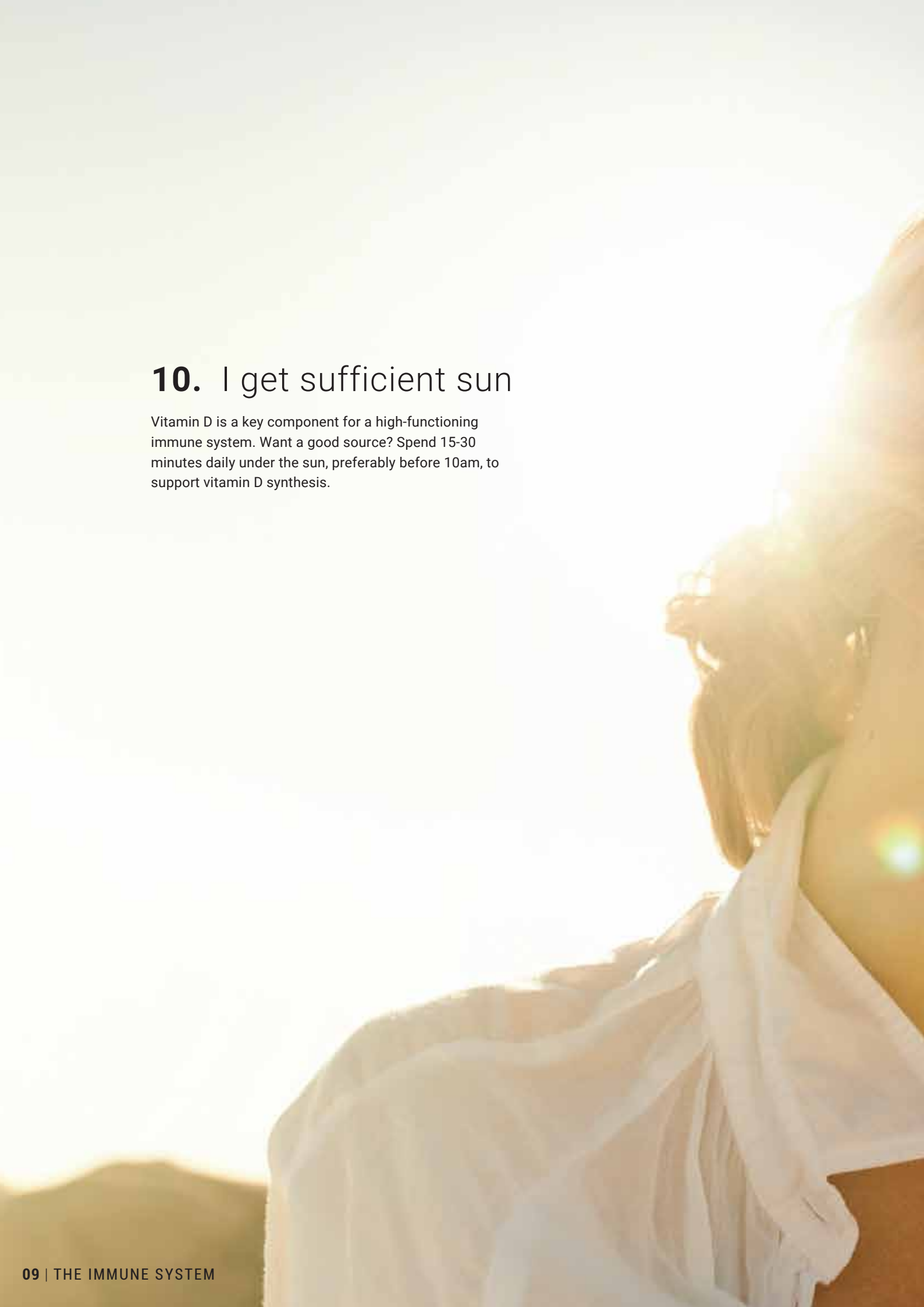
9. I avoid drugs and alcohol

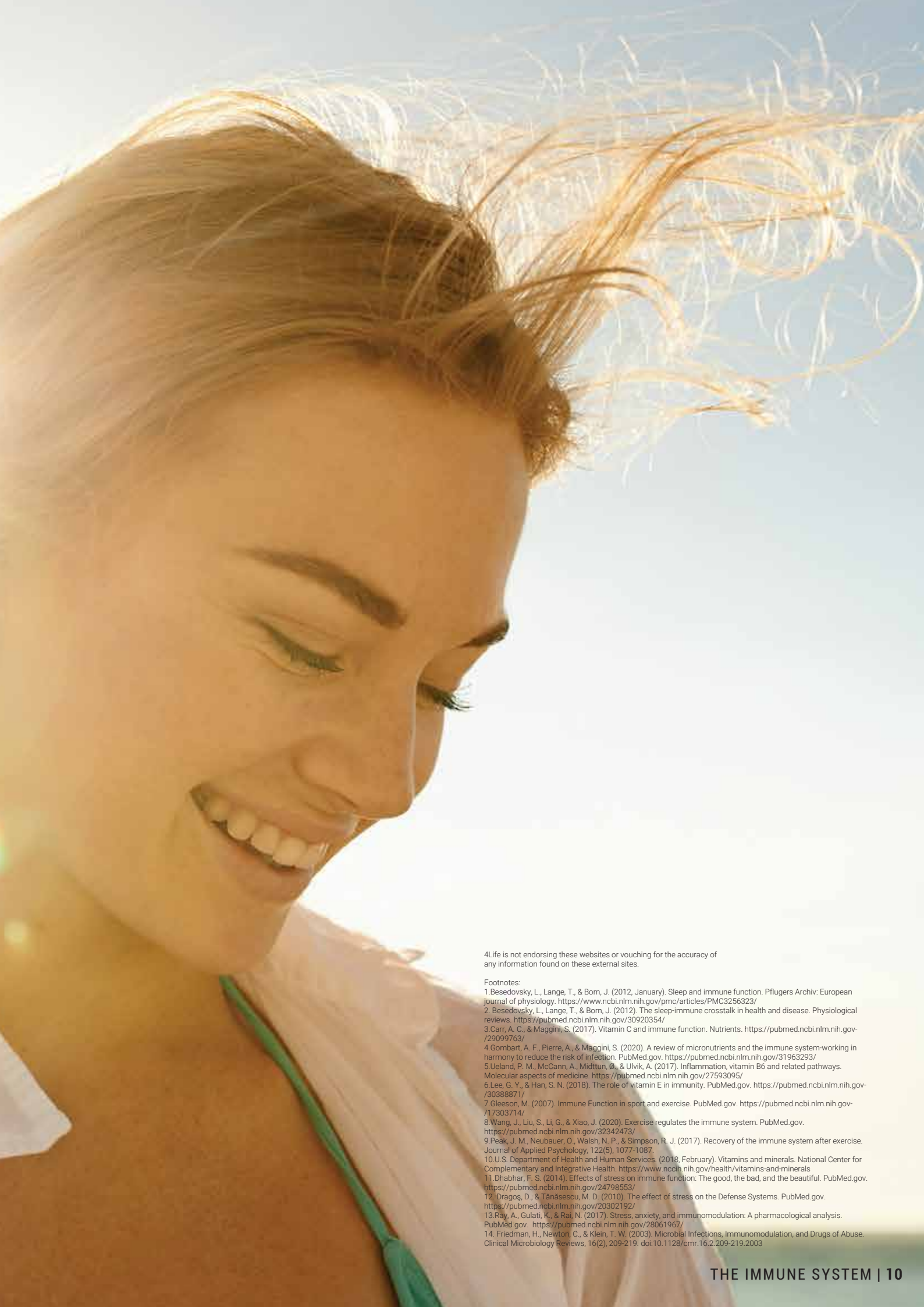
Drugs and alcohol can limit the effectiveness of your immune system. There are correlations between drug and/or alcohol use and increased susceptibility to infections.[14]



10. I get sufficient sun

Vitamin D is a key component for a high-functioning immune system. Want a good source? Spend 15-30 minutes daily under the sun, preferably before 10am, to support vitamin D synthesis.





4Life is not endorsing these websites or vouching for the accuracy of any information found on these external sites.

Footnotes:
1.Besedovsky, L., Lange, T., & Born, J. (2012, January). Sleep and immune function. Pflugers Archiv: European journal of physiology. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3256323/
2. Besedovsky, L., Lange, T., & Born, J. (2012). The sleep-immune crosstalk in health and disease. Physiological reviews. https://pubmed.ncbi.nlm.nih.gov/30920354/
3.Carr, A. C., & Maggini, S. (2017). Vitamin C and immune function. Nutrients. https://pubmed.ncbi.nlm.nih.gov-/29099763/
4.Gombart, A. F., Pierre, A., & Maggini, S. (2020). A review of micronutrients and the immune system-working in harmony to reduce the risk of infection. PubMed.gov. https://pubmed.ncbi.nlm.nih.gov/31963293/
5.Ueland, P. M., McCann, A., Midttun, Ø., & Ulvik, A. (2017). Inflammation, vitamin B6 and related pathways. Molecular aspects of medicine. https://pubmed.ncbi.nlm.nih.gov/27593095/
6.Lee, G. Y., & Han, S. N. (2018). The role of vitamin E in immunity. PubMed.gov. https://pubmed.ncbi.nlm.nih.gov-/30388871/
7.Gleeson, M. (2007). Immune Function in sport and exercise. PubMed.gov. https://pubmed.ncbi.nlm.nih.gov-/17303714/
8.Wang, J., Liu, S., Li, G., & Xiao, J. (2020). Exercise regulates the immune system. PubMed.gov. https://pubmed.ncbi.nlm.nih.gov/32342473/
9.Peak, J. M., Neubauer, O., Walsh, N. P., & Simpson, R. J. (2017). Recovery of the immune system after exercise. Journal of Applied Psychology, 122(5), 1077-1087.
10.U.S. Department of Health and Human Services. (2018, February). Vitamins and minerals. National Center for Complementary and Integrative Health. https://www.nccih.nih.gov/health/vitamins-and-minerals
11.Dhabhar, F. S. (2014). Effects of stress on immune function: The good, the bad, and the beautiful. PubMed.gov. https://pubmed.ncbi.nlm.nih.gov/24798553/
12. Dragoş, D., & Tănăsescu, M. D. (2010). The effect of stress on the Defense Systems. PubMed.gov. https://pubmed.ncbi.nlm.nih.gov/20302192/
13.Ray, A., Gulati, K., & Rai, N. (2017). Stress, anxiety, and immunomodulation: A pharmacological analysis. PubMed.gov. https://pubmed.ncbi.nlm.nih.gov/28061967/
14. Friedman, H., Newton, C., & Klein, T. W. (2003). Microbial Infections, Immunomodulation, and Drugs of Abuse. Clinical Microbiology Reviews, 16(2), 209-219. doi:10.1128/cmr.16.2.209-219.2003

For more information, please contact:

FORLIFE RESEARCH SDN BHD
(Reg. No. 200201007676 (575339 - A)) AJL No. 931508

Customer Service Careline
1-800-819-419 (within Malaysia)
+603-3099 2902 (from Overseas)
E malaysiacs@4life.com

FORLIFE RESEARCH SINGAPORE PTE LTD
(Reg. No. 200312919C)

T 6735 2988 **E** singaporecs@4life.com

malaysia.4life.com / singapore.4life.com

4lifemsia

4Life Malaysia & Singapore

4Life Malaysia /4Life Singapore

V1 010922