Stress Reduction Module #7:

Improved Stress Resilience through Diet, Exercise, and Sleep

### Stakeholder Sign Off

| **Name** | **Role\*** | **Initials** | **Date** |
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### Version Update Management

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By the end of this module, you should have a clear understanding of:

* How stress affects diet, exercise, and sleep.
* The role of key nutrients, physical activity, and good sleep hygiene in building stress resilience.
* Strategies to transform diet, exercise and sleep from stress triggers to stress relievers.

Welcome to Module 7! This week, we’re focusing on how three key lifestyle factors—diet, exercise, and sleep—can either increase or reduce your stress levels. By understanding how stress interacts with these areas, you’ll learn how to shift your habits to support your well-being, making you more resilient to stress.

### The Relationship Between Stress and Diet

We’ve all experienced reaching for comfort foods after a stressful day or skipping meals because we’re too busy or overwhelmed. But what you eat (or don’t eat) can have a big impact on your stress levels.

**Negative Effects of Stress on Diet:**

* **Emotional eating**: Stress can lead to cravings for comfort foods that provide short-term relief but increase long-term stress.
* **Cortisol-driven cravings**: High cortisol can trigger cravings for sugary or fatty foods, which only add stress.
* **Skipping meals**: Stress can cause loss of appetite or lead to forgetting to eat, and you need to fuel your mind and body to manage stress.
* **Caffeine and alcohol**: While that extra cup of coffee or glass of wine might seem helpful, both caffeine and alcohol can make stress worse. Use one of your tools in your toolbox instead.

**[EXPANDED OPTION] The Relationship Between Stress and Diet**

* **Emotional eating:** Comfort foods often spike blood sugar, followed by a crash, leaving you tired and irritable.
* **Cortisol-driven cravings**: High cortisol triggers cravings for sugary or fatty foods, as your brain seeks quick energy to handle stress. Unfortunately, these foods contribute to weight gain and make stress harder to manage over time.
* **Skipping meals:** Missing meals typically leads to feeling fatigued or irritable and contributing to added stress.
* **Digestive Issues:** Stress affects digestion, increasing issues like acid reflux, irritable bowel syndrome (IBS), and bloating. Stress diverts energy away from digestion, causing discomfort.
* **Caffeine and alcohol:** Caffeine stimulates adrenaline release, which can increase anxiety, while alcohol disrupts your sleep cycle and raises stress over time.

**Identifying Stress in Your Eating Patterns:**

* Do you crave unhealthy foods when stressed? Are you truly hungry, or just stressed?
* Do you skip meals or eat irregularly, leading to energy crashes and irritability?
* Do you use caffeine or alcohol to cope?
* Have you noticed unusual eating patterns resulting in rapid weight changes (gain or loss)?

If you notice these patterns, that’s stress talking!

**Adopting Stress-Reducing Dietary Habits:**

* **Plan ahead**: Preparing meals in advance helps avoid unhealthy last-minute food choices. Pack snacks like nuts, yogurt, or fruit to keep your energy stable throughout the day.
* **Mindful eating**: Slow down, savor each bite, and tune into your hunger and fullness cues. This reduces emotional eating triggered by stress.
* **Create a Routine**: Set meal times and stick to them. Skipping meals leads to low blood sugar, which can worsen stress and anxiety.

**Here’s an example from [ ] at Kuara:** ~~Try packing a handful of almonds and an apple for a mid-afternoon snack. These will keep your energy stable without causing a sugar crash~~.

**[EXPANDED OPTION] Stress-Fighting Foods and Nutrients:**

* **Magnesium**: Helps regulate the nervous system and promotes relaxation. Found in leafy greens (like spinach), nuts, seeds, and whole grains.  
  *This is one of the supplements already included in the program, and by now, you've been using it for a few weeks to help support stress resilience.*
* **Omega-3s**: Found in fatty fish like salmon, it reduces inflammation and regulates cortisol, supporting brain health.   
  *Omega-3 supplements have also been part of the regimen you've been following, contributing to a reduction in stress-related inflammation.*
* **Vitamin C and B vitamins**: Citrus fruits and whole grains help lower cortisol and blood pressure, while supporting energy production.  
  *Your B-vitamin supplements have played an important role in managing stress and supporting your nervous system over the past few weeks.*
* **Antioxidants**: Dark chocolate (in moderation!) is packed with antioxidants and flavonoids, that reduce stress and inflammation and support brain health, mood, and well-being.
* **Hydration:** Dehydration can raise cortisol and exacerbate stress. Drinking enough water helps improve focus and reduce fatigue. How much? Your urine should be the color of light lemon juice.

### Exercise: A Natural Stress Reliever

For some, stress can lead to fatigue and avoidance of exercise; for others, it can lead to over-exercising. Finding a balance is key to using exercise as a tool to relieve stress and build resilience.

**Positive Effects of Exercise on Stress:**

* **Endorphins**: Physical activity releases endorphins— “feel-good” chemicals that improve mood and reduce pain. It also increases serotonin and dopamine, which help combat depression and anxiety.
* **Better sleep**: Regular physical activity improves sleep quality, which in turn reduces stress.
* **Energy boost**: Even a short walk can help clear your mind and lift your energy.

**[EXPANDED OPTION] Negative Effects of Stress on Exercise:**

* **Fatigue**: When you’re stressed, your body diverts energy to deal with the stressor. This can leave you feeling too tired to work out, making stress worse in the long term.
* **Muscle tension**: Stress often causes physical tension in the body, particularly in the neck, shoulders, and back. This can make exercising feel uncomfortable or painful. This may mean you need to try a different type of exercise like yoga or Tai Chi.
* **Over-exercising**: For some people, exercise becomes a way to “burn off” stress. However, pushing your body too hard can increase stress hormones, fatigue, and even lead to injury. Sufficient recovery is key.

**Exercise Strategies to Manage Stress:**

* **Short bursts of movement**: Research shows that even 5–10 minutes of light physical activity, like stretching or walking, can reduce stress immediately. Try taking consistent, brief movement breaks throughout the day. Learn more [here](https://www.cuimc.columbia.edu/news/columbia-researcher-and-npr-ask-listeners-walk-walk-real-world-study).
* **Find what works for you**: Whether it’s walking, jogging, swimming, yoga, dancing, or something else– find an activity that fits your schedule and that you enjoy.
* **Mindful Movement**: Incorporate mindfulness-based exercises like yoga or Tai Chi into your routine. These practices combine movement with breathwork and meditation, reducing stress in both body and mind. These multi-taskers can be especially important when you are short on time.

**Here’s an example from Heather at Kuara:** *“Whenever I get up from my desk during the day– to use the bathroom or get a glass of water– I do 5 to 10 pushups. It helps me feel less sluggish and has the added bonus of improving the number of pushups I can do!”*

### The Connection Between Stress and Sleep

Stress and sleep are closely connected. When you’re stressed, your mind and body struggle to relax, which can lead to insomnia or poor sleep quality. Conversely, poor sleep can make stress worse– let’s look at how to break the cycle.

**Negative Effects of Stress on Sleep:**

* **Insomnia**: Stress increases cortisol and adrenaline, resulting in a heightened state of alertness. When your mind is racing, sleep becomes difficult.
* **Unrestful Sleep**: Even with the recommended 7-9 hours, stress can cause poor-quality sleep, leaving you tired and irritable the next day.
* **Oversleeping**: For some, stress leads them to sleep excessively, to avoid facing stressors, but this can lead to feeling sluggish and more stressed.

**Identifying Stress in Your Sleep Patterns:**

* Do you have trouble falling or staying asleep?
* Are you waking up feeling tired or anxious?
* Do you find yourself sleeping more than usual?

*“The best bridge between despair and hope is a good night’s sleep.”*

*– Mathew Walker*

**Strategies for Restful Sleep When Stressed:**

* **Create a calming bedtime routine**: Dim the lights, read a book, or do some light stretching before bed to signal to your body that it’s time to relax.
* **Limit screen time**: Avoid screens and stimulating activities at least an hour before bed. The blue light from screens interferes with your body’s natural production of melatonin, the sleep hormone.
* **Incorporate calming foods**: Try a cup of chamomile tea or a small handful of almonds to ease you into sleep.
* **Mindfulness & Relaxation Techniques**: Try deep breathing exercises, progressive muscle relaxation, or guided meditation to calm your racing thoughts before bed.

**Here’s an example from [ ] at Kuara:**

### Building Long-Term Resilience

Your diet, exercise, and sleep habits don’t exist in isolation– they’re interconnected and work together to either promote or reduce stress. Improving one area can positively affect the others, creating a cycle of resilience.

**Remember**: Building stress resilience is a gradual process. With each small step, you’re getting closer to managing stress and improving your overall well-being.

## Module #7: Activities and Exercises

### **Activity: Mindful Eating**

**Objective:** Practice mindful eating as a stress-reduction technique.

**Instructions:**

* Choose one meal or snack this week and dedicate time to eating mindfully. Follow these steps:
  1. Pause before eating: Take a few deep breaths to relax your mind and body.
  2. Savor the food: Notice the colors, textures, and aromas before taking a bite. Take small bites and chew slowly.
  3. Pay attention: Focus on the flavors and sensations in your mouth. Are you still feeling hungry, or are you satisfied?
* After you finish, reflect on the experience. Did eating mindfully change the way you felt about the food or your level of stress?

### **Activity: Sleep Environment Quiz**

**Objective:** Evaluate your sleep environment to support restorative sleep and stress management.

**Instructions:**

This quiz will help you evaluate whether your sleep environment is supporting or hurting the quality and duration of your sleep– and in turn, affecting your stress levels. A “Yes” answer indicates a more sleep-promoting environment, while a “No” may suggest areas for improvement.

1. Is your bedroom free from excessive noise at night? **Y/N**
2. Do you keep your bedroom cool and comfortable (between 60-67°F)? **Y/N**
3. Is your bed and mattress comfortable and supportive? **Y/N**
4. Do you block out light while you sleep (with curtains/blinds or an eye mask)? **Y/N**
5. Is your bedroom free from electronic devices that emit light (including ambient light e.g., power on/off light of phones, TVs, or computers)? **Y/N**
6. Do you limit your screen time at least one hour before bed?
7. Is your bedroom a soothing, pleasing place? **Y/N**
8. Do you maintain a consistent bedtime and wake-up routine, on average? **Y/N**
9. Do you use calming sounds (e.g., white noise) to promote a restful environment? **Y/N**
10. If you have trouble sleeping when its noisy, do you wear earplugs? **Y/N**
11. Is your bedroom free from distractions that might interrupt your sleep? (e.g., pets, outside noises, electronic devices)? **Y/N**
12. Do you have blue light filters on all your electronic devices?
13. Do you save your bed for sleeping and sex only? (i.e. do you engage in other activities such as watching tv, ‘hanging out,’ reading etc. in bed?) **Y/N**
14. Do you get exposure to natural light in the mornings after you wake up (preferably before 10 am), either by going outside or by being near a window? **Y/N**

### **Activity: Progressive Muscle Relaxation (PMR)**

**Objective:** PMR is a technique that helps reduce stress by systematically tensing and relaxing your muscle groups. By learning to release physical tension, you can also alleviate mental stress. The goal is to become more aware of where you hold tension in your body and learn how to consciously relax those areas.

**Instructions:**

* Preparation: Find a quiet space where you won’t be disturbed. Sit or lie down in a comfortable position. Take a few deep breaths to center yourself before you begin.
* Step-by-Step Guide:
  1. Start with your feet:
     + Inhale deeply and tense the muscles in your feet for 5–10 seconds. Focus on the tension.
     + Exhale and quickly release, noticing the difference as the muscles relax.
  2. Move to your legs:
     + Tense the muscles in your calves and thighs, hold for 5–10 seconds, then release.
     + Pay attention to how relaxation feels.
  3. Work through your body:
     + Move upwards through your body—tense and relax muscle groups in your abdomen, chest, hands, arms, shoulders, neck, and face.
     + With each group, inhale as you tense and exhale as you relax.
  4. Complete the cycle:
     + Once you’ve worked through all muscle groups, spend a minute focusing on your breathing and noticing how relaxed your body feels overall.
* Duration:  
  Spend about 10–15 minutes completing the full cycle. Repeat this practice daily or whenever you feel stressed.

**Reflection:**

After completing the PMR exercise, reflect on the following questions:

* Where did you feel the most tension in your body?
* How did your stress levels change after the exercise?
* How did the physical relaxation affect your mental state?
* Did certain muscle groups feel more resistant to relaxing?

**[ADAPTED VERSION]**

This adapted version of PMR is designed to accommodate individuals who may, for any reason, have difficulty completing the exercise. For example, individuals who experience chronic pain, physical disabilities, PTSD, etc.

**Objective:** The goal remains to reduce stress through relaxation, but with a focus on individual comfort, emotional safety, and personal limitations.

**Instructions:**

* **Preparation**:  
  Find a quiet space where you feel comfortable. You may sit, lie down, or stay in a position that works best for your body. Take a few deep breaths to center yourself before you begin.

Adjust or stop the exercise at any point if needed.

* **Step-by-Step Guide**:
  1. **Modify tension**:
     + If tensing muscles causes discomfort or pain, **visualize** tensing the muscle instead of physically doing it. For example, imagine your feet tensing and then relaxing without engaging the muscles physically.
     + For areas of chronic pain or sensitivity, **skip** the tensing and focus solely on relaxing that muscle group or part of the body.
  2. **Focus on gentle awareness**:
     + Instead of tensing, direct your attention to each muscle group. You may simply **breathe deeply** into that area of the body and on your exhale, **release tension** mentally or emotionally.
     + You can start at your feet and gently work upwards, visualizing a sense of warmth or relaxation spreading through each part of your body.
  3. **Trauma sensitivity**:
     + If you are managing PTSD or trauma-related stress, pay attention to any emotional or physical discomfort during the exercise. It’s important to focus on your **sense of safety**. If certain body parts or sensations trigger stress, you can **skip that area** or end the exercise early.
     + Consider pairing the PMR practice with **grounding techniques**, such as focusing on your breath or the sensations around you (e.g., the feeling of the chair or bed beneath you) to help stay present.
  4. **Alternative muscle relaxation**:
     + For those with limited mobility or muscle control, simply **focus on breathing**. Inhale deeply into the area of focus, and as you exhale, imagine the tension leaving that part of the body. The breath itself can provide a relaxing effect.

**Reflection:**

After completing the adapted PMR exercise, reflect on these questions:

* How did your stress levels or physical tension change throughout the exercise?
* Did visualizing the release of tension help you relax mentally or physically?
* What felt most comfortable or effective for you during this practice?

*Remember, there is no "right" way to do this exercise—focus on what feels best for you, and allow yourself the flexibility to modify the practice as needed.*