

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/273946086>

# Stress Management

Chapter · January 2012

---

CITATIONS

0

---

READS

40,575

2 authors:



[Joshua J Broman-Fulks](#)  
Appalachian State University

44 PUBLICATIONS 1,342 CITATIONS

SEE PROFILE



[Kerry Kelso](#)  
George Mason University

7 PUBLICATIONS 18 CITATIONS

SEE PROFILE

# STRESS MANAGEMENT

## Module Overview

- What is Stress
- Body Responses to Stress
- Benefits and Costs of Stress
- Stress Management
- A Prescription for Stress Management
- e-Resources

## Module Objectives:

This module will provide you the opportunity to:

- Define key terms related to stress, the stress response, and stress management.
- Explain the physiological and psychological changes that occur in response to stress.
- Identify the positive and negative effects of stress.
- Identify various stress management techniques and the benefits of each technique.
- Explore and apply the content in a personally meaningful manner.

## **Key Terms**

### **Cognitive restructuring**

A technique that involves the identification, challenging, and replacement of irrational or maladaptive thoughts with more rational, adaptive, or positive thoughts.

### **Diaphragmatic breathing**

A relaxation technique consisting of deep abdominal breathing designed to expand and contract the diaphragm, slow breathing, and regulate oxygen intake.

### **Fight-or-flight response**

Activation of the sympathetic nervous system that occurs in response to a stressor and prepares the organism for dealing with a stressor.

### **Guided imagery**

A relaxation technique involving the use of language to create calming, sensory rich experiences in one's imagination.

### **Homeostasis**

A return to equilibrium following activation of the stress response system.

### **Meditation**

A relaxation technique that combines focusing on a specific object or sensation while disengaging from other distracters and regulating internal experiences through non-judgmental acceptance.

### **Progressive muscle relaxation (PMR)**

A relaxation technique involving the repeated tensing and relaxing of various muscle groups throughout the body.

### **Stress**

Emotional, cognitive, behavioral, and physiological reactions a person experiences in response to environmental threats or demands.

### **Stress hormones**

Hormones, including Cortisol and Norepinephrine, that are released by the body during a fight-or-flight response.

### **Stressor**

Any event or stimulus that causes stress.

### **Yerkes-Dodson Law**

Law dictating that physiological and mental functioning is optimal at mild to moderate levels of arousal, but diminishes as arousal becomes extreme (high or low).



## What is Stress?

Although “stress” is a commonly used term in today’s vernacular, and most people appear to have an intuitive sense of what it means, stress is difficult to precisely define as it is often used interchangeably with a variety of other terms, such as anxiety, pressure, or strain. In a general sense, stress refers to a collection of physiological, emotional, behavioral and cognitive reactions that occur in response to environmental demands. As we interact with the world around us, we must make constant appraisals of environmental threats, challenges, and demands and attempt to cope with any issues that arise. At times, environmental demands are easily handled, such as when you have to press a button on a key to unlock your car. However, at other times, the demands of the environment can seem daunting or unmanageable, such as when you have to take three exams on the same day, and result in feelings of physical tension, negative thought patterns, and unpleasant emotional experiences. Lazarus and Folkman (1984) suggested that stress results when the demands of the environment are greater than the individual’s perceived coping resources.

A “stressor” is any event or stimulus that causes stress. However, what serves as a stressor for one person may not be the same for another. For example, being asked to attend a social event may create stress for someone who perceives that they lack the necessary social skills to fit in, whereas another person who feels comfortable in social situations may not experience any stress. Stressors can take many forms, ranging from the daily hassles of life to significant life changes. Daily hassles are the regularly occurring events or situations that we experience in everyday life, such as misplacing items, concerns about weight, or having to wait your turn. Any one of these events is unlikely to have a major impact on our overall quality of life. In contrast, life changes, such as death of a family member, getting married, or a negative health diagnosis are more significant. Notice that not all stressors are negative. Getting married, having children, and starting a new job are often positive experiences, though they can create a significant amount of stress because they require us to alter our lives and adjust to new circumstances.

College is a transitional time of life when new and unique stressors are often being encountered. Not only are college students often away from home for the first time and forced to be more self-sufficient, but they must also cope with the increasing demands of the academic environment. Changes in sleep and eating habits, increased financial responsibilities, having to share living space and possessions with strangers, and increased exposure to alcohol, drugs, and sex are only a few of the additional stressors often encountered by college students. To exacerbate matters, college students are often forced to cope with the challenges of college stressors with reduced access to their traditional support systems, such as family and long-time friends. Thus, it is important for college students to increase their awareness about stress, the impact that excessive stress can have on physical and mental health, and various coping strategies and techniques available to help cope with the challenges of the college environment.

## **Body Responses to Stress**

When threatened by environmental dangers, changes, or demands, humans experience a variety of physiological and psychological changes. Once a threat has been recognized and appraised as dangerous, the individual evaluates available coping resources. If the demands of the situation are deemed to be greater than the available coping resources, an “alarm” or “Fight-or-Flight Response” is generated. During the fight-or-flight response, the body prepares for action, generally consisting of either confrontation or avoidance of the threat. The sympathetic nervous system is activated, and hormones, including adrenaline and noradrenaline, are released into the blood stream. Heart and respiration rates accelerate and blood pressure increases, enabling the body to quickly circulate oxygen-rich blood to the brain and large muscles of the body. Blood is redirected away from the extremities to the core, and digestive processes are slowed. Muscles tend to become tense, eyes dilate, and hearing becomes more acute. Sweat glands activate to cool the body, and the skin often becomes paler or flushed.

Concurrent with these physiological changes, the fight-or-flight response tends to generate various psychological processes. Attention becomes heightened and narrowed, with particular focus on threat relevant cues, and one’s ability to attend to and concentrate on other tasks can be impaired. Short-term memory and decision-making abilities can also be negatively affected by high stress, and, emotionally, people tend to report feeling jittery, “on edge”, fearful, anxious, and restless. Pacing, fidgeting, and avoidance behaviors are common behavioral manifestations of a stress-induced alarm reaction, and many people experience an urge to avoid the stressor or to flee from the situation.

If the person is able to successfully manage or avoid the stressor, the body begins to return to homeostasis. However, chronic exposure to stress or recurrent confrontations with stressful stimuli can begin to take a toll on the individual.

## Benefits and Costs of Stress

Although we generally think of stress as something to avoid, stress is a natural, adaptive response that serves a protective function. At moderate levels, stress helps alert us to potential threats in the environment and enables us to focus our attention on resolving the threat. Stress also provides us with the energy needed to confront or retreat from the threat via the “fight-flight” response.

Although some stress is beneficial, prolonged or intense stress can be associated with a variety of negative physical and psychological outcomes. For example, whereas moderate amounts of stress helps to focus our attention, excessive stress leads to diminished attention, concentration, decision-making, and short-term memory. High stress can also lead to a variety of emotional disturbances, including irritability, depression, and anxiety disorders. Indeed, many researchers consider stress a core component of the cause of emotional disorders. Chronic high stress is associated with serious physical health concerns, including cardiovascular disease, hypertension, immunosuppression and more frequent illnesses, sexual dysfunction, gastrointestinal disorders, and recurrent headaches.

High levels of stress are also associated with a variety of behaviors and lifestyle choices that can have negative health outcomes. Research indicates that individuals experiencing high stress are more likely to engage in excessive alcohol consumption and increased use of drugs and tobacco products. Ironically, alcohol increases cortisol levels, which can prolong the feeling of tension generated by stress responses. Stress can change the way the body processes alcohol, resulting in a reduction in the pleasant effects of alcohol and increased craving for more alcohol. In addition, chronic alcohol consumption and tobacco use are leading causes of a variety of chronic health problems, including lung and liver cancer, cirrhosis of the liver, emphysema, coronary heart disease, and stroke.

It is important to recognize that exceptionally low levels of stress can have negative consequences as well. For example, when arousal levels are too low, people generally experience boredom, poorer cognitive and physical performance, procrastination, and lack of attention to detail. The Yerkes-Dodson Law, developed by psychologists in the early 1900’s, holds that organisms’ physiological and mental functioning tends to be optimal when experiencing mild to moderate levels of arousal. Although the level of stress and arousal required for optimal functioning varies depending on the type of task, research over the past century has generally been supportive of this notion, which has shaped how stress and anxiety are conceptualized and treated.

## **Stress Management**

Given the beneficial nature of mild to moderate levels of stress, the goal of stress management is not to eliminate all stress. Rather, stress management techniques are designed to keep stress levels within an optimal range. Engaging in healthy lifestyle behaviors can help to reduce stress and maximize the likelihood of living a long, healthy life. The following stress management techniques have been consistently supported by empirical research: physical activity and exercise; healthy eating; adequate sleep; relaxation, mindfulness and meditation; laughter, self-expression and social support; and cognitive restructuring.

## **Physical Activity and Exercise**

Considerable evidence has accumulated indicating that regular physical exercise is associated with numerous physical and psychological health benefits. For example, regular engagement in moderate exercise, such as a brisk walk, strengthens the immune system and decreases rates of illness. Exercise also strengthens body muscles, including the heart, preserves muscle mass, and helps with weight management. Individuals who exercise regularly are also at a reduced risk for some chronic diseases, such as diabetes and hypertension.

Although exercise is, technically, a stressor itself, requiring the body to adapt to the demands of the activity, research suggests that regular physical exercise can help to reduce the body's reactivity to other stressors. In fact, several studies have demonstrated that individuals who exercise demonstrate lower physiological (e.g., blood pressure, heart rate) markers of stress and report less anxiety in response to a stressful situation than those who do not exercise. This finding is particularly important given that stressful events precede approximately 80 percent of major depressive episodes, and stress is a central risk factor for the development of panic attacks, generalized anxiety, posttraumatic stress, social anxiety, and phobias. Thus, involvement in regular exercise may help protect against or prevent the onset of anxiety and mood disturbances. In addition, accumulating research suggests that regular physical activity is effective in treating many of these conditions once they develop. In fact, some studies suggest that exercise is as effective as psychotherapy or medication in treating some anxiety and mood disorders. For example, in one study, individuals who experienced recurrent panic attacks responded to 12 weeks of aerobic exercise in a comparable manner to those taking psychiatric medication. Other research has suggested that aerobic exercise reduces symptom severity among individuals with obsessive compulsive disorder, and a recent review of 11 studies comparing the effects of regular exercise with psychotherapy for depression revealed that two to four sessions of exercise per week was just as effective in treating depression as psychotherapy. Furthermore, although most professionals recommend regular involvement in an exercise regimen to maximize benefits, research suggests that even a single bout of aerobic exercise or weightlifting can reduce perceived stress levels and improve mood. It appears that exercise is medicine!

## **Healthy Eating**

When experiencing high levels of stress, research suggests that many people change their eating patterns. One of the most common dietary changes associated with stress involves the increased consumption of caffeine in an effort to improve early morning or late night productivity. Ironically, although caffeine is associated with short term increases in alertness, caffeine can also exacerbate the stress response. For example, caffeine stimulates the body to release various stress hormones, including cortisol and glucocorticoids, as well as catecholamines, which include epinephrine (adrenaline), norepinephrine, and dopamine. The release of these chemicals is associated with heightened levels of stress for hours after



ingestion. In addition, caffeine consumption can lead to other conditions that can affect the body's ability to respond to stress, including insomnia, hypertension, increased risk of heart disease, gastrointestinal problems, and immune system suppression, making you more prone to infections.

As noted earlier, high levels of stress are also associated with increases in cortisol, which tend to lead to cravings for high fat or sugary foods. In addition, when busy, people often resort to skipping meals or eating fast foods. These dietary changes can actually make it more difficult for our bodies to manage stress.

Eating a healthy diet full of nutrient rich foods can help you manage stress in several ways. For example, complex carbohydrates, like oatmeal and whole grain breads and cereals, cause your brain to release Serotonin, a neurotransmitter associated with positive mood. Even simple carbohydrates, such as candy or chocolate can be good for a quick spike in Serotonin. Research suggests that foods rich in Vitamin C (e.g., oranges) and Omega-3 fatty acids (e.g., salmon) can help reduce levels of stress hormones and improve immune functioning. A well balanced diet improves one's ability to manage stress.

### **Adequate Sleep**

Research suggests that the relationship between stress and sleep is bidirectional in that high levels of stress tend to be associated with impaired sleep, and lack of sleep tends to exacerbate the experience of stress. Numerous studies have indicated that excessive stress tends to lead to diminished ability to fall and stay asleep, increased rate of nightmares, and poorer sleep quality. In addition, various emotional disorders associated with stress and anxiety, such as posttraumatic stress disorder and generalized anxiety disorder, are often associated with significant sleep disruption. On the other hand, lack of sufficient sleep often leads to suboptimal physiological and psychological functioning. For example, sleep deprived individuals report higher levels of stress, anxiety and anger in response to even low-level psychological demands. Further, some evidence suggests that sleep deprivation affects cortisol (a stress hormone) levels, and neuroimaging studies indicate that sleep deprivation is associated with impaired neurological functions, including increased amygdala (part of the brain associated with emotional responses) reactivity and pre-frontal control regions of the brain. In addition, considerable evidence indicates that poor sleep is associated with poorer immune functioning. Epidemiological research suggests that most individuals require 7 to 8 hours of sleep nightly to obtain the maximum physiological and psychological benefits from sleep.

### **Relaxation, Mindfulness, and Meditation**

Relaxation, or easing of physical or mental stress, is often thought to be the antidote to stress. Relaxation and anxiety are thought to be opposing emotions, in that one cannot be relaxed and anxious at the same time. Indeed, the achievement of a state of relaxation during a period of stress is often a challenging task. However, a variety of techniques have been devised with the intention of helping one to reach a state of relaxation, several of which have demonstrated reliable efficacy in psychological research: Diaphragmatic breathing, progressive muscle relaxation, guided imagery, and meditation exercises.

Diaphragmatic breathing, or deep abdominal breathing, is a technique designed to slow one's breathing and regulate oxygen intake. Diaphragmatic breathing involves taking slow, deep breaths with the intention of expanding and contracting the diaphragm, which is a muscle separating the chest and abdominal cavities. Typically, diaphragmatic breathing exercises involve sitting in a comfortable chair or lying down and taking slow, deep breaths with the intention of breathing so that the air expands the abdomen more than the chest.

Research suggests that practicing diaphragmatic breathing can significantly reduce perceived stress. In one study, a sample of medical school students participated in a deep breathing program for 5 minutes per day prior to class over a 10-month period. After six weeks, students engaging in the deep breathing exercises reported significantly less test anxiety, self-doubt, nervousness and increased concentration during exams.

Progressive muscle relaxation (PMR) refers to a series of techniques that involves the repeated tensing and relaxing of various muscle groups in the body. Often, deep breathing is integrated, whereby an individual undergoes a deep breathing exercise while also tensing and relaxing muscle groups. The goal of PMR is to affect the autonomic arousal component of stress and anxiety via a reduction in skeletal muscle tension. It is believed that as skeletal muscle tension diminishes, other aspects of autonomic arousal, such as blood pressure and heart rate, also decrease. Although the original progressive muscle relaxation paradigm was extremely time-intensive (i.e., involving nearly 30 muscle groups and as many as 100 individual practice sessions carried out over months or years), subsequent research has suggested that comparable effects can be generated with far fewer sessions. Similar to diaphragmatic breathing, PMR sessions typically involve assuming a comfortable position and taking deep breaths while tensing and relaxing 16 different muscle groups (e.g., starting with the head muscles and working down the body before ending with the feet). As part of the Personal Discovery Assessment (PDA) within this module, you will have the opportunity to experience PMR for yourself.

Guided imagery, or visualization, refers to a type of relaxation training that involves the use of language to create calming, sensory rich experiences in one's imagination. Although guided imagery techniques can vary widely, most involve guiding an individual toward places or situations in which they feel calm and comfortable, and individuals are encouraged to free their minds of any interfering thoughts or daily concerns. For example, a session might consist of having an individual imagine that they are sitting on a quiet beach on a perfect weather day or in the woods next to a gentle flowing stream. Research suggests that guided imagery techniques are effective in reducing stress and enhancing positive mood states. Guided imagery has also been shown to enhance feelings of well-being and calmness among individuals with a variety of chronic diseases.

Similar to diaphragmatic breathing, meditation exercises combine focusing on a specific object or sensation (such as breathing) while disengaging from other distracters and regulating internal experiences (i.e. emotions, thoughts) through non-judgmental acceptance. Research suggests that meditation is negatively correlated with perceived stress and decreases in serum Cortisol levels (a stress hormone). Further, meditation is positively associated with a variety of relaxation markers, such as reduced skeletal muscle metabolism, higher skin resistance, decreased heart rate, and increased alpha wave activity. It is also associated with enhanced sociability, empathy, and positive thinking.

In sum, a variety of relaxation exercises have been shown to reduce stress and improve emotional well-being. Whether it is diaphragmatic breathing, PMR, guided imagery, meditation, or a host of others not discussed here, it only takes a few minutes per day to improve stress levels.

### **Laughter, Self-Expression, and Social Support**

It has long been said that, "laughter is the best medicine." Indeed, we now know that laughter produces many positive physiological and psychological changes in the body. Research indicates that laughter increases oxygen intake and stimulates various muscles and organs, including the heart and lungs. Laughter also reduces blood pressure and blood sugar levels, increases blood flow, and improves energy levels. In addition, laughter

causes the release of endorphins, which can increase pain tolerance and induce feelings of euphoria. Humor provides a psychological distance from the current state and enables us to replace our negative appraisals with more positive ones. In fact, some research suggests that laughter may be as effective as mild aerobic exercise or relaxation training at improving mood.

Suppressing negative feelings can increase stress, and, in turn, be detrimental to one's health. However, research suggests that expressing negative emotions in an adaptive and socially acceptable manner can serve to reduce stress and improve immune function. For example, one study found that a sample of international students who wrote about their most traumatic or stressful experiences for 20 minutes per day over three days reported significantly less stress at the end of the study than their counterparts who wrote on neutral topics. The physical and psychological benefits of disclosure are not limited to writing. Talking about emotionally disturbing or traumatic events has also been shown to reduce anxiety, stress, and dysphoria. In fact, one of the most effective forms of psychological treatment for stress disorders involves intentionally recalling and talking about traumatic events repeatedly until the recollection of the event is less distressing. Much like humor, emotional disclosure allows an individual to step back and gain perspective on the stressful event and can transform how the individual views and makes sense of the situation.

A strong social support system is also helpful when coping with stress. Research suggests that the strength of one's social support network is a predictor of health and is negatively associated with many mental health problems. In contrast, loneliness is associated with a variety of health problems, including high blood pressure, and lonely individuals have more stressful experiences and are more likely to assess situations as stressful. Researchers theorize that higher levels of perceived stress may explain the poorer health conditions of lonely individuals. Further, they have found that loneliness mediates the relationship between social support and health. Loneliness is best protected against with the quality, or closeness, of relationships over quantity, or number of relationships. Thus, effort should be put towards meaningful relationships rather than countless peripheral ones.

### **Cognitive Restructuring**

Often, we presume that the events that we experience have a direct effect on our emotions. For example, finding out that you made a poor grade on an exam or that your partner wants to break up with you CAUSES you to feel sad. However, it is not the event itself that leads to the emotion. Rather, it is the meaning that you give to the event or your interpretation of the situation that determines the event's emotional impact. If you interpret the poor grade to mean that you are not very intelligent or that you will never succeed in school no matter how hard you try, you will likely experience a depressed mood. In contrast, if you interpret the grade as a fluke or the wake-up call you have needed to enhance your motivation for school, your mood will likely be much less negative.

As you can see, the way that we perceive or think about a situation or event can dramatically affect the emotions we experience. Cognitive restructuring involves learning to recognize the irrational or maladaptive thoughts we experience that contribute to negative mood states and then altering them to more accurately reflect the situation. For example, if you are preparing for a presentation, and you repeatedly think, "I know I'm going to say something stupid, and everyone will laugh at me" or "Everyone is going to be able to see how anxious I am, and they will think I'm an idiot", you will likely be fairly anxious. However, are these rational thoughts? Unless you are particularly adept at foretelling the future (in which case, I would appreciate some help selecting my lottery numbers!), these thoughts are likely examples of catastrophizing thoughts, which

serve to increase anxiety. Although it is possible that you will say something stupid, what are the chances if you thoroughly prepare and rehearse your presentation? How many times have you given a presentation in the past and NOT said anything stupid? Even if you do say something that does not sound particularly intellectual, is it possible that some, most, or all of the people in the class might not notice or think negatively about you? If people do notice your anxiety, is it possible that they might interpret it in a different way than assuming you're "an idiot?" Might some people not have empathy for you considering that public speaking is one of the greatest fears among college students? After challenging the irrational or maladaptive thoughts in this manner, it is important to select a rational alternative to substitute. A more rational alternative to the first assumption might be, "If I prepare well and know what I am going to say in advance, I will probably do a fine job of delivering the presentation." For the second statement, you might substitute, "most people will be anxious when they present, and even if they do notice my anxiety, they will probably be able to relate to it."

Research suggests that cognitive restructuring or learning to recognize maladaptive thoughts and change them to reflect more adaptive, rational thought patterns can significantly improve mood, reduce stress, and decrease negative emotions.

## A Prescription for Stress Management

To maximize your ability to cope with stress, try the following:

1. **Exercise Regularly.** Engage in 3-5 sessions of moderate intensity exercise each week to enhance your immune system and reduce your risk of developing anxiety and mood disorders. However, even if you cannot exercise regularly, remember that even a single episode of exercise can be a great way to relieve stress and improve mood.
2. **Eat a Healthy Diet.** Eat plenty of fruits, vegetables, whole grains, and fatty fish to maximize your physical health and your body's ability to manage stress.
3. **Sleep.** Get 7-8 hours of uninterrupted sleep per night to improve your mood and boost your immune functioning.
4. **Practice Relaxation.** Engage in relaxation exercises on a regular basis or during periods of moderate to high stress. Progressive muscle relaxation (PMR), guided imagery, and meditation are great ways to reduce your overall level of arousal. Or, combine exercise with meditation or mindfulness by engaging in yoga two to three times per week!
5. **Express Yourself.** Look for the humor in stressful situations, and find ways to express your emotions through writing, art, or talking with friends and family.
6. **Reframe.** Attend to the ways in which you think about and interpret stressful situations and look for opportunities to reframe the situation in a more rational or positive manner. Remember, the test at the end of this chapter is not something to be feared. Instead, it represents an opportunity for you to demonstrate how much you have learned about stress and stress management!

## **e-Resources**

### **University**

- ASU University Recreation  
[www.urec.appstate.edu/](http://www.urec.appstate.edu/)
- ASU Counseling Center  
[www.counseling.appstate.edu](http://www.counseling.appstate.edu)
- ASU Learning Assistance Program  
[www.lap.appstate.edu/stress-management](http://www.lap.appstate.edu/stress-management)

### **Local/Community-based**

- Daymark Recovery Services  
[www.daymarkrecovery.org](http://www.daymarkrecovery.org)
- ASU Psychology Clinic  
[www.psychclinic.appstate.edu](http://www.psychclinic.appstate.edu)

### **State/Regional**

- North Carolina Psychological Association  
[www.ncpsychology.org](http://www.ncpsychology.org)
- Healthy Place Online Psychological Screening Tests  
[www.healthyplace.com/psychological-tests](http://www.healthyplace.com/psychological-tests)

### **National/Federal**

- American Psychological Association  
[www.apa.org/topics/stress/index.aspx](http://www.apa.org/topics/stress/index.aspx)
- Anxiety Disorders Association of America  
[www.adaa.org](http://www.adaa.org)

## References

- Beck, A. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Harper & Row.
- Bernstein, D. A., Carlson, C. R., & Schmidt, J. E. (2007). Progressive relaxation: Abbreviated methods. In P. M. Lehrer, R. L. Woolfolk, & W. E. Sime (Eds.), *Principles and practice of stress management* (3<sup>rd</sup> ed. Pp. 88-122. New York: The Guilford Press.
- Broocks, A., Bandelow, B., Pekrun, G., George, A., Meyer, T., Bartman, U., Hillmer-Vogel, U., & Ruther, E. (1998). Comparison of aerobic exercise, clomipramine, and placebo in the treatment of panic disorder. *American Journal of Psychiatry*, 155, 603-609.
- Brown, R. A., Abrantes, A. M., Strong, D. R., Mancebo, M. C., Menard, J., Rasmussen, S. A., & Greenberg, B. D. (2007). A pilot study of moderate-intensity aerobic exercise for obsessive-compulsive disorder. *Journal of Nervous & Mental Disease*, 195, 514-520.
- Wallace, R. K. (1970). Physiological effects of transcendental meditation. *Science*, 1751-1754.
- White, S., & Winzelberg, A. (1992). Laughter and stress. *Humor: International Journal of Humor Research*, 343-355.
- White, S., & Camarena, P. (1989). Laughter as a stress reducer in small groups. *Humor: International Journal of Humor Research*, 73-79.
- Yusuf, S., Hawken, S., Ôunpuu, S., Dans, T., Avezum, A., Lanas, F., et al. (2004). Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *Lancet*, 937-952.
- Yerkes R.M. & Dodson, J. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, 459-482.
- Cacioppo, J. T. (2002). Do lonely days invade the nights? Potential social modulation of sleep. *Psychological Science*, 384-387.
- Chu, L.-C. (2010). The Benefits of Meditation Vis-à-Vis Emotional Intelligence, Perceived Stress and Negative Mental Health. *Stress and Health*, 169-180.
- Childs, E., O'Connor, S., & de Wit, H. (2011). Bidirectional Interactions Between Acute Psychosocial Stress and Acute Intravenous Alcohol in Healthy Men. *Alcoholism: Clinical & Experimental Research*, 1794-803.
- Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion*, 336-353.
- Fletcher, D., Hanton, S., & Mellalieu, S. (2006). *An organizational stress review: conceptual and theoretical issues in competitive sport*. Hauppauge: Nova Science.
- Folkman, S., & Lazarus, A. L. (1984). *Stress, Appraisal and Coping*. New York: Springer.
- Folkman, S., & Lazarus, R. S. (1999). Ways of Coping Questionnaire. *Journal of Personality and Social Psychology*, 360-369.
- Gross, J. J., & Levenson, R. W. (1997). Hiding feelings: The acute effects of inhibiting negative and positive emotion. *Journal of Abnormal Psychology*, 95-103.
- Hains, A. A., & Szyjakowski, M. (1990). A cognitive stress-reduction intervention program for adolescents. *Journal of Counseling Psychology*, 79-84.
- Nandagopal, S. (2008). The use of written expression of emotion paradigm as a tool to reduce stress among Indian international students. *Psychology and Developing Societies*, 165-181.
- MacLean, C. R., Walton, K. G., Wenneberg, S. R., Levitsky, D. K., & al, e. (1997). Effects of the Transcendental Meditation program on adaptive mechanisms: Changes in hormone levels and responses to stress after 4 months of practice. *Psychoneuroendocrinology*, 277-295.
- Mahony, D. L., Burroughs, W. J., & Hieatt, A. C. (2001). The Effects of Laughter on Discomfort Thresholds: Does Expectation Become Reality? *Journal of General Psychology*, 217-227.

- Paul, G., Elam, B., & Verhulst, S. J. (2007). A Longitudinal Study of Students' Perceptions of Using Deep Breathing Meditation to Reduce Testing Stress. *Teaching and Learning in Medicine* , 287-292.
- Pennebaker, J. W. (1997). Writing About Emotional Experiences as a Therapeutic Process. *Psychological Science* , 162-166.
- Szabo, A. (2003). The acute effects of humor and exercise on mood and anxiety. *Journal of Leisure Research* , 152-162.
- Segrin, C., & Passalacqua, S. A. (2010). Functions of Loneliness, Social Support, Health Behaviors, and Stress in Association With Poor Health. *Health Communication* , 312-322.



# STRESS MANAGMENT

## Personal Discovery Assessment

**Overview:** In this PDA you will engage in activities aimed at helping you manage your personal level of stress effectively. The PDA is divided into three parts.

- Part 1 focuses on evaluating your current level of stress
- Part 2 focuses on evaluating your current use of stress management techniques
- Part 3 focuses on a specific technique for managing your stress.

**Note: You must complete all three parts in order to receive credit for this PDA.**

**Part 1: General Well-Being Assessment**

**Part 2: Stress Management Techniques Assessment**

**Part 3: Progressive Muscle Relaxation Exercise**

## Part 1. General Well-Being Assessment

In this part you will be required to:

- Assess your personal stress state and
- Reflect upon your stress state as it relates to your wellness

### Directions

1. For each question, select the one choice that best applies to you.
2. Compare your result to the norms in the **'National Norms'** table.
3. Respond to the reflection questions

### GENERAL WELL-BEING ASSESSMENT

Insert Health and Fitness 11.1 here

(modified from Live Long & Healthy Neiman Fitness 11 11.1)

Enter questions with radio buttons for each option and delete values on left. GWB Assessment score should be auto-calculated upon completion

HEALTH AND FITNESS ACTIVITY 11.1  
The General Well-Being Scale

As described earlier in this chapter, one measure of psychological states that has been used with good success in national surveys is the General Well-Being Scale (GWB). The GWB was designed by the National Center for Health Statistics, and consists of 15 questions covering such matters as energy level, satisfaction, freedom from worry, and self-control. A high score on the GWB reflects an absence of bad feelings and an expression of positive feelings. Results from national surveys have shown that higher scores for the GWB are significantly associated with increased amounts of physical activity for all age groups and for both men and women. (See: Stephen T. Physical Activity and Mental Health in the United States and Canada: Evidence from Four Population Surveys, Prev Med 17:35-47, 1988.)

**The General Well-Being Scale.**

Instructions: The following questions ask how you feel and how things have been going for you during the past month. For each question, mark an "X" for the answer that most nearly applies to you. Since there are no right or wrong answers, it's best to answer each question quickly without pausing too long on any one of them.

1. How have you been feeling lately?
  - 5  In excellent spirits
  - 4  In very good spirits
  - 3  In good spirits usually
  - 2  Not happy, up and down in spirits a lot
  - 1  In bad spirits usually
  - 0  In a very low spirit
2. Have you been bothered by helplessness or your "nerves"?
  - 0  Extremely so--if the good things I could not work or take care of things.
  - 1  Very much so.
  - 2  Quite a bit.
  - 3  Some--enough to bother me.
  - 4  A little.
  - 5  Not at all.
3. Have you been in firm control of your behavior, thoughts, emotions, or feelings?
  - 5  Yes, definitely so.
  - 4  Yes, for the most part.
  - 3  Generally so.
  - 2  Not so well.
  - 1  No, and I am somewhat disturbed.
  - 0  No, and I am very disturbed.

### INTERPRETING YOUR SCORE

Insert 'National Norms' table here

(From Live Long & Healthy Neiman Fitness 11 11.1)

### REFLECTIVE QUESTIONS

What was your **Total Stress Score**?

Based on your Total Stress score, what is your current **Stress State**?

- Positive well-being (81-110)
- Low Positive (76-80)
- Marginal (71-75)
- Stress Problem (56-70)
- Distress (41-55)
- Serious (26-40)
- Severe (0-25)

How does your current **Stress State** impact your overall wellness?

- My stress state has a very positive impact
- My stress state has a positive impact
- My stress state has a negative impact
- My stress state has a very negative impact

## Part 2. Stress Management Techniques Assessment

In this part you will be required to:

- Assess your current use of stress management techniques,
- Reflect upon your use of stress management techniques and their contribution to your wellness, and
- Plan to maintain or improve your use of stress management techniques to meet your wellness goals.

### Directions

1. Rate your current use of each stress management technique (see text for technique descriptions)
2. Respond to the reflective questions

Stress Management Techniques	Not at All	Sometimes	Often	All the Time
Physical Exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Healthy Eating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relaxation/Meditation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laughter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cognitive Restructuring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How does your current **use of stress management techniques** impact your overall wellness?

- My use of stress management techniques has a very positive impact
- My use of stress management techniques has a positive impact
- My use of stress management techniques has a negative impact
- My use of stress management techniques has a very negative impact

What will you do in the future regarding your use of stress management techniques to better manage your level stress?

### Part 3. Progressive Muscle Relaxation Exercise

In this part you will be required to:

- Rate your current level of stress,
- Engage in a Progressive Muscle Relaxation (PMR) exercise for 5 consecutive days,
- Reflect upon your level of stress after completing the 5-day PMR exercise.

#### Directions

1. Just prior to engaging in the Day 1 PMR exercise, rate your level of relaxation using the Relaxation Scale
2. To begin PMR exercise, find a quiet place where you will be undisturbed
3. Assume a comfortable and relaxed position where your body is supported (e.g., lying on a bed, sitting in a soft chair that offers neck support)
4. Listen and follow the directions of the audio recording PMR exercise
5. Complete the PMR on 5 consecutive days. It is recommended that you do the PMR at the same time each day, preferably just before going to sleep.
6. After completing the 5-Day PMR exercise, rate your level of relaxation and respond to the reflection questions

**Insert 'PMR Relaxation' audio recording here**

#### Relaxation Scale

1	2	3	4	5	6	7	8	9	10
Very Relaxed									Very Tense

**Pre Day 1 PMR Relaxation Rating:**

**Post Day 5 PMR Relaxation Rating:**

#### **DAY 1 PMR**

Date:

Time of Day:

Location:

#### **DAY 2 PMR**

Date:

Time of Day:

Location:

**DAY 3 PMR**

Date:

Time of Day:

Location:

**DAY 4 PMR**

Date:

Time of Day:

Location:

**DAY 5 PMR**

Date:

Time of Day:

Location:

**REFLECTIVE QUESTIONS**

How has PMR impacted your overall wellness?

- PMR has had a very positive impact
- PMR has had a positive impact
- PMR has had a negative impact
- PMR has had a very negative impact

What is your plan for achieving a state of relaxation on a regular basis?

## STRESS MANAGEMENT EXAM POOL

1. The collection of physiological, emotional, behavioral and cognitive reactions that occur in response to environmental demands is known as:
  - A. Stress
  - B. Interpersonal Problems
  - C. Environmental Demands
  - D. Mood
2. An event that causes stress is known as a:
  - A. Preceptor
  - B. Stressor
  - C. Enervator
  - D. Arousant
3. What system is activated when the demands of a situation are greater than the available coping resources?
  - A. Parasympathetic nervous system
  - B. Peripheral amygdala system
  - C. Sympathetic nervous system
  - D. Limbic system
4. Activation of the sympathetic nervous system during the stress response cycle is also known as:
  - A. Residual
  - B. Homeostasis
  - C. Relaxation
  - D. The Fight-or-Flight Reaction
5. Which of the following physiological changes occur during activation of the sympathetic nervous system?
  - A. Blood pressure increases
  - B. Less norepinephrine is available in the blood stream than normal
  - C. Respiration rate decreases
  - D. Blood is redirected toward the extremities
6. Activation of the sympathetic nervous system does **not** cause:
  - A. Hearing to become more acute
  - B. Blood to be redirected to the extremities from the core
  - C. Eyes to dilate
  - D. Activation of sweat glands
7. Which of the following psychological changes is most likely to occur during a period of high stress?
  - A. Short-term memory is enhanced
  - B. Decision-making abilities are enhanced
  - C. Avoidance behaviors are increased
  - D. Attention is diverted from threat-relevant cues

8. How is stress adaptive?
- A. Prolonged stress strengthens the immune system
  - B. Stress diverts attention from stress-relevant cues
  - C. High stress enhances short-term memory
  - D. Stress provides energy needed to address a threat
9. Intense or prolonged stress negatively impacts which of the following cognitive functions?
- A. Decision-making
  - B. Verbal reasoning
  - C. Long-term memory
  - D. Perceptual reasoning
10. Intense or prolonged stress is **not** associated with the onset of which of the following emotional disturbances?
- A. Posttraumatic stress disorder
  - B. Attention Deficit Hyperactivity Disorder
  - C. Depression
  - D. Anxiety Disorders
11. Chronic high stress is associated with all of the following negative physiological effects **except**:
- A. Recurrent headaches
  - B. Immunosuppression
  - C. Dementia
  - D. Cardiovascular disease
12. Persons experiencing high levels of stress are more likely to engage in:
- A. Healthy eating
  - B. More leisure activities
  - C. Extreme sports
  - D. Excessive alcohol consumption
13. Alcohol increases Cortisol levels, which produces what type of effect?
- A. Prolonged tension generated by the stress response
  - B. Decreased stress by reduction in stress hormones
  - C. Increase in pleasant effects of alcohol
  - D. Decreased cravings for more alcohol
14. Chronic alcohol and tobacco consumption leads to all of the following health problems **except**:
- A. Lung and liver cancer
  - B. Heart murmur
  - C. Cirrhosis of the liver
  - D. Stroke



15. Extremely low levels of stress are associated with all of the following **except**:
- A. Lack of attention to detail
  - B. Boredom
  - C. Enhanced attention
  - D. Procrastination
16. Which of the following are **not** stress management techniques discussed in this chapter?
- A. Physical exercise, healthy eating, and sufficient sleep
  - B. Relaxation exercise, cognitive restructuring, and mediation
  - C. Using humor, self-expression, and social support
  - D. Catharsis, supplements and acupuncture
17. Exercise produces all of the following physical health benefits, **except**:
- A. Increases hydration
  - B. Improves immune system function
  - C. Preserves muscle mass
  - D. Strengthens body muscles
18. The physical health benefits of exercise include:
- A. Increased Body Mass Index (BMI)
  - B. Stronger immune system
  - C. Decreased muscle mass
  - D. Decreased range of motion
19. Research demonstrates that those who exercise regularly experience:
- A. Higher anxiety in response to stressful events
  - B. Higher blood pressure
  - C. Lower physiological markers of stress
  - D. Higher heart rates
20. Regular physical exercise has been shown to be an effective treatment for:
- A. Schizophrenia
  - B. Personality disorders
  - C. Anorexia
  - D. Obsessive-compulsive disorder
21. Regular exercise is just as effective as psychiatric medication in treating individuals with:
- A. Panic attacks
  - B. Bipolar disorder
  - C. Schizoaffective disorder
  - D. Eating disorders
22. A single bout of aerobic exercise or weight lifting has been shown to:
- A. Have little effect on perceived stress and mood
  - B. Reduce perceived stress and improve mood
  - C. Increase perceived stress in the short term but improve mood in the long term
  - D. Reduce perceived stress in the short term but diminish positive mood in the long term

23. Caffeine consumption can exacerbate the stress response by:
- A. Increasing short-term alertness
  - B. Reducing fatigue
  - C. Stimulating stress hormones
  - D. Increasing urine production
24. Stress hormones stimulated by caffeine are associated with:
- A. Heightened levels of stress for days after ingestion
  - B. Heightened levels of stress for minutes after ingestion
  - C. Heightened levels of long-term alertness
  - D. Heightened levels of stress for hours after ingestion
25. Caffeine consumption can lead to all the following conditions, **except**:
- A. Coeliac disease
  - B. Hypertension and increased risk of heart disease
  - C. Gastrointestinal problems and immune system suppression
  - D. Insomnia
26. High levels of stress are associated with increased cortisol levels, which can induce cravings for:
- A. Salty foods
  - B. Foods high in fat and sugar
  - C. Bitter foods
  - D. Foods low in fat and sugar
27. Which of the following when consumed can cause your brain to increase in levels of Serotonin?
- A. Protein rich foods
  - B. Salty foods
  - C. Complex carbohydrates
  - D. Foods rich in Vitamin C
28. Research suggests that the relationship between sleep and stress is:
- A. Minimal
  - B. Dichotomous
  - C. Unimodal
  - D. Bidirectional
29. Sleep deprivation is associated with which of the following **except**:
- A. Hypothyroidism
  - B. Higher levels of stress
  - C. Impaired neurological function
  - D. Anxiety and mood disorders
30. Most individuals need how many hours of sleep nightly to obtain the maximum physiological and psychological benefits of sleep?
- A. 5-6
  - B. 8-9
  - C. 6-7
  - D. 7-8

31. Diaphragmatic breathing does **not** involve:
- A. Taking quick, shallow breaths
  - B. Attempting to slow one's breathing regulate oxygen intake
  - C. Sitting in a comfortable chair or lying down
  - D. Breathing so that the abdomen expands more than the chest
32. A study of medical students who practiced deep breathing for 5 minutes daily, found that the medical students experienced:
- A. Increased study times
  - B. Less test anxiety and self-doubt
  - C. Decreased concentration
  - D. No effects
33. Progressive muscle relaxation involves:
- A. Electrodermal stimulation to relax smooth muscles
  - B. An increase in skeletal muscle tension
  - C. Repeated tensing and relaxing of various muscle groups in the body
  - D. Heightened blood pressure and heart rate
34. In contrast to the original PMR protocol, research suggests that shorter session's involving \_\_\_\_\_ generates comparable effects.
- A. 30 muscles groups
  - B. 100 practice sessions
  - C. 1 practice session
  - D. 16 muscle groups
35. Guided Imagery, or visualization, is **not** described by which of the following:
- A. Focusing on daily concerns and addressing interfering thoughts
  - B. Use of language to create calming, sensory rich experiences in one's imagination.
  - C. Guiding an individual towards places or situations in which they feel clam and comfortable
  - D. A type of relaxation training
36. Meditation is defined as
- A. A combination of focus on a specific object or sensation while engaging with distracters and regulating internal experience through non-judgmental acceptance.
  - B. A combination of focus on a specific object or sensation while disengaging from other distracters and regulating internal experience through non-judgmental acceptance.
  - C. A combination of focus on a specific object or sensation while disengaging with distracters and regulating internal experiences through non-judgmental rejection.
  - D. A combination of focus on many objects or sensations while engaging with distracters and regulating internal experiences through non-judgmental acceptance.
37. Meditation is associated with decreases in what stress hormone?
- A. Thyroxine
  - B. Testosterone
  - C. Cortisol
  - D. Serotonin

38. Meditation is associated with what relaxation marker?
- A. Increased skeletal muscle metabolism
  - B. Lower skin resistance
  - C. Increased heart rate
  - D. Increased alpha wave activity
39. Laughter produces all of the following positive physiological effects **except**:
- A. Decreased pain threshold
  - B. Increased oxygen intake
  - C. Decreased blood pressure
  - D. Decreased blood sugar levels
40. Research has demonstrated that laughter is as effective as which of the following at improving mood and reducing anxiety?
- A. Psychiatric medication
  - B. Mild aerobic exercise or relaxation training
  - C. Cognitive-behavioral therapy
  - D. Psychoanalysis
41. Research suggests that expressing negative emotions in an adaptive and socially acceptable manner can serve to:
- A. Lower diastolic and raise systolic blood pressure
  - B. Reduce gastrointestinal problems
  - C. Improve immune functioning
  - D. Moderate sleep disturbances
42. Research indicates that written disclosure and which of the following are effective forms of self-expression for reducing stress?
- A. Exercise
  - B. Mental imagery
  - C. Behavioral modification
  - D. Verbal disclosure
43. Strength of social support has many benefits **except**:
- A. Increasing blood pressure
  - B. Being a predictor of good physical health
  - C. Having a negative association with mental health problems
  - D. Helping in coping with stress
44. People often make the mistake of attributing their emotions to events that precede them. However, it is not the event that causes the emotion. Rather, the emotion is caused by:
- A. The person's stress level
  - B. The person's interpretation of the event
  - C. The person's genetics
  - D. The person's family history

45. When it comes to friendship, what best protects against loneliness?
- A. Having no enemies
  - B. Having a few acquaintances
  - C. Having a few close friends
  - D. Having many acquaintances
46. After challenging irrational maladaptive thoughts, it is **best** to:
- A. Avoid anxiety-provoking situations in the future
  - B. Clear the mind of distracting thoughts
  - C. Accept them and embrace subsequent negative mood states
  - D. Select a rational alternative as a substitute
47. Learning to recognize maladaptive thoughts and replace them with more adaptive thoughts is known as:
- A. Behavioral modification
  - B. Cognitive restructuring
  - C. Behavioral restructuring
  - D. Cognitive modification
48. Which law posits that physical and mental functioning tends to be optimal at mild to moderate levels of arousal?
- A. Yerkes-Dodson
  - B. Lazarus-Folkman
  - C. Renner-Mackin
  - D. Broman-Fulks
49. A return to equilibrium following activation of the stress response system is known as:
- A. Stress
  - B. Homeostasis
  - C. Fight-or-flight response
  - D. PMR
50. The primary hormones released by the body during a fight-or-flight response are:
- A. Testosterone and Epinephrine
  - B. Estrogen and Dopamine
  - C. Cortisol and Norepinephrine
  - D. Erythropoietin and Glucagon