

Practicing Mindfulness for Health, Well Being and Cognitive Control

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Mindfulness is a simple yet challenging exercise for attending to our sensations of the present moment with a calm, accepting and non-judgemental attitude. Mindful breathing is an awareness exercise that produces a focused state of calmness. Both the process and goal of mindfulness is to be aware of and focused on our sensations in the present moment. Mindful breathing is a way to activate the “relaxation response” as a calming antidote when stressed. Although mindfulness happens spontaneously with everyone, it’s a skill that can be expertly developed with practice. Routine mindfulness practice changes the structure and function of both mind and body. Some of the health benefits of mindful breathing include stress reduction, pain reduction, cardiovascular health, lower blood pressure, improved sleep and neuroplasticity. The mental health benefits include an improved sense of well being, enhanced emotional regulation, impulse control, self awareness and reduced reactivity to stressors. Mindfulness also develops the capacity to pay attention and maintain cognitive control.

Mindfulness Practice will help build skills to:

- Calm and rest the mind and body
- Feel better, increase well being
- Stay healthier by removing stress from our bodies
- Reduce reactivity to stressors
- Keep your attention in the present situation for enhanced performance
- Become more self-aware, to recognize thoughts, emotions, feelings, habits
- Become more aware of others’ emotions, needs, intentions by attunement
- Reduce pain or become more accepting of discomfort
- Be more resilient emotionally, cognitively, physically, athletically
- Improve cognitive, emotional and behavioral control
- Maintain attention, patience, calmness, and improve impulse control
- Reduce irritability, anxiety, sadness, hostility and anger
- Improve memory through improved attention and decreased stress
- Increase performance: Academic, Athletic, Cognitive, and Social

This handout will describe 5 basic mindfulness practices:

- 1) Belly Breathing
- 2) Mindful Breathing
- 3) Body Scan
- 4) Mindful Walking
- 5) Mindfully Eating a Raisin

Overview: Life is Balancing.

Think of a typical single cell organism. To stay alive it must keep its structure and balance its metabolism. Maintaining structure requires an influx of energy and building blocks used to constantly repair, grow, and maintain both structure and function. The cell must solve the puzzle of how to balance food, water, salt, temperature, and energy use, etc. For a cell to survive, all of the puzzles have to be solved to maintain balance within life sustaining boundaries. In biology this balancing is called homeostasis, an essential feature for life to survive. Generally, for living systems, balancing is a matter of **sensing** what the situation is and **responding** to maintain the balance required. Homeostasis is a goal directed system and like a thermostat in your house, it’s an intelligent system. Our minds and bodies are built to help maintain the balance of our lives. Our minds are always solving puzzles about keeping our lives in balance. Our minds sense what is in and around us and build maps of what needs to be balanced. Our minds are routinely preparing and making responses to keep our lives balanced. This goal directed behavior is also known as resilience, the tendency or ability to bounce back to normal if there is a challenge or change in the environment.

What is Stress?

Stress results when you perceive that something is out of balance, different than your expectations or goals, and you think the situation may exceed your ability to deal effectively with the lack of balance. When this happens the stress-reactive areas of your brain become activated and the concentrations of stress hormones in the blood and brain increase. Stress chemicals prepare your body for action.

The Stress Response is a “Fight or Flight” Response. (Sympathetic Nervous System)

Our ancestors survived because when they experienced stress their bodies released chemicals that helped them marshal physical resources to fight or run fast in emergencies. For a short time the fight or flight response may help in running away from a saber toothed tiger, hunting a mastodon, or working hard to get to safety. However, in modern society, if we are chronically stressed, it *causes a variety of health problems*. Modern life is filled with psychological demands that typically create chronic stress. In our modern world, every day your mind is working to solve thousands of puzzles, even if you're not consciously thinking about them, your brain is busy puzzling. This can result in stress, but if we learn to notice our sensations, then we can become aware of our stress and acquire mindful skills for relaxation. We can regularly activate the relaxation response to create calm and balance in mind and body, actually building a more aware, less reactive mind and body.

The Relaxation Response is a learnable skill. (Parasympathetic Nervous System)

When we do mindful breathing we activate the relaxation response, which is our body's system for quieting and calming. The relaxation response is your body's way to calm or unwind “Fight or Flight” responses. We can learn how to become expert at activating the relaxation response by practicing simple yet challenging attention exercises called mindful breathing and body scanning.

Attention is like a muscle.

Our capacity to pay attention gets stronger with exercise and can become expertly developed. If we try to focus our attention on our sensations of breathing, very quickly our attention may move to some other activity. Why is it so difficult to keep your attention on your breathing? It's because the mind's job is to be vigilant to everything that needs to be done. Its job is to always be looking out for you, the people around you and the things around you, to help keep you safe and well cared for. So the mind tends to always be solving the puzzle about how to keep your life in balance. So what happens is that your attention tends to move away from sensing your breathing to anything and everything else that may need addressed. Your mind will keep track of things in the past, or anticipate the future, make judgements, and rehearse dialogues. That's ok, when you find your attention has moved away from your breathing, just notice in an accepting and non-judgemental way where your attention has gone and then gently bring your attention back to sensing your breathing.

Attention works like a Flashlight.

What we focus on gets lit up with our awareness when we focus our attention on it. The flashlight of attention can shine in different places: 1) inside your own body, 2) tuning in to another person, 3) attending to a thing, 4) to a memory in the past, 5) to planning for the future, or to making a judgement or solving a puzzle. When you practice maintaining your attention carefully, your brain actually builds new structure that strengthens your capacity to pay attention.

Sensation and Attention

Our senses are channels for information traveling *from both outside and inside* our bodies. At any one moment a large river of information is available, coming into us, but we only have a small tea cup size of attention to focus on any part of our sensations. We can't focus on everything our body is feeling at a given moment, nor focus on all of the puzzles we are trying to solve at one moment. To manage the situation, to take care of us, our minds jump focus from one place to the next, all day long. Our mind (and attention) can get exhausted from chronically jumping around. Mindful breathing can give your mind a rest. At the same time it also increases your skill for paying attention and brings about a relaxation response, clearing your body of stress chemicals. It will also build your awareness of what your mind is busy doing, even if you are just trying to pay attention to your breathing!

Exercise 1) Belly Breathing:

First breathe in by expanding your chest and rib cage, this is expanding the chest to inhale. Lets call this "chest" breathing, not "belly" breathing.

Belly breathing can be very relaxing. Take a stuffed animal to be your "breathing buddy," (actually any object will do) and lie flat with your back on the floor. Put your stuffed animal on your belly. Expand your belly (not your chest) and lift up your stuffed animal with your belly... notice that you inhaled when your breathing buddy went up.

Now lower your breathing buddy as it sits on your belly and notice that you exhaled... the air went out of your lungs. This is belly breathing. It works best to relax if you aren't moving your chest much and are breathing only as much as your body needs. It also can help bring your awareness to your belly.

You can practice inhaling for a count of 4 and exhaling for a count of 4. As your body calms and relaxes it will need less oxygen and you will be able to count longer on the exhales.

As you relax more, try breathing more slowly, exhaling for a count of 8 or more and inhaling for a count of 4. This practice of exhaling for twice as many counts as when inhaling is a way to activate the parasympathetic system. The counts don't have to be exact seconds, they're just counts. The quieter your body and mind, the more relaxed, the less oxygen is needed... the longer the counts.

Exercise 2) Mindful Breathing:

Mindful breathing is an exercise for focusing your attention. Like exercising a muscle, focusing your attention gets stronger each time you practice. So it will be more helpful for you the more you practice. A great routine is to practice every morning and every night.

Mindful breathing is a skill. The more you practice the better you get at it. Mindful breathing is just the ability to sit quietly, with eyes closed, resting, not moving and keeping your awareness, your mind, your attention on your breathing. It sounds easy. But if you try it, you will soon find that your mind will probably quickly wander to thinking about something else. When it does, without judgment, acceptingly recognize where your attention goes, and then gently bring it back to being aware of the sensations of your breathing. Every time your mind wanders, gently bring your attention back to your breathing. Each time you gently bring it back, your attention skill is getting stronger!

Sit comfortably upright in a quiet place w/o distractions, eyes closed, feet flat on the floor.

Attend to the sensations of breathing through your nose while belly breathing.

If your mind wanders, notice where it goes, and label what your mind was doing,

e.g., "puzzling," "planning," "recalling," "rehearsing dialogue," "judging," "itching," etc.

Recognize or be aware of where your attention went to, notice, accept and then without judgment,

Gently return your attention to the sensation of breathing.

All this happens while sitting quietly, not moving and not thinking about moving other than breathing.

Counting If you have a lot of difficulty keeping your attention on your breath, then you may want to try counting your breaths, each complete cycle, (in) "1"/(out) "1", (in) "2" /(out) "2", (in) "3"/ (out) "3"... This works wonders to help focus your mind on the sensations of breathing.

Find the Beginning and End of each breath In/Out Watch to see: Where does your in-breath begin & end? Where does your out-breath begin/end? Maybe using this approach can better help maintain your attention on your breathing? Is it easier to use this technique? Does it help?

Doubling Try breathing in to the count of four and exhaling to the count of 8 or more. Exhaling tends to activate the parasympathetic system whereas inhaling tends to activate the sympathetic system.

Exercise 3) Body Scan:

Body scan is an “eyes closed” exercise that can be done either sitting or standing, but it is much more relaxing to do the body scan exercise sitting in a relaxed but upright sitting posture. The general idea of body scan is to slowly, carefully, move your attention through your body paying attention to what sensations you experience that are happening in each body part as you systematically move your attention through your body.

First settle your attention toward your internal sensations and do a few moments of mindful breathing and then begin your body scan at your feet and slowly, over the course of a few minutes, move your attention quietly and calmly through your whole body, place by place, to arrive at the top of your head. When completed, take a few moments to do some mindful breathing and then sit quietly opening your eyes and being aware of your present moment, where you are and how you are feeling right now.

Exercise 4) Mindful Walking:

Mindful Walking is a little bit similar to the sitting body scan exercise but it is done first standing quietly with eyes closed, sensing what it feels like to stand in a well balanced and quiet way. After a few moments of mindful breathing, perhaps 5 cycles of in/out breathing, open your eyes and very slowly, walk in a circle of 10 to 30 steps, feeling the pressure of your feet on the floor and how your bones support your weight. You could also walk several paces in one direction and turn around. Completely attend to the sensations of your body in the moment as you are walking.

Feel the force of the ground lifting your feet and attend carefully to the sensations of your body in motion. Notice the sensations of balancing your body in motion. Observe the sense of your muscles flexing and relaxing and the weight of your limbs flowing around the swinging gate of your torso. How much can you relax your shoulders and other muscle groups while walking? After a minute of walking return to a standing position with eyes closed and do a few moments of mindful breathing. Slowly open your eyes and become aware of your surroundings.

Exercise 5) Eating a Raisin:

Place a raisin (or any natural raw food in your hand in front of you). Taking your time, use all of your five senses observing the raisin. Explore the raisin with your senses. Look at its color. Feel its texture. What does its weight feel like in your hand? What does it smell like? Without eating it, take a little taste. Is your mouth salivating? *Now notice what you are feeling inside yourself.* Do you have the urge to eat the raisin? What does that urge feel like? Slowly and carefully eat the raisin with complete focus of attention... mindfully notice what the sensations of texture and taste all feel like in this process of eating mindfully. What are you feeling?

It Only Takes a Moment...

We can spend much of lives thinking about the map of our lives, puzzling about the future or the past or judging or rehearsing conversations, rather than experiencing our present moments. Emersing ourselves in theses maps of our lives can helpful, but if we are always oriented in our mental map of our life or a situation, it can be limiting. Tuning into the present moment experience of our sensations can be liberating.

It only takes a moment to remember to feel your breath or your body's posture and your surroundings. Once you remember to be present here in this moment, bring your attention to relaxing your muscle tension in the next breath. With your second breath you may find yourself smiling and mindfully present, relaxed in this moment.