

Healthy Living Lifestyle Habits: Land and Sea¹

Razieh Farzad, Brittany Scharf, Jim E. Davis, LuAnn Duncan, and Jana Anderson²

This publication provides information for the general public about the benefits of incorporating land- and water-based natural resource activities to achieve a healthy lifestyle.

Introduction

A healthy lifestyle includes maintaining a body weight that reduces the risk for chronic disease, consuming a nutritious diet, routinely exercising, and refraining from consuming excessive alcohol and smoking. Adults who follow healthy lifestyle habits live longer and reduce the risk for chronic diseases such as type 2 diabetes, cancer, and cardiovascular disease (Li et al. 2020). While sticking to healthy habits is often easier said than done, this guide provides tips to boost your physical and mental health through nutrition, exercise, and mental wellness.

This publication addresses the benefits of incorporating land-based (green space) and water-based (blue space) natural resources and activities to achieve a healthy lifestyle. Physical and mental well-being are essential components of balancing individual wellness.

Citizen science contributes to physical and mental awareness

One way to achieve environmental well-being is by getting involved within your community. Volunteering or participating in scientific research and monitoring

projects, often referred to as citizen science, can improve one's physical health and mental awareness (Cigliano et al. 2015). By engaging in hands-on education and experiences, participants understand the value of the environmental resources and are more willing to make behavior changes to preserve those vital resources (Church et al. 2018; Jordan et al. 2011). Individuals recognize how day-to-day actions impact the environment in which they live (Church et al. 2018). Restoration of our environment is more financially costly than preservation and prevention. Education and stakeholder engagement is critical (Allendorf and Lundquist 2003; Larsen et al. 2011).

For example, individuals participating in the Florida Horseshoe Crab Watch citizen science program contribute data toward horseshoe crab species management (Heres et al. 2021). Trained volunteers walk beaches during predetermined times and record information about mating horseshoe crabs utilizing the skills learned during the training workshops. These volunteers also engage with others at the survey beach and around their community, teaching the program's importance and how horseshoe crabs contribute to both human and environmental health. These experiences guide volunteers to make more informed decisions, act within their community, and share knowledge gained with others all while physically exercising (Wyles et al. 2017). Volunteers provide many benefits toward environmental well-being by increasing monitoring and data collection that otherwise would be too costly for agencies to

1. This publication is FSHN22-7, one of a series of the Food Science and Human Nutrition Department, UF/IFAS Extension. Original publication date May 2022. Visit the EDIS website at <https://edis.ifas.ufl.edu/> for the currently supported version of this publication.
2. Razieh Farzad, assistant professor and seafood safety Extension specialist, Food Science and Human Nutrition Department and Florida Sea Grant; Brittany Scharf, marine Extension agent, UF/IFAS Extension Hernando County, Florida Sea Grant; Jim E. Davis, county Extension director, UF/IFAS Extension Sumter and Hernando Counties; LuAnn Duncan, family and consumer science Extension agent, UF/IFAS Extension Sumter County; and Jana Anderson, family and consumer science Extension agent, UF/IFAS Extension Orange County; UF/IFAS Extension, Gainesville, FL 32611.

conduct. Volunteer time is a valuable resource and generates community buy-in for monitoring, preserving, and restoring environmental areas that are of intrinsic value for many (Church et al. 2018).

Volunteers provide many benefits toward environmental well-being by increasing monitoring and data collection that otherwise would be too costly for agencies to conduct. Volunteer time is a valuable resource and generates community buy-in for monitoring, preserving, and restoring environmental areas that are of intrinsic value for many (Church et al. 2018).

Physical activity has a variety of health benefits

The US Department of Health and Human Services (HHS) physical activity guidelines recommend that adults achieve 150 minutes of moderate-intensity or 75 minutes of vigorous activity each week (US HHS 2018). Physical activity can improve one's physical fitness, increase the quality of life, prevent and manage chronic health conditions, improve self-esteem and mood, and provide enhanced feelings of well-being. For adults, research suggests performing actions that maintain or increase muscular strength and endurance for a minimum of 2 days per week (US HHS 2018). Today, most environments, indoor and outdoor, can provide opportunities to be physically active. However, active adults should modify any exercise in response to variations in their exercise capacity, usual activity level, and chosen environment.

Outdoor activities like hiking, gardening, brisk walks, and certain beach activities can provide fun physical and mental health benefits. Hiking, for example, can strengthen your legs and core to help improve your balance skills. Climbing uphill and descending downhill can activate large muscle groups like the quadriceps, hamstrings, glutes, and calves.

According to researchers at Stanford University, time spent in nature limits repetitive thought patterns that cause negative emotions (Bratman et al. 2015). Nature may also provide opportunities to be mindful and present in the moment, affecting blood pressure and reducing stress. When you are physically active outdoors, consider wearing lightweight, loose-fitting, breathable clothing. It is also good to be aware of signs of heat exhaustion, heat fainting, heat cramps, and most importantly, heatstroke. Table 1 summarizes the signs, symptoms, and treatment of different heat-related illnesses. Make a hydration plan, know where fluids may be available, and carry water bottles with you

in a belt or backpack. Finally, when choosing activities you enjoy, you'll be much more likely to keep them up.

Linking Nature Walks to Mental Health Benefits

Getting out in nature does a body good. After all, humans are biophilic—we have a desire or tendency to commune with nature. Humans tend to interact or be closely associated with nature and its many forms. Whether it be nature hikes or even community greenspaces, getting outdoors is beneficial in improving one's body physically and mentally. Sedentary lifestyles can negatively affect physical health and mental health. Depression, anxiety, and rumination are examples of mental health challenges affecting mental wellness. Nature can be an intervention to help combat these mental health issues (Bratman et al. 2015).

Nature walks are an activity that can increase mental well-being and have been shown to boost the human psyche. Walking at least 120 minutes a week can have a significant positive effect on one's health and well-being. Incorporating a series of short or long nature walks in your weekly routine can also help in reducing constant, repetitive thoughts that may cause stress to an individual (White et al. 2019). Walking through nature on your own or with friends or family members can confer benefits. Those who walked outdoors expressed less negativity and talked more about their surroundings, suggesting a positive correlation between nature hikes and family interactions (Izenstark et al. 2021).

Mental Wellness Benefits from Nature Walks

- Improves concentration
- Improves creativity
- Improves problem-solving and decision-making
- Reduces stress
- Increases well-being
- Increases social interactions

How Blue Space (Water Surrounding Us, Such as a Lake, River, etc.) Impacts Well-Being

We have begun to understand how being surrounded by nature benefits humans, both mentally and physically, but how does being surrounded by water help our well-being?

The brain produces chemical reactions to water that impact mental health and the feeling of well-being. The amount of research related to water activity and the impact of living near water is limited. Yet current studies (Nicholas et al. 2014) indicate:

- There is a positive correlation between exposure to blue spaces and mental health.
- Water activity may improve the mental health of those experiencing post-traumatic stress disorder (PTSD) or addictions.

Water activity can benefit people of all ages, ethnicities, and social or economic strata.

- Being exposed to water not only impacts emotional health but may also have positive cognitive memory impacts.
- For some people, water activities may be more relaxing than other physical outdoor activities.

Spending time near the water and participating in water activities impact well-being. But consuming seafood when fresh-caught from safe waters or purchased from an approved source can also provide health benefits.

Florida Seafood

As one of the nation's leading seafood producers, Florida's seafood industry, both aquaculture and wild-caught fisheries, is diverse. Florida's aquaculture industry produces an estimated 1,500 species or varieties of fish, plants, mollusks, crustaceans, and reptiles. Furthermore, Florida's commercial fishers harvest more than 80 different kinds of wild-caught seafood. Fishing and quality seafood products are part of Florida's culture, past and present.

Aquatic Foods: The Main Pillar of a Healthy Diet

Aquatic foods include various fish, shellfish, and plants, like seaweed and sea cucumber, each with unique qualities and nutrients sourced from oceans and inland water bodies. These foods are vital sources of highly digestible protein and many nutrients such as iron, zinc, calcium, iodine, vitamins A, B12, D, and omega-3 fatty acids. The micro-nutrients in aquatic animals are highly bioavailable, which means you can absorb them efficiently.

The American Heart Association (AHA) recommends eating at least two servings (3.5 oz) of nonfried fatty fish, such as salmon or sardines, or adding 1/3 cup of flaked fish to your weekly diet. Similarly, the world-leading researchers

(EAT-Lancet Commission) in nutrition, health, and sustainability suggest that a healthy diet consists of 3.5 ounces of fish or shellfish* twice per week.

*Fish and crustacean shellfish (e.g., crab, lobster, and shrimp) are considered major food allergens by the United States Food and Drug Administration. Avoid consuming shellfish, fish, or products that contain them as ingredients if you have a known fish or shellfish allergy.

You can find some seafood recipes on the [FL Sea Grant websites](#).

In closing, nature continues to provide a wealth of resources to keep us healthy. Nature offers a comprehensive variety of products humans consume and places for outdoor recreational activities. We are beginning to understand the importance of retaining the sustainability of those natural resources for our present and future well-being.

References

- Allendorf, F. W., and L. L. Lundquist. 2003. "Introduction: Population Biology, Evolution, and Control of Invasive Species." *Conservation Biology* 17 (1): 24–30. <https://doi.org/10.1046/j.1523-1739.2003.02365.x>
- Bailey, R. L., K. P. West Jr., and R. E. Black. 2015. "The Epidemiology of Global Micronutrient Deficiencies." *Annals of Nutrition and Metabolism* 66 (Suppl. 2): 22–33. <https://doi.org/10.1159/000371618>
- Barré, T., M. Perignon, R. Gazan, F. Vieux, V. Micard, M.-J. Amiot, and N. Darmon. 2018. "Integrating Nutrient Bioavailability and Co-production Links When Identifying Sustainable Diets: How Low Should We Reduce Meat Consumption?" *PLoS ONE* 13 (2): e0191767. <https://doi.org/10.1371/journal.pone.0191767>
- Bratman, G. N., J. P. Hamilton, K. S. Hahn, G. C. Daily, and J. J. Gross. 2015. "Nature Experience Reduces Rumination and Subgenual Prefrontal Cortex Activation." *Proceedings of the National Academy of Sciences of the United States of America* 112 (28): 8567–8572. <https://doi.org/10.1073/pnas.1510459112>
- Burns, G. W. 2005. "Naturally Happy, Naturally Healthy: The Role of the Environment in Well-being." In *The Science of Well-Being*, edited by F. A. Huppert, N. Baylis, and B. Keverne, 405–434. New York: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198567523.003.0016>

- Church, S. P., L. B. Payne, S. Peel, and L. S. Prokopy. 2019. "Beyond Water Data: Benefits to Volunteers and to Local Water from a Citizen Science Program." *Journal of Environmental Planning and Management* 62 (2): 306–326. <https://doi.org/10.1080/09640568.2017.1415869>
- Cigliano, J. A., R. Meyer, H. L. Ballard, A. Freitag, T. B. Phillips, and A. Wasser. 2015. "Making Marine and Coastal Citizen Science Matter." *Ocean and Coastal Management* 115:77–87. <https://doi.org/10.1016/j.ocecoaman.2015.06.012>
- FAO and WHO. 2011. *Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption*. FAO Fisheries and Aquaculture Report No. 978. Rome.
- FAO and WHO. 2019. *Sustainable Healthy Diets: Guiding Principles*. Rome.
- FAO and WHO. 2021. *The Role of Aquatic Foods in Sustainable Healthy Diets: Guiding Principles*. Rome.
- Hallström, E., K. Bergman, K. Mifflin, R. Parker, P. Tyedmers, M. Troell, and F. Ziegler. 2019. "Combined Climate and Nutritional Performance of Seafoods." *Journal of Cleaner Production* 230:402–411. <https://doi.org/10.1016/j.jclepro.2019.04.229>
- Heres, B., C. Crowley, S. Barry, and H. Brockmann. "Using Citizen Science to Track Population Trends in the American Horseshoe Crab (*Limulus polyphemus*) in Florida." *Citizen Science: Theory and Practice* 6 (1): 19. <http://doi.org/10.5334/cstp.385>
- Izenstark, D., N. Ravindran, S. Rodriguez, and N. Devine. 2021. "The Affective and Conversational Benefits of a Walk in Nature among Mother-Daughter Dyads." *Applied Psychology: Health and Well-Being* 13 (2): 299–316. <https://doi.org/10.1111/aphw.12250>
- Larson, D. L., L. Phillips-Mao, G. Quiram, L. Sharpe, R. Stark, S. Sugita, and A. Weiler. 2011. "A Framework for Sustainable Invasive Species Management: Environmental, Social, and Economic Objectives." *Journal of Environmental Management* 92 (1): 14–22. <https://doi.org/10.1016/j.jenvman.2010.08.025>
- Li, Y., A. Pan, D. D. Wang, X. Liu, K. Dhana, O. H. Franco, S. Kaptoge, E. D. Angelantonio, M. Stampfer, W. C. Willett, and F. B. Hu. 2018. "Impact of Healthy Lifestyle Factors on Life Expectancies in the US Population." *Circulation* 138 (4): 345–55. <https://doi.org/10.1161/CIRCULATIONAHA.117.032047>
- Li, Y., J. Schoufour, D. D. Wang, K. Dhana, A. Pan, X. Liu, M. Song, G. Liu, H. J. Shin, Q. Sun, L. Al-Shaar, M. Wang, E. B. Rimm, E. Hertzmark, M. J. Stampfer, W. C. Willett, A. H. Franco, F. B. Hu. 2020. "Healthy Lifestyle and Life Expectancy Free of Cancer, Cardiovascular Disease, and Type 2 Diabetes: Prospective Cohort Study." *BMJ* 368:l6669. <https://doi.org/10.1136/bmj.l6669>
- Nichols, W. J. 2014. *Blue Mind, the Surprising Science That Shows How Being near, in, on, or under Water Can Make You Happier, Healthier, More Connected and Better at What You Do*. New York City: Little Brown Spark.
- Qizilbash, M. 1998. "The Concept of Well-Being." *Economics and Philosophy* 14 (1): 51–73. <https://doi.org/10.1017/S0266267100004934>
- US Department of Health and Human Services. 2018. *Physical Activity Guidelines for Americans*. 2nd edition. https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf
- White, M. P., I. Alcock, J. Grellier, B. W. Wheeler, T. Hartig, S. L. Warber, A. Bone, M. H. Depledge, and L. E. Fleming. 2019. "Spending at Least 120 Minutes a Week in Nature Is Associated with Good Health and Well-Being." *Sci Rep.* 9 (1): 7730. <https://doi.org/10.1038/s41598-019-44097-3>
- White, M. P., L. R. Elliot, M. Gascon, B. Roberts, and L. E. Fleming. 2020. "Blue Space, Health and Well-being: A Narrative Overview and Synthesis of Potential Benefits." *Environmental Research* 191:110169. <https://doi.org/10.1016/j.envres.2020.110169>
- Wyles, K. J., S. Pahl, M. Holland, and R. C. Thompson. 2017. "Can Beach Cleanups Do More Than Clean Up Litter? Comparing Beach Cleans to Other Coastal Activities." *Environment and Behavior* 49 (5): 509–535. <https://doi.org/10.1177/0013916516649412>

Table 1. Definitions, symptoms, and treatment of different heat-related illnesses.*

Heat Illnesses	Definition	Symptoms	Treatment
Heat Exhaustion	Heat exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating. Workers most prone to heat exhaustion are those that are elderly, have high blood pressure, or are working in a hot environment.	Headache Nausea Dizziness Weakness Irritability Thirst Heavy sweating Elevated body temperature Decreased urine output	Take the individual to a clinic or emergency room for medical evaluation and treatment. If medical care is unavailable, call 911. Stay with the individual until help arrives. Remove individual from the hot area and give liquids to drink. Remove unnecessary clothing, shoes, and socks. Cool the individual with cold compresses or have the individual wash head, face, and neck with cold water. Encourage frequent sips of cool water.
Heat Fainting	Fainting (syncope) episodes or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.	Fainting (short duration) Dizziness Light-headedness during prolonged standing or suddenly rising from a sitting or lying position	Sit or lie down in a cool place. Slowly drink water, clear juice, or a sports drink.
Heat Cramps	Usually affect individual who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture levels. Low levels in muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion.	Muscle cramps, pain, or spasms in the abdomen, arms, or legs	Drink water and have a snack and/or carbohydrate-electrolyte replacement liquid (e.g., sports drinks) every 15 to 20 minutes. Avoid salt tablets. Get medical help if the individual has heart problems, if they are on a low-sodium diet, or if cramps do not subside within 1 hour.
Heatstroke	The most serious heat-related illness. Occurs when the body can no longer control its temperature. Body temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.	Confusion, slurred speech Coma Hot, dry skin or extreme sweating Seizures Very high body temperature Can be fatal	Call 911 immediately and stay until emergency medical services arrive. Move the individual to a shaded, cool area and remove outer clothing. Cool the individual quickly with a cold water or ice bath if possible; wet the skin, place cold wet cloths on skin, or soak clothing with cool water. Circulate the air around the individual to speed cooling. Place cold wet cloths or ice on head, neck, armpits, and groin, or soak the clothing with cool water.

*Adapted from physical activity guidelines of the US Department of Health and Human Services (US HHS 2018).