Benefits of Nature

What has no side effects, is readily available, costs little to nothing, improves cognitive function, mental and emotional well-being, and other aspects of health? Nature Therapy, also known as spending time outside!

Walking in nature promotes total health, both physical and mental. An example of this can be seen by looking at the body’s relationship with stress after walking through an urban vs a green environment. In one study, groups of university students were taken on walks through a forest and city. Saliva samples taken from the participants before and after each of the walks demonstrated that the experience of walking through the forest reduced the participants’ levels of cortisol, the body’s stress hormone, to a greater extent than did the city walk. In another study, researchers looked at EEG readings of participants as they walked through a shopping district, a leafy green area, and then a busy commercial site. The brain activity recorded on this walk exhibited a reduction in tension and stress as the participants entered into the natural area. Increased levels of calm and relaxation were also indicated. By intentionally getting exposure to nature during their walk, the participants had lower levels of stress, both physical and mental, than they experienced by walking through more developed areas. In a Stanford-led study (2015), researchers investigated whether spending time in nature affects rumination. Repetitive focus on negative thoughts can exhibit anxiety, depression, and other issues, such as binge eating or post-traumatic stress. In the study, two groups of participants walked for 90 minutes, one in a grassland area near Stanford University, the other along a traffic-heavy four-lane roadway. Before and after, the researchers measured heart and respiration rates, performed brain scans and had participants fill out questionnaires. The researchers found little difference in physiological conditions, but significant changes in the brain. The participants who walked in the natural environment reported lower levels of rumination on obsessive, negative thoughts and also had reduced neural activity in the subgenual prefrontal cortex, where high levels of activity are associated with mental illness. Those who walked through an urban environment didn’t enjoy these benefits.

Walking in nature can have additional positive impacts on disposition and memory. In one
study, University of Michigan students were given a brief memory test, then divided into two groups. One group took a walk around an arboretum, and the other half took a walk down a city street. When the participants returned and did the test again, those who had walked among trees did almost 20% better than the first time. The participants who walked in the city did not consistently improve. In an earlier study published in Environment and Behavior, researchers worked to deplete participants' ability to focus. Then some took a walk in nature, some took a walk through the city, and the rest just relaxed. When they returned, the nature group scored the best on a proofreading task. The natural environment is "restorative," and one thing that a walk outside can restore is your waning attention.

Attention Deficit Hyperactivity Disorder (ADHD) is a common disorder among children. Those with ADHD generally have trouble staying focused, are easily distracted, exhibit hyperactivity, and have difficulty controlling impulses. In a study in the Journal of Attention Disorders (2008), researchers found that exposing children with ADHD to “green outdoor activities” reduced their ADHD symptoms. The benefits of exposure to nature can extend to anyone with inattention and impulsivity. The intentional effect of nature is so strong that doctors conclude that simple changes that involve green activities or settings can improve attention - Even as little as 20 minutes in a park.

Several of these studies mentioned are part of a growing body of research exploring the connection between nature and human well-being. We know walking is beneficial to the body and mind. Taking this exercise out into nature can augment these benefits. So, what are you waiting for? That urban park or nearby forest is just crying out for a visit from you!

Student Hikes
Last year, we organized monthly hikes for NMT students in an effort to improve student well-being (physical and mental health). This semester we plan to do the same (1 to 2 hikes each month). A week before the scheduled hike, signs will be posted in the gym and on the Tech master calendar. If you want to be added to the student hike email list, stop by my office to sign up. NMT staff: please encourage the students you work with to participate. NMT students: this is a great opportunity to visit new areas in and outside of Socorro, create a new healthy habit, and meet new people!

Walking Meditations
Last year, Dr. Siv Watkins in the Biology department, organized several 30 minute walking meditation sessions which took place on campus. Dr. Watkins and I are working together to organize these sessions once again. This is the vision Dr. Watkins has in mind, “Once a week, anyone who is interested can meet at a prearranged spot and we’ll all take a walk around campus. You can join in for the whole thing, or for a bit of it. You can come and chat with people, or you can be mindful and keep to
yourself, listen to music, etc. The idea is we all get to spend a bit of time **without emails or phones**, a bit of human company, a bit of sun, a bit of nature, a bit of fresh air. Only rule is: **no shop talk! Nothing about exams, nothing about homework.** Talk about science by all means, but nothing that is likely to stress anyone out. We'll schedule it for a different time each week. I'm hopeful that students and staff (not just Biology, everyone is invited) will participate if and when they can.” A schedule with the days and times will be sent out via email to all staff and students once a month.

**Benefits of Walking Meditation**
These meditation sessions are a way to help us feel more connected to the environment, they affords us a mental break from the daily grind, they help us establish a deeper connection between mind and body, helping us to embrace our body as it moves through space, they strengthen concentration through the continual process of attention drifting away and coming back to the task at hand and these sessions are a way to slow us down. Enjoy the opportunity to not have to reach a destination. Mindful walking is about taking your time, all the time you need. Remember, it isn’t about how fast you go, but how deeply you can feel.

**Recipe**
The apple trees are producing yummy fruit this year. I am so grateful to all my friends who like to share their crops with me. Socorro is still experiencing warm temperatures so I wanted to share a health fall salad that’ll make for an easy and tasty dinner this month.

**Fall Salad with Apples, Walnuts, and Stilton**

**Ingredients:**
- 1 tbsp minced shallot
- 1 ½ tbsp champagne or white wine vinegar
- 1 tbsp fresh lemon juice
- 1 tbsp honey
- 1 tsp Dijon mustard
- 1 dried apricot, finely chopped
- 3 tbsp extra-virgin olive oil
- ¼ tsp salt & fresh ground black pepper
- 4 cups variety salad mix
- 1 (5-oz) package baby arugula
- ¼ Stilton cheese (crumbled goat cheese for a milder flavor)
- ¼ cup walnuts, coarsely chopped and toasted
- 1 oz very thin slices prosciutto, torn
- 2 apples, cored and thinly sliced

**Directions:**
1) Combine first 6 ingredients in a blender. With blender on, slowly add oil; process until well combines. Stir in salt and pepper.
2) Combine lettuce and remaining ingredients in a large bowl; add apricot mixture, tossing gently to coat.