The Mind Spa

Welcome to the Mind Spa at Portland State University. The Mind Spa is designed to help students improve their physical and emotional health. The Mind Spa offers biofeedback, light therapy, a massage chair, and a yoga/meditation space.
Mind Spa Light Settings

There are 5 different light settings in the Mind Spa.

**Setting 1:** Turns on all of the overhead and ambient track lighting in the Mind Spa. The alcove will also be lit with a warm glow (it is not set for light therapy). This setting provides an overall clean and crisp light experience.

**Setting 2:** Activates the light therapy lamps, and should be used during light therapy sessions. The ambient track lighting remains on, and the overhead lighting is dimmed to provide a calm and relaxing atmosphere during your light therapy session.

**Setting 3:** Dims the overhead and ambient track lighting in the Mind Spa. The lamps in the light therapy area are deactivated.

**Setting 4:** Overhead and ambient track lighting, as well as the alcove light, are set to a warm glow (the alcove light is not set for light therapy). This setting can be used while meditating, using the massage chair, and for relaxation purposes.

**Setting 5:** Turns off all lights in the Mind Spa.

Biofeedback Therapy

**Key Terms**

*Cortisol:* a hormone in the body that increases when an individual is under mental and/or physical stress.

*Coherence:* when bodily systems (heart rate, breathing rate) are synchronized and functioning at their optimal level.

*Coherence Training:* practicing biofeedback skills.
**Coherence Ratio:** the amount of time spent in low, medium or high coherence. The emWave2 software tracks coherence ratios during each biofeedback session.

**Mindful:** maintaining a moment-by-moment awareness of feelings, emotions, bodily sensations and environment.

**Parasympathetic:** a branch of the autonomic nervous system that is activated when the body is relaxed and calm.

**Stress Response:** changes the body experiences (increased heart and breathing rate) when a threatening situation is encountered.

**Sympathetic:** a branch of the autonomic nervous system that is activated during stressful or emergency situations.

Biofeedback is a type of complementary and alternative medicine called mind-body therapy. It is designed to enable you to use your thoughts and will to control your body, allowing for better control of your stress response. For example, when you are stressed your heart and breathing rate increase, and stress hormones such as cortisol spike. This triggers the fight or flight response, increasing your physiological arousal. During a biofeedback session, heart rate and breath rate are measured and techniques such as deep breathing, visualization, meditation are taught. This “feedback” will help you better recognize, manage, and reduce the mental and physiological symptoms that stress triggers.

There are two biofeedback software programs available in the Mind Spa: Wild Devine and emWave2. These programs will teach how to make a harp play, juggle balls with your laughter, meditate to open doors, all with the use of your mind and breathing. When you have mastered these techniques, you can use these new abilities to relax, stay focused and centered in your everyday life.
EmWave2 Biofeedback Software

The emWave2 is a biofeedback training system. It measures heart rate rhythms and confirms when there is coherence between the two branches of your autonomic nervous systems (sympathetic, parasympathetic). Coherence is an optimal state of balance between one’s physiological and psychological processes. When achieved, coherence promotes optimal functioning of physiological (respiratory, circulatory, digestive systems) psychological (mental clarity) processes.

The emWave2 offers 6 games for coherence training. Each game focuses on optimizing your breath and heart rate to promote coherence. At the end of the game, you can review your heart rhythm data and see your coherence ratios.

Beginning a Biofeedback Session

1. Make sure the emWave2 handheld device is plugged into the USB port of the computer.
2. Hold the power button for 2 seconds to turn on the emWave2.
   - A tone will sound when it is turned on
3. Attach the Ear sensor to earlobe and make sure it is securely connected.
4. Click the Start button on the bottom toolbar.
5. Place thumb on sensor button.
6. Your session will begin automatically once your heart rate is detected by the EmWave2.
7. The Heart Rate action strip will display a blue light that rises and falls acting as your breathing pacer.
   - Breathe in as the light rises
   - Breathe out as the light falls
     - If the breath pace is too fast or slow, breathe at a comfortable rate. The pacer will adjust to your breathing rhythm.
8. To stop your session press the stop button on the bottom toolbar.
Games

1. Select a game of your choice, click the Start button to begin.
   - You may stop your session by clicking the Stop button. You can then review your heart rhythm data.

Balloon Game

Watch a hot air balloon rise, travel, and take you on a ride. The higher your coherence score during the game, the faster your hot air balloon will travel. When your coherence level is low, the hot air balloon will travel lower and more slowly. The objective of the game is to travel as far as possible in the allotted time. This game gives you visual feedback to help with coherence training. You can change your challenge level (Low, Medium, High, or Highest) as you improve your coherence ratios. This game is appropriate for all skill levels.

Coherence Coach

The Coherence Coach® teaches you how to achieve coherence between your breath and heart rates. This activity is great for beginners.

Garden Game

As you maintain coherence, you will watch a black and white garden fill in with color and running water. The garden will become more and more colorful as you enter the medium or high coherence levels. The garden game will end after three minutes. This is a fun and visually pleasing game. This game is appropriate for all skill levels.
**Rainbow Game**

As you maintain medium or high coherence, you will watch a rainbow appear in the upper left corner of the screen. The rainbow will cascade down and across the screen until it reaches the pot of gold, which will fill with gold coins as you maintain your coherence levels. This game lasts five minutes and is a fun, interactive game for all skill levels.

**Visualizers**

The Emotion Visualizers are graphic displays that change as your coherence levels fluctuate.

**Light Therapy**

Light therapy uses a light box to expose individuals to light that mimics the sun's natural light. It works by exposing your retinas to indirect light, which causes an increase in the hormones that are responsible for bodily processes such as metabolism, response to stress, inflammation, and immunity (Golden, 2005). Light therapy is used to treat seasonal affective disorder (SAD), depressive symptoms, and circadian (sleep) rhythm disorders (Golden, 2005; Christian, 2008). Individuals who have received light therapy treatment report a decrease in SAD, depressive symptoms, and reported being able to fall asleep more quickly, and wake feeling refreshed (Center for Light Therapy, n.d).

The light therapy alcove in the Mind Spa uses 3,500 degree Kelvin lamps that emit white light. These lamps are emitting 10,000 lux (unit of illumination) of white light.
when **Setting 2** is selected in the Mind Spa. 10,000 lux is equivalent to the light emitted by the sun 1-2 hours after sunrise. The recommended exposure time for light of this intensity is to start at 15 minutes and build up to 30 minutes, several times a week (Center for Light Therapy, n.d). Light therapy has been shown to be the most beneficial when experienced in the morning hours as exposure later in the day can cause insomnia. The light therapy area uses a screen that has UV filtering properties to decrease the UV exposure during the user’s light therapy session.

**Procedures for the Light Therapy Area**

1. Select light **Setting 2**.

2. Remove your shoes, and position yourself in the light therapy alcove. The lights should be indirectly in your view, and you should not sit directly facing the lights. This allows the light to be detected by your retinas, while not exposing your eyes to the direct light which can cause eye strain and headache.

3. Set a timer for the desired time you wish to spend in the light therapy area.
   - **The recommended time for your first visit is 15 minutes**
   - In order to receive therapeutic benefits, it is important to keep your eyes open so that light is able to reach your retina. Once you begin your session, feel free to read, study, or listen to music.

4. After your light therapy session is complete, you may choose a different light setting that you find pleasant while you enjoy the other aspects of the Mind Spa.
**Risks:** It is important that individuals utilizing the light therapy area do not have any preexisting retinal, or eye disease (Bright Light Therapy, n.d). Some individuals have reported experiencing headache, nausea, eyestrain, fatigue, and insomnia after light therapy sessions (Terman & Terman, 1999). In a small percentage of individuals diagnosed with Bipolar disorder light therapy has triggered symptoms of mania and hypomania (Terman & Terman, 2005). Due to the potential risks, please consult with your physician prior to using light therapy.

**Massage Chair uAstro™2**

The uAstro™2 is a state of the art massage chair that offers 8 automatic massage programs to help you enjoy the benefits of a relaxing and invigorating massage, as well as 4 manual massage programs that allow you to customize your massage experience. The uAstro™2 helps relieve muscle fatigue, strain and tension, improve blood circulation, and relieve stress.
Procedures for uAstro™2

1. Remove your shoes

2. Sit in the uAstro™2

3. Adjust the neck strap so it is comfortable, and supports your neck and head during massage session.

4. Turn on the Power Button on the controller

5. Select an Automatic, Localized, or Manual Massage Program (see pages 17 & 18 for options)

6. 15 minutes is the recommended time for each massage session, and is the default setting for all the programs. Do not massage any particular areas of the body for more than 5 minutes.

7. You may adjust the position of the uAstro™2, the intensity and strength of your massage, as well as the positions of the massage rollers during an Automatic Massage program.

8. During a Localized Massage Program you may select and combine different aspects of the program to personalize your massage session.

9. Once the massage session has ended press the Seat Return button. This will reset the uAstro™2 to its default position.

10. Once the massage chair is back in the default setting press the Power Button to turn off the uAstro™2.
**Automatic Massage Programs**

You may select any automatic program that best suits your needs by pressing the respective program button on the controller.

**Full-Body:** A comprehensive full body massage with air bags and roller system for deep relaxation.

**Full Air:** Recommended for those who prefer a softer full-body massage using air bags.

**Relax:** Fully relaxes your body for a good rest, and is great for relieving stress.

**Energize:** Awakens and energizes your muscles to prepare them for the day ahead.

**Swedish:** Harder kneading and tapping massage.

**Rejuvenate:** Gentler kneading and tapping massage.

**Stretch:** Consists primarily of movement and air pressure to stretch the body.

**Quick:** Provides a quick 5 minute massage to refresh the entire body.

**Zero Gravity Option:** This setting reclines the massage chair and raises your legs to help decompress your spine, and decrease your muscle tension (Ozzelo, 2012).
Localized Area Program

You may select and combine your favorite massage areas by pressing the respective localized massage buttons, customizing your massage to target areas of stress and tension. These settings can be found at the bottom of the controller.

Neck & Shoulder

Back and Lumbar

Arm, Seat Lumbar (air)

Foot Air & Roller

You may also select and combine your favorite massage type, speed, and intensity by pressing the respective manual buttons on the controller.

Kneading

Roller

Rolling

Tapping

Adjusting Automatic Program, Localized Area Program or Manual Program Settings

Timer Button: The default time for the uAstro™2 is 15 minutes. You may change the timer from a selection of 5, 10, 15, 20, 25, and 30 minutes.
**Heat Button:** This setting is off by default, but can be used during any automatic program, localized area program or manual program.

**Air Intensity Button:** The air massage intensity starts off at default level 3. Each time you press the button the intensity will increase by 1 level.

**Massage Strength Button:** The strength of the massage starts at level 3 by default. Each time you press the button the strength will increase by 1 level. The maximum level is 5. (Massage strength starts at level 2 for Swedish program and level 1 for Rejuvenate program. If the program is changed the massage strength is reset to its default setting).

**Vibration Button:** Vibration mode can be switched on or off while any of the programs are running. You may select the Seat and/or Hand button on the remote to switch on or off the vibration.

**Focus Button:** This function can only be activated during the Kneading and Tapping massage mode.

**Roller Width Button:** This function can only be activated during the Tapping and Rolling massage mode. By default the roller width is set to ‘Mid’. You may change from Narrow, Mid, and Wide roller widths.

**Changing the Massage Program**
You may change from one massage program to another at any time without waiting for the program to be complete. Selecting a different program will cause the rollers to return to their storage position and begin the newly selected program. Changing between programs will not reset the timer.
**Stopping a Massage Session**

Press the Power Button to stop all massage chair functions. The rollers will move back to the storage position and all the air bags will deflate, ending the massage session. The Power Button will change to a yellow color and go into standby mode.

**Pausing a Massage Session**

To pause a massage, press the Pause Button on the controller. This will temporarily stop all operations. Press the Pause Button again to resume the massage session.

**Meditation & Yoga Area**

The Mind Spa offers a meditation and yoga corner to help you relax and reduce your stress. Meditation is a great way to help cultivate inner peace and ease your mind. There are many different types of meditation that you can practice in order to increase relaxation and help manage your stress.

**Guided Imagery and Visualization**

Guided imagery and visualization are meditation and relaxation techniques where you imagine places or situations that calm you and promote relaxation. This form of meditation is often accompanied by an audio recording and is a guided type of mediation (Bair, 2010). These visualization techniques are accompanied by deep and calming breathing which puts your mind and body in a state of relaxation. Guided imagery and visualization are great meditation techniques for beginners who are just starting to practice meditation.
**Mindfulness Meditation**

Mindfulness meditation is another technique that emphasizes the importance of awareness and focusing on the present moment. Mindfulness meditation comes from the Buddhist tradition, and is a popular form of meditation all over the world (Bair, 2010). Mindfulness meditation emphasizes the importance of the breath and letting go of judging thoughts as you meditate.

**To Begin a Meditation Session**

- Take a seat on the floor; you may use the meditation pillow if that is comfortable.
- Make sure your posture is strong, but is not forced or rigid. Sitting upright helps your energy flow as you meditate.
- Rest your hands on your thighs.
- Keep your eyes slightly open. It is best to set your gaze about 4-6 feet in front of you (Wegela, 2010).
- Take a few moments to become aware of your senses and your environment.
- If your attention begins to wander, gently bring it back to your body and the present moment.
  - *Your mind will wander and this is normal. Just notice this and, without judgment, bring your awareness back to your environment and the present moment (Wegela, 2010).*
- Now begin to notice your breath and breathe at a comfortable pace.
- Sit for a few minutes while being aware of your posture, breathing, surroundings and thoughts. When you feel your mind begin to wander, without judgment, gently bringing yourself back to the present moment. Turn your attention to the
rhythm of your breath, focusing on how the breath feels moving in and out of your nose.

- As you meditate you will notice certain thoughts and feelings that may arise. Keep your observations neutral and try not to judge the thoughts and emotions that may arise.

Begin your meditation practice for 10 minutes every day and gradually increase your sessions as you deepen your meditation practice.

**Yoga**

Yoga is an active form of meditation that connects your mind and body to bring you to a balanced and relaxed state (Carrico, 2007). Yoga emphasizes your posture, balance, and breathing to increase relaxation and flexibility.

**Sun Salutation (Surya Namaskar)** The Sun Salutation is a traditional yoga practice that focuses on movement and balance (Yee, 2004). There are 12 different poses that are performed together that help connect your mind and body and bring you back to your center. These poses consists on forward bending, back bending, and centering poses that increase your circulation and can help combat stress in your everyday life (Yee, 2004).
To Begin Sun Salutation:

- Roll out the yoga mat
- Stand in Mountain Pose to begin sequence (see diagram below)
- Breathe
- Move through the poses (see diagram below) with intention, holding each pose for 5 to 10 breathes or however long feels comfortable to you
- Listen to your body and modify poses if you feel discomfort or pain
- Complete two sequences of Sun Salutation, one sequence for the left side of the body, and one sequence for the right side (Toback)
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<tbody>
<tr>
<td>1. Mountain</td>
<td>2. Hands up</td>
<td>3. Head to knees</td>
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<tr>
<td><img src="image" alt="Mountain" /></td>
<td><img src="image" alt="Hands up" /></td>
<td><img src="image" alt="Head to knees" /></td>
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<tr>
<td>Begin by standing in Mountain pose, feet about hip width apart, hands either by your sides or in prayer position. Take several deep breaths.</td>
<td>On your next inhale, in one sweeping movement, raise your arms up overhead and gently arch back as far as feels comfortable and safe.</td>
<td>As you exhale, bend forward, bending the knees if necessary, and bring your hands to rest beside your feet.</td>
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<tr>
<td><img src="image" alt="Lunge" /></td>
<td><img src="image" alt="Plank" /></td>
<td><img src="image" alt="Stick" /></td>
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<td>Inhale and step the right leg back</td>
<td>Exhale and step the left leg back into plank position. Hold the position and inhale.</td>
<td>Exhale and lower yourself as if coming down from a push up. Only your hands and feet should touch the floor.</td>
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<tr>
<td><img src="image" alt="Upward Dog" /></td>
<td><img src="image" alt="Downward Dog" /></td>
<td><img src="image" alt="Lunge" /></td>
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<td>Inhale and stretch forward and up, bending at the waist. Use your arms to lift your torso, but only bend back as far as feels comfortable and safe. Lift your legs up so that only the tops of your feet and hands touch the floor. It's okay to keep your arms bent at the elbow.</td>
<td>Exhale, lift from the hips and push back and up.</td>
<td>Inhale and step the right foot forward.</td>
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<td><img src="image" alt="Head to knees" /></td>
<td><img src="image" alt="Hands up" /></td>
<td><img src="image" alt="Mountain" /></td>
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<td>Exhale, bring the left foot forward and step into head-to-knee position.</td>
<td>Inhale and rise slowly while keeping arms extended.</td>
<td>Exhale, and in a slow, sweeping motion, lower your arms to the sides. End by bringing your hands up into prayer position. Repeat the sequence, stepping with the left leg.</td>
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(“Sun Salutation”)
References

**Biofeedback**


**Light Therapy**


Center for Light Treatment and Biological Rhythms. (n.d.). Light Treatment Center.


Massage


Yoga


