



HEALTH
MEANS®

**REDUCE STRESS,
FEEL BETTER**

by HEALTHMEANS

CONTENTS

- 5 Do Yoga
 - Boost Prosocial Emotions
- 6 Try Progressive Muscle Relaxation
- 7 Get a Massage
- 8 Watch Positive or Humorous Videos
 - Listen to Soothing Music
- 9 Don't Restrict Calories
 - Eat Stress-Busting Foods
- 10 Work on Your Breathing
- 11 Exercise
 - Submerge Yourself in Cold Water
- 12 Do a Catecholamine Detox
 - Get Good Sleep
- 13 Develop a Challenge Mindset
- 14 Be More Mindful
 - Practice Naming Your Emotions
- 15 Get Better Acquainted with Your Stress
 - Stop Rumination Cycles
- 16 Generate Some Positive Emotions
 - Reframe the Situation With Cognitive Reappraisal
- 17 Take a Break From Your Phone
 - Practice Acceptance
- 18 Let it Go
- 19 References

STRESS. YOU KNOW THE FEELING. YOUR MIND RACES, YOUR BODY TIGHTENS, MAYBE YOU EVEN HAVE A HARD TIME EATING OR SLEEPING. WE KNOW THAT STRESS DOESN'T FEEL GOOD, AND WE MAY EVEN KNOW THAT STRESS IS BAD FOR OUR HEALTH, BUT SO MANY OF US DON'T KNOW HOW TO STOP IT.



Before we can really understand how to reduce stress we need to know what stress is, exactly. Stress is the full-body response that occurs in response to what we call a stressor—a stressor is some event that we perceive as threatening [1]. The stressor can be something that occurs in our daily lives or it can be something that occurs inside of our minds—for example, our health can be a stressor, but our worries about our health can also be a stressor.

The response that we have to a stressor is called “stress.” Stress is a cascade of bodily changes including activation of the HPA-axis, activation of the sympathetic nervous system, the release of cortisol and the release of the catecholamines norepinephrine and epinephrine. The adrenal glands are then responsible for turning off cortisol, and glucocorticoids help balance the HPA axis after the stressor is no longer present [1].

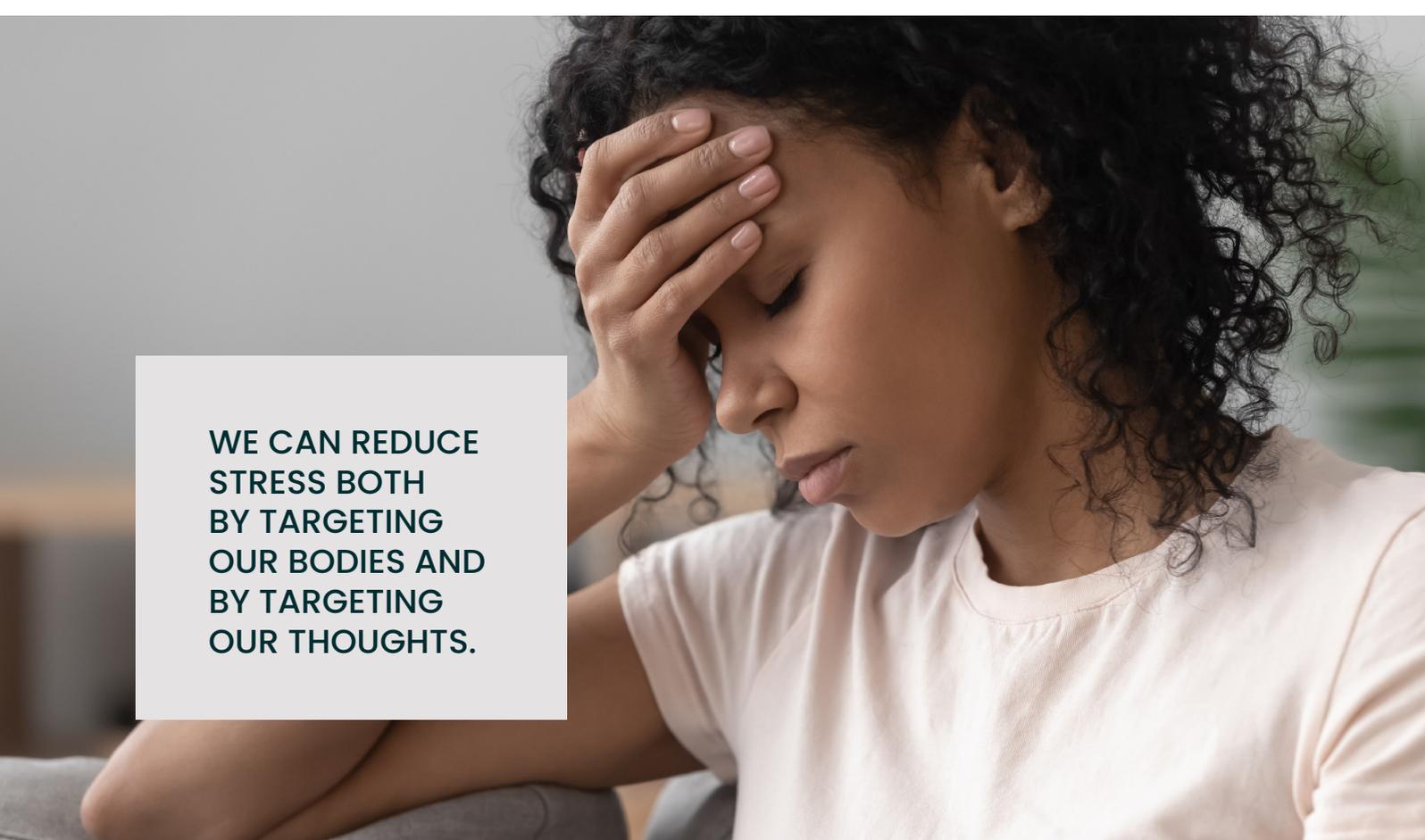
A little bit of stress, or “good stress” can be really beneficial—it helps us stay alert and focused while decreasing our body’s energy expenditure on things like appetite and digestion. Even moderately difficult stressors can be “good stress” because they can be growth-experiences and increase resilience [2].

“Tolerable stress” refers to the kind of stress we can cope with, but it may also produce a feeling of “distress”—or a sense of unease and helplessness to control the situation.

Lastly, “toxic stress” refers to when we experience a stressor and we just can’t cope with it. We can have difficulty coping with stress for a variety of reasons—for example, our genetics and our upbringing can leave us more or less resilient to stress. We can also have a harder time with stress if our body’s current stress load is already high or if our stress response systems are worn down and not working well. Regardless of the causes, “toxic stress” is likely to last longer than “good stress” and cause more problems because it’s harder to deal with and recover from [2].

Any prolonged stress can harm our bodies, namely our digestive function, reproduction and immunity [1]. For example, if we experience just a little stress, our immune system gets a boost. Our body is trying to help us out by fighting off disease and repairing wounds. But if we’re exposed to ongoing stress for a few weeks (or longer), our immune system gets tired and is suppressed [2]. That’s why it’s so important that we learn how to stop stress and get our bodies back in balance as quickly as possible after experiencing a stressor.

So what, exactly, should we do to reduce our stress? The good news is that there are many research-supported ways to reduce stress.



**WE CAN REDUCE
STRESS BOTH
BY TARGETING
OUR BODIES AND
BY TARGETING
OUR THOUGHTS.**

STRESS-REDUCING STRATEGIES YOU CAN START TODAY.

1. DO YOGA

Cortisol is the primary activator of the stress response. So to beat our stress, we can start by doing activities that balance cortisol. One of these activities is yoga.

One study asked people to do yoga for three months. They found that people who did 50 or more yoga sessions across a three-month period showed a significant drop in cortisol while people who did not do yoga didn't have this same drop in cortisol [3]. That means that four yoga sessions per week could result in a meaningful decrease in stress. So consider trying a yoga class near you or online.



2. BOOST PROSOCIAL EMOTIONS

Prosocial emotions are positive emotions toward others, for example emotions like compassion, gratitude and loving kindness. In one study, people engaged in an intervention that included 30 minutes of prosocial discussion and loving-kindness meditation five days per week for three months. This intervention decreased cortisol secretion by up to 51 percent [4]. This suggests that experiencing prosocial emotions may help reduce stress.

3. TRY PROGRESSIVE MUSCLE RELAXATION

One of the ways your body responds to stressors is with muscle tension. Progressive muscle relaxation is one tool that can help relieve that tension. It involves tensing a group of muscles as you breathe in and quickly releasing tension as you breathe out. Proceed through one set of muscles at a time. For example, start with the hands, then forearms, then biceps, then shoulders and so on.

Research has shown that progressive muscle relaxation can lower cortisol in the short-term and in the longer-term [5, 6]. For example, one study asked employees to spend 20 minutes doing progressive muscle relaxation in a quiet room during daily lunch breaks. After six months, these people had lower cortisol at both lunchtime and upon waking in the morning [6]. This suggests that progressive muscle relaxation may be helpful for reducing stress in the moment, but it may also be helpful for managing chronic or ongoing stress.



4. GET A MASSAGE

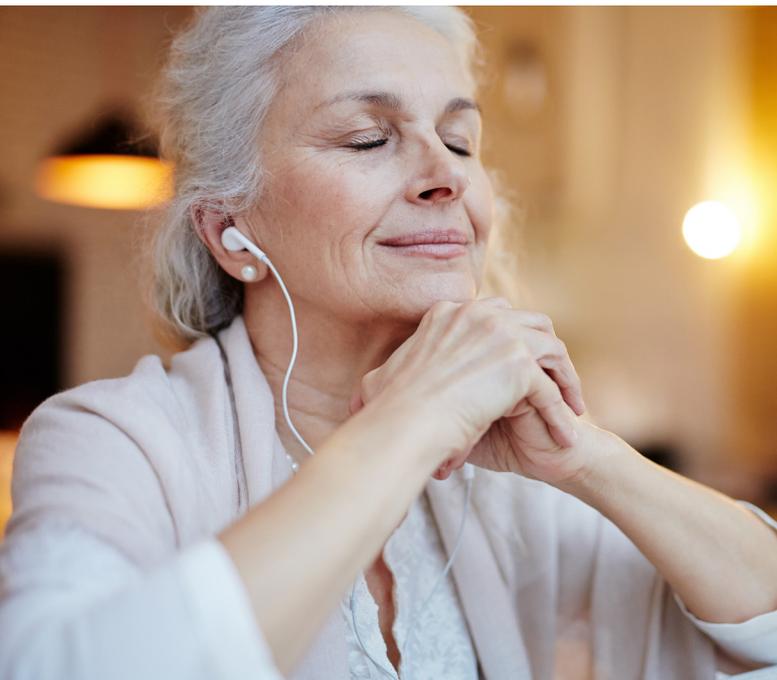
A massage can feel good and relaxing. But research shows that massages can also decrease cortisol in the body. For example, one study found that 10 30-minute massage therapy sessions over five weeks contributed to lower cortisol in both the saliva and urine. Lower cortisol in the urine suggests that these people had lower cortisol over a longer period of time (i.e., since they last urinated) [7].



RESEARCH SHOWS THAT MASSAGES CAN DECREASE CORTISOL IN THE BODY.

5. WATCH POSITIVE OR HUMOROUS VIDEOS

When we're stressed, sometimes we just want to crash on the couch in front of the TV. Well, research suggests that might not be such a bad idea—that is as long as we're watching something positive or humorous. That's right. One study showed that watching a few video clips that induced positive emotions reduced cortisol [8]. So if you're feeling stressed out, take a quick break to watch some cute cat videos or something else that you find funny or enjoyable.



6. LISTEN TO SOOTHING MUSIC

In addition to watching funny movies, we can also listen to soothing music to reduce stress [9]. One study showed that listening to calming music after a stressful event helps us more quickly reduce the cortisol levels in our bodies [10]. Without this calming activity, the study suggests that our cortisol response continues to rise, even after the stressful event has ended. So next time something is getting you really amped up, put on some calming music and turn down your stress response.

7. DON'T RESTRICT CALORIES



Many of us diet in an attempt to improve our health. In fact, 47 percent of adults in the United States are trying to lose weight at any given time [11]. But if our goal is to reduce stress, we have to be careful because low calorie diets lead to increased cortisol. One study showed that three weeks on a 1200 calorie per day diet led to greater cortisol [11]. So if you do decide to diet, be sure not to restrict calories too much or for too long.

8. EAT STRESS-BUSTING FOODS

If we're stressed, our bodies can become depleted of important stress-relieving nutrients and they can become more sensitive to stress-inducing foods. So to reduce stress, it's key to make sure we're eating the right foods.

For example, foods naturally rich in magnesium and zinc are thought to help us feel calmer [12-14]. Foods like salmon, which are high in omega-3 fatty acids [15] and foods like sauerkraut or kefir, which are high in probiotics, appear to help reduce anxiety, at least in some people [16]. In contrast, consuming caffeine can result in greater negative emotions and greater panic symptoms [17]. By being aware of how foods may increase or decrease our stress, we can better manage stress when it arises.

9. WORK ON YOUR BREATHING

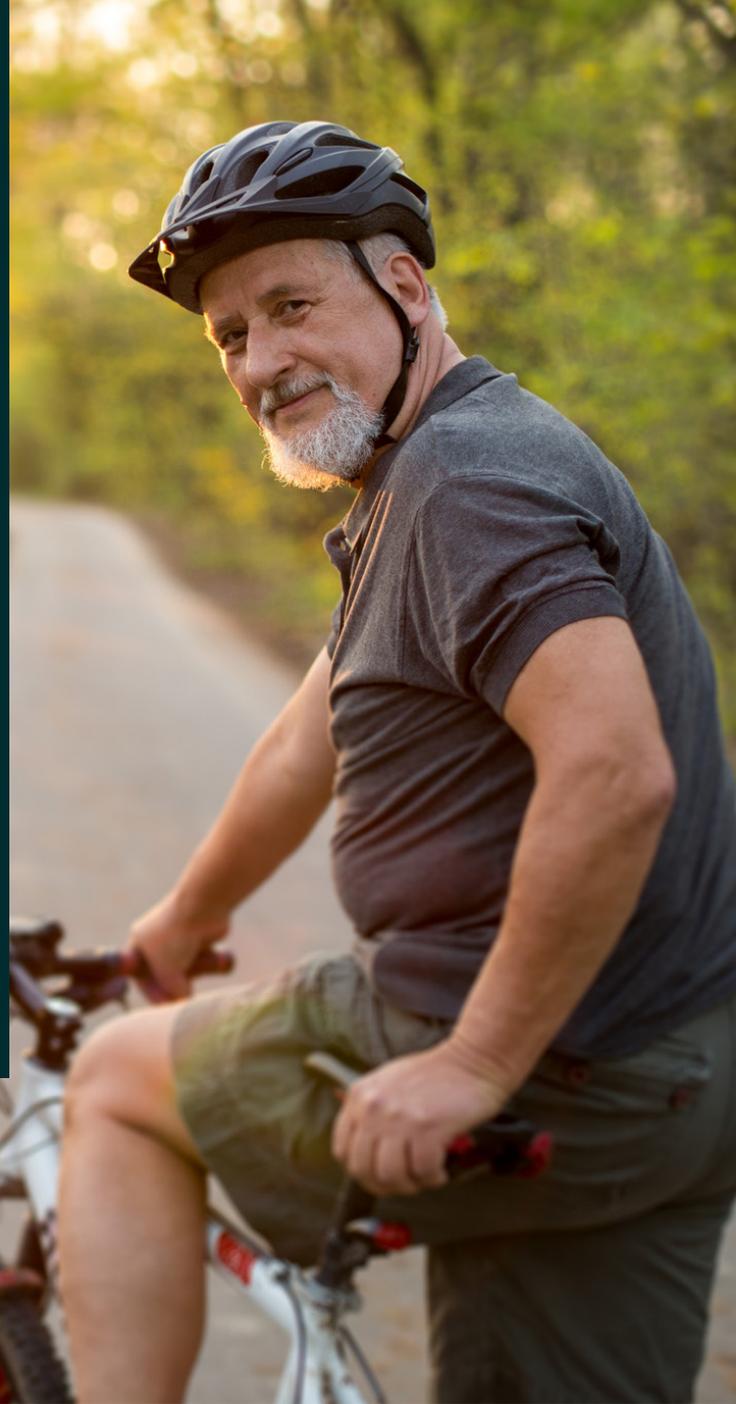
In addition to doing things that balance or reduce our cortisol, we can also decrease stress by doing things that activate the parasympathetic nervous system. The parasympathetic nervous system is largely responsible for stopping our fight or flight responses and helping us to relax [18].

One of the easiest ways to activate the parasympathetic nervous system is with deep breathing. For example, SKY breathing—a technique involving cycling slow breathing (2-4 breaths per minute) then fast (30 breaths per minute), then three long “Om”s, or a long vibrating exhale—has been shown to reduce anxiety [19]. Breathing techniques like this one can help you activate your parasympathetic nervous system and turn off your stress response.



10. EXERCISE

Another good way to increase parasympathetic activity is with regular cardiovascular and weight training exercise [20, 21]. Exercise actually increases in-the-moment sympathetic activity (during the exercise) but by engaging in regular exercise, we increase parasympathetic activity over all. This can help us prevent stress and help our bodies cope more effectively when we are stressed again in the future.



11. SUBMERGE YOURSELF IN COLD WATER

Perhaps one of the more surprising ways to activate the parasympathetic nervous system is by submerging our bodies in cold water. Research has shown that spending 20 minutes in ~80 degree Fahrenheit (26 degrees Celsius) water significantly increased parasympathetic activity [22]. So, if you're feeling stressed, jumping in a cold river, pool or shower can be a fast way to stop your stress response and generate a sense of calm.

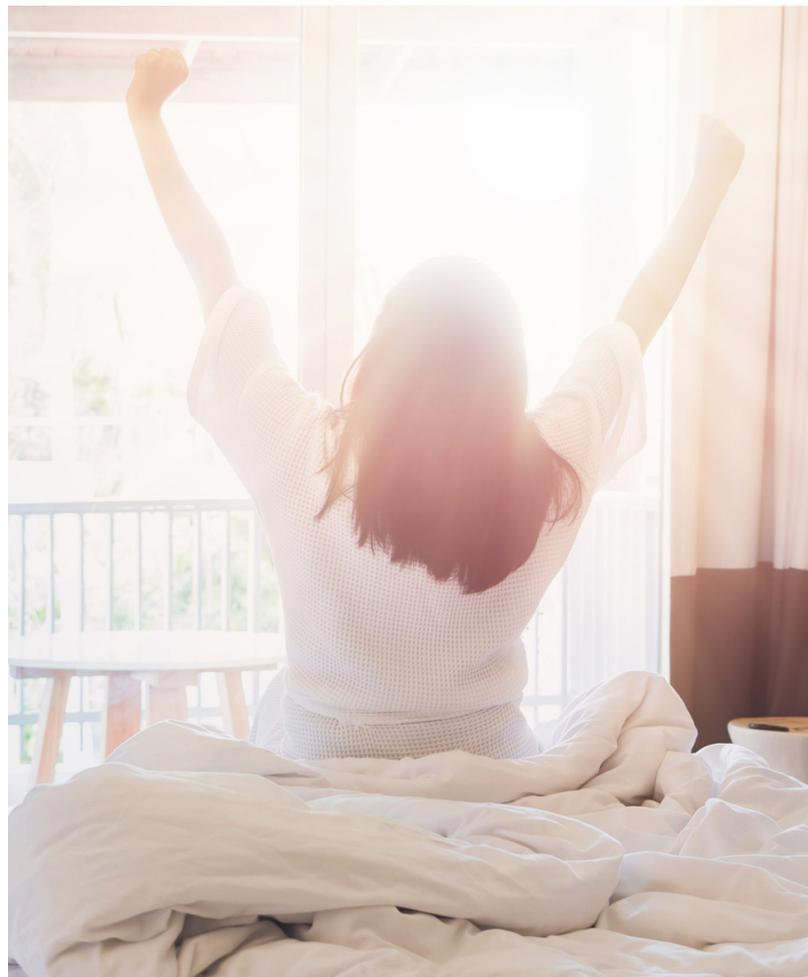
12. DO A CATECHOLAMINE DETOX

One more part of the stress response is the release of the catecholamines norepinephrine and epinephrine [1, 23]. The gene catechol-O-methyltransferase (COMT) is largely responsible for detoxing the body of these catecholamines after the stressor is gone and they are no longer needed [24].

If we're stressed a lot, the catecholamine detox system may get backed up and slow down. That's why if you've experienced frequent or chronic stress, it can be helpful to do a short catecholamine detox by avoiding catecholamine-rich foods, drinks and supplements. Foods rich in catecholamines include green/black tea, coffee, chocolate, caffeine and anything with quercetin in it [25]. In addition, high protein foods contain tyrosine, which contributes to more catecholamines in the body [26]. So if you're doing a catecholamine detox, be sure not to consume tea, quercetin-rich foods or too much protein.

13. GET GOOD SLEEP

You already know it's important to get good sleep. But when it comes to reducing stress, sleep is essential. Research has shown that a lack of sleep can contribute to anxiety [27], and poor sleep is associated with higher levels of the stress hormones norepinephrine and epinephrine [28]. That's why when working on reducing stress, it's key to get all the sleep you need.

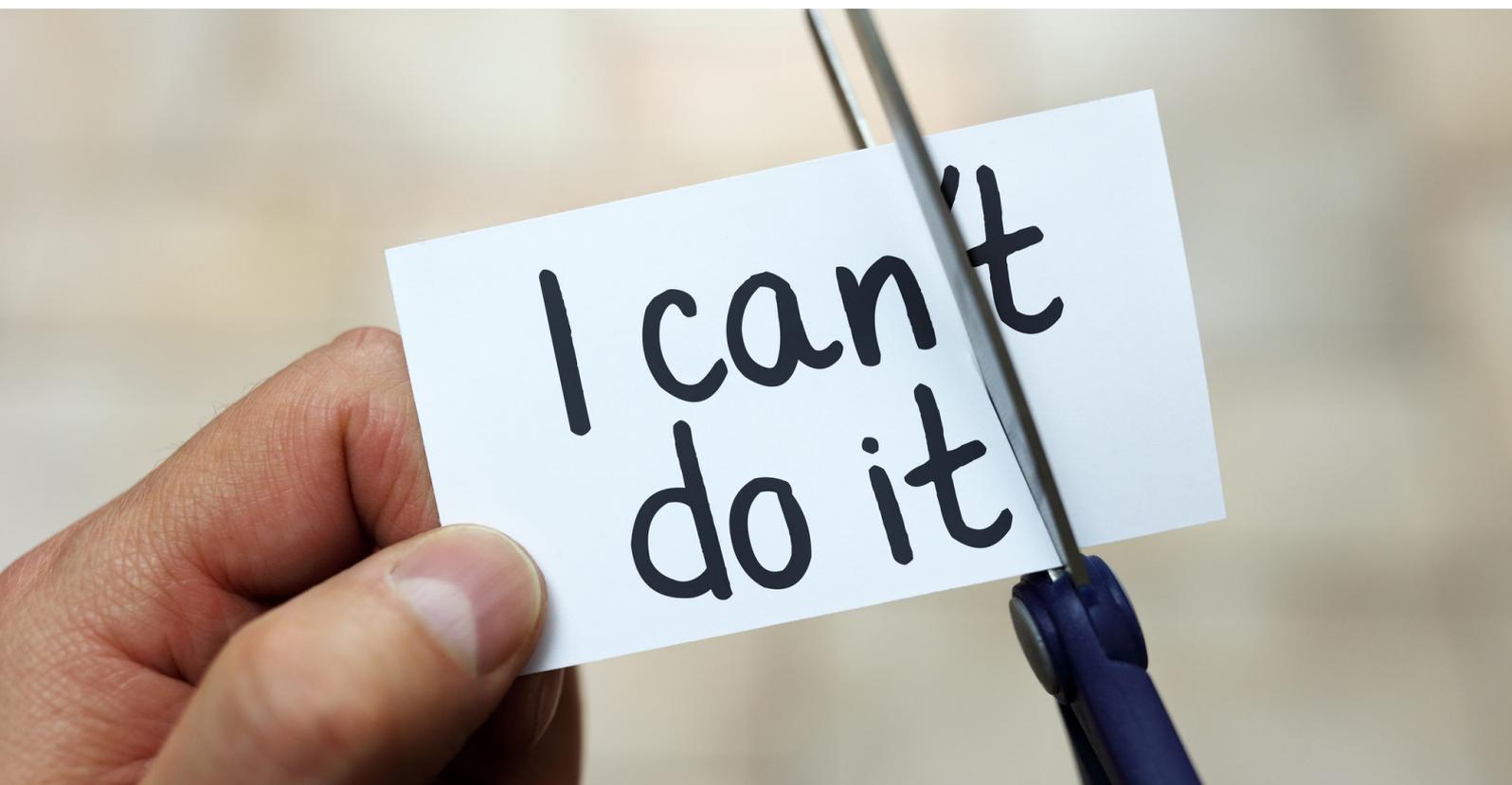


14. DEVELOP A CHALLENGE MINDSET

Stress is defined as a response to something that is perceived as threatening. That means that much of what makes something stressful is our perception of that thing as a threat. But that's good news. It means that when some tough event comes our way, we actually have some control over how we respond to it. We can view it as a challenge that we can handle instead of a threat that would overwhelm us.

It may be that these two response types, challenge versus threat, parallel our decision of fight versus flight. When we view a stressor as a threat, we tend to have a stronger desire to avoid it. But when we view a stressor as a challenge we have a stronger desire to approach it [29].

The research suggests that changing how we view a stressor changes how our body responds to it [30] and that a challenge mindset appears to be the better choice [29]. So when encountering a stressor, take a moment to pause and give yourself a little pep talk. Tell yourself something like, "You can do this! You're stronger than you think!" This may help your mind and body shift in ways that can help you cope with stress more effectively.



15. BE MORE MINDFUL

Mindfulness involves being aware but non-judgmental about our thoughts, feelings and surroundings [31]. Many people use mindful meditation to reduce negative emotions like stress and anxiety, but we can also work on being more mindful in our daily lives by building skills like present awareness and compassionate acceptance [31]. So next time you are feeling stressed, try to practice these skills or do a short mindful meditation.



16. PRACTICE NAMING YOUR EMOTIONS

When we're stressed we often become overwhelmed by our emotions. But if we practice identifying, labeling and differentiating between our emotions, we can better understand how we are feeling and take the right actions to effectively resolve those feelings [32]. For example, if you're feeling stressed about a conflict with a family member, ask yourself what emotions you're feeling.

Maybe you're feeling embarrassed for a mistake you made. Maybe you're feeling unappreciated for all the things you do for this person. Or maybe you're feeling sad about the state of your relationship with this person. By getting clearer on the root emotions, you can more easily take actions or shift your perspective to resolve those feelings and reduce your stress.

17. GET BETTER ACQUAINTED WITH YOUR STRESS

Stress can include a lot of bodily changes and physical sensations like racing heart, quick breathing and tightening muscles. These feelings are there to warn us that something is wrong. If we can become more aware of our personal stress sensations, we can intervene sooner and prevent our stress from spiraling out of control. So we're served by observing our bodily sensations without judgment or avoidance [32], but also attempting to change our surroundings to prevent our stress from becoming chronic.

genetics that impair glutathione production). NAC has been shown to aid cancer prevention due to its ability to aid the metabolism of xenobiotics [19].



18. STOP RUMINATION CYCLES

When we ruminate, we think about the causes and implications of our current circumstances [33]. When we do this we get stuck in our heads—we're in the past and the future but not in the present. We can get stuck in negative ruminative cycles and as a result, have a difficult time moving past negative emotions and stressful situations.

So how do we stop ruminative cycles? One study showed that focusing on an unrelated problem helped reduce rumination [34]. Indeed, intentionally distracting yourself from the negative emotions can help stop rumination. So next time you're feel stressed, distract yourself with a change in scenery or change of thoughts. Something as simple as going for a walk can be really helpful [35].

19. GENERATE SOME POSITIVE EMOTIONS

In addition to making us feel good, positive emotions also help us broaden our thought processes, become more flexible, and be more efficient [36]. That makes positive emotions a useful tool for undoing negative emotions, like the ones that arise when we're stressed. So next time your stressed, try to find something that increases positive emotions—things like laughing with a friend, doing an activity you enjoy, doing something inspiring like hiking in a beautiful landscape or doing something calming like coloring in an adult coloring book [37].

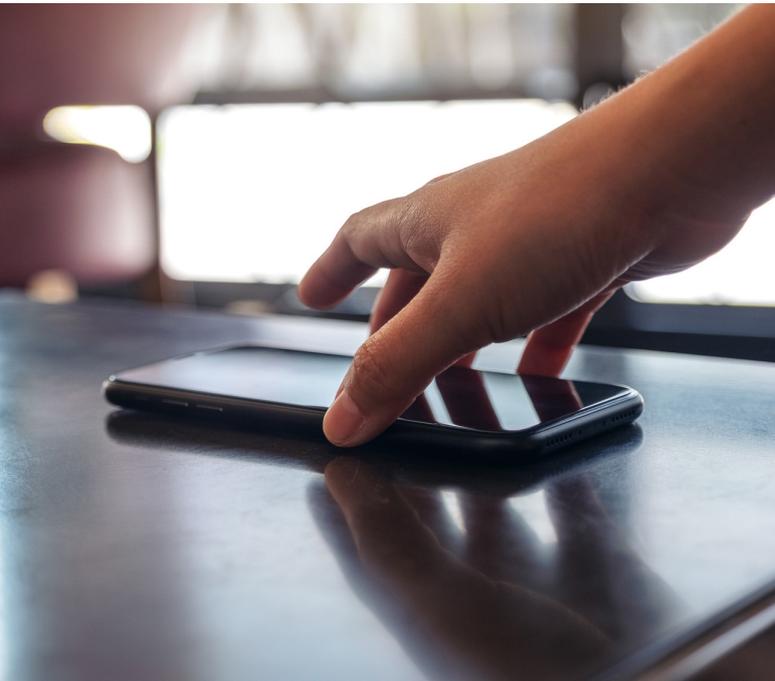


20. REFRAME THE SITUATION WITH COGNITIVE REAPPRAISAL

By focusing our attention away from negative things and onto positive things, we can reduce negative emotions that go along with stress [38, 39]. One way to do this is with cognitive reappraisal.

Cognitive reappraisal is defined as the attempt to reinterpret a situation in a way that alters its meaning and changes its emotional impact [40]. When we use cognitive reappraisal, we reframe our situation, this time paying more attention to the good things (or downplaying the bad). When we're struggling with stress, especially stress that we have no control over, cognitive reappraisal can be a really helpful tool [41].

21. TAKE A BREAK FROM YOUR PHONE



The research suggests that smartphone use, overall, is associated with greater levels of stress, and this association seems to be growing [42]. Perhaps because we are spending more and more time on our phones, they are contributing to more and more stress. Regardless of the reason, we can benefit from spending less time on our phones. You can start by creating “no phone zones” (places where you will not use your phone) or “no phone times” (times when you will not use your phone) [43]. By using our phones less, we not only reduce our stress, we also open up more time to do even more things that further reduce our stress.

22. PRACTICE ACCEPTANCE

Ironically, trying too hard to control how we feel can actually lead us to feel worse. If we instead focus on **CHANGING WHAT WE CAN AND ACCEPTING THE REST** we can feel a lot better [44]. So ask yourself, what are the things you can and can't change? Start taking baby steps to change the things you can change and try to let the rest go.

LET IT GO

Stress can be such a difficult thing to manage. Our hormones, bodily process, and thoughts go haywire. Sometimes we even get stuck in a stress cycle that can be hard to get out of. Luckily, there are things we can do. By using the strategies in this eBook to slowly undo both the bodily changes and mental changes that come from stress, we can indeed create a lower-stress life.



**HERE'S
TO HEALTH.**

REFERENCES

1. Charmandari, E., C. Tsigos, and G. Chrousos, *Endocrinology of the stress response*. Annu. Rev. Physiol., 2005. 67: p. 259-284.
2. McEwen, B.S., *Neurobiological and systemic effects of chronic stress*. Chronic stress, 2017. 1: p. 2470547017692328.
3. Thirthalli, J., et al., *Cortisol and antidepressant effects of yoga*. Indian journal of psychiatry, 2013. 55(Suppl 3): p. S405.
4. Engert, V., et al., *Specific reduction in cortisol stress reactivity after social but not attention-based mental training*. Science Advances, 2017. 3(10): p. e1700495.
5. Pawlow, L.A. and G.E. Jones, *The impact of abbreviated progressive muscle relaxation on salivary cortisol and salivary immunoglobulin A (sIgA)*. Applied psychophysiology and biofeedback, 2005. 30(4): p. 375-387.
6. Krajewski, J., M. Sauerland, and R. Wieland, *Relaxation-induced cortisol changes within lunch breaks—an experimental longitudinal worksite field study*. Journal of Occupational and Organizational Psychology, 2011. 84(2): p. 382-394.
7. Field, T., et al., *Cortisol decreases and serotonin and dopamine increase following massage therapy*. International Journal of Neuroscience, 2005. 115(10): p. 1397-1413.
8. Buchanan, T.W., M. al'Absi, and W.R. Lovallo, *Cortisol fluctuates with increases and decreases in negative affect*. Psychoneuroendocrinology, 1999. 24(2): p. 227-241.
9. Yehuda, N., *Music and stress*. Journal of Adult Development, 2011. 18(2): p. 85-94.
10. Khalfa, S., et al., *Effects of relaxing music on salivary cortisol level after psychological stress*. ANNALS-NEW YORK ACADEMY OF SCIENCES, 2003. 999: p. 374-376.
11. Tomiyama, A.J., et al., *Low calorie dieting increases cortisol*. Psychosomatic medicine, 2010. 72(4): p. 357.
12. Sartori, S.B., et al., *Magnesium deficiency induces anxiety and HPA axis dysregulation: modulation by therapeutic drug treatment*. Neuropharmacology, 2012. 62(1): p. 304-312.
13. Torabi, M., et al., *Effects of nano and conventional Zinc Oxide on anxiety-like behavior in male rats*. Indian journal of pharmacology, 2013. 45(5): p. 508.
14. D'souza, D., et al., *The effect of dietary magnesium aspartate supplementation on pork quality*. Journal of Animal Science, 1998. 76(1): p. 104-109.
15. Kiecolt-Glaser, J.K., et al., *Omega-3 supplementation lowers inflammation and anxiety in medical students: a randomized controlled trial*. Brain, behavior, and immunity, 2011. 25(8): p. 1725-1734.
16. Hilimire, M.R., J.E. DeVlyder, and C.A. Forestell, *Fermented foods, neuroticism, and social anxiety: An interaction model*. Psychiatry research, 2015. 228(2): p. 203-208.
17. Telch, M.J., A. Silverman, and N.B. Schmidt, *Effects of anxiety sensitivity and perceived control on emotional responding to caffeine challenge*. Journal of Anxiety Disorders, 1996. 10(1): p. 21-35.

18. Mauss, I.B. and M.D. Robinson, *Measures of emotion: A review*. Cognition and Emotion, 2009. 23(2): p. 209-237.
19. Zope, S.A. and R.A. Zope, *Sudarshan kriya yoga: Breathing for health*. International journal of yoga, 2013. 6(1): p. 4.
20. Goldsmith, R.L., D.M. Bloomfield, and E.T. Rosenwinkel, *Exercise and autonomic function*. Coronary artery disease, 2000. 11(2): p. 129-135.
21. Figueroa, A., et al., *Resistance exercise training improves heart rate variability in women with fibromyalgia*. Clinical physiology and functional imaging, 2008. 28(1): p. 49-54.
22. Mourof, L., et al., *Cardiovascular autonomic control during short-term thermoneutral and cool head-out immersion*. Aviation, space, and environmental medicine, 2008. 79(1): p. 14-20.
23. Charney, D.S., C. Grillon, and J.D. Bremner, *The Neurobiological Basis of Anxiety and Fear: Circuits, Mechanisms, and Neurochemical Interactions* (Part I. The Neuroscientist, 1998. 4(1): p. 35-44.
24. Stein, M.B., et al., *COMT polymorphisms and anxiety-related personality traits*. Neuropsychopharmacology, 2005. 30(11): p. 2092-2102.
25. Singh, B., et al., *Dietary quercetin exacerbates the development of estrogen-induced breast tumors in female ACI rats*. Toxicology and applied pharmacology, 2010. 247(2): p. 83-90.
26. Jongkees, B.J., B. Hommel, and L.S. Colzato, *People are different: tyrosine's modulating effect on cognitive control in healthy humans may depend on individual differences related to dopamine function*. Frontiers in psychology, 2014. 5: p. 1101.
27. Alvaro, P.K., R.M. Roberts, and J.K. Harris, *A systematic review assessing bidirectionality between sleep disturbances, anxiety, and depression*. Sleep, 2013. 36(7): p. 1059-1068.
28. Zhang, J., et al., *Relationship of sleep quantity and quality with 24-hour urinary catecholamines and salivary awakening cortisol in healthy middle-aged adults*. Sleep, 2011. 34(2): p. 225-233.
29. Blascovich, J., *25 Challenge and Threat*. Handbook of approach and avoidance motivation, 2013: p. 431.
30. Tomaka, J., et al., *Cognitive and physiological antecedents of threat and challenge appraisal*. Journal of personality and social psychology, 1997. 73(1): p. 63.
31. Greeson, J. and J. Brantley, *Mindfulness and anxiety disorders: Developing a wise relationship with the inner experience of fear, in Clinical handbook of mindfulness*. 2009, Springer. p. 171-188.
32. Mennin, D.S., *Emotion Regulation Therapy: An Integrative Approach to Treatment-Resistant Anxiety Disorders*. Journal of Contemporary Psychotherapy, 2006. 36(2): p. 95-105.
33. Nolen-Hoeksema, S. and J. Morrow, *A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake*. Journal of Personality and Social Psychology, 1991. 61(1): p. 115-121.

34. Hilt, L.M. and S.D. Pollak, *Getting out of rumination: Comparison of three brief interventions in a sample of youth*. Journal of abnormal child psychology, 2012. 40(7): p. 1157-1165.
35. Merom, D., et al., *Promoting walking as an adjunct intervention to group cognitive behavioral therapy for anxiety disorders—a pilot group randomized trial*. Journal of anxiety disorders, 2008. 22(6): p. 959-968.
36. Fredrickson, B.L., et al., *The undoing effect of positive emotions*. Motivation and emotion, 2000. 24(4): p. 237-258.
37. Curry, N.A. and T. Kasser, *Can coloring mandalas reduce anxiety?* Art Therapy, 2005. 22(2): p. 81-85.
38. Amir, N., et al., *Attention modification program in individuals with generalized anxiety disorder*. Journal of Abnormal Psychology, 2009. 118(1): p. 28-33.
39. Hofmann, S.G., et al., *How to handle anxiety: The effects of reappraisal, acceptance, and suppression strategies on anxious arousal*. Behaviour Research and Therapy, 2009. 47(5): p. 389-394.
40. Gross, J.J. and O.P. John, *Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being*. Journal of Personality and Social Psychology, 2003. 85(2): p. 348-362.
41. Troy, A.S., A.J. Shallcross, and I.B. Mauss, *A Person-by-Situation Approach to Emotion Regulation: Cognitive Reappraisal Can Either Help or Hurt, Depending on the Context*. Psychological Science, 2013.
42. Vahedi, Z. and A. Saiphoo, *The association between smartphone use, stress, and anxiety: A meta-analytic review*. Stress and Health, 2018. 34(3): p. 347-358.
43. Davis, T., *Outsmart Your Smartphone: Conscious Tech Habits for Finding Happiness, Balance, and Connection IRL*. 2019: New Harbinger Publications.
44. Harris, R., *ACT made simple: An easy-to-read primer on acceptance and commitment therapy*. 2019: New Harbinger Publications.



If you like what you've read here, be sure to [explore HealthMeans](#) for 1000s of additional health talks, eBooks and programs!

© 2020 HealthMeans. The contents of this document are for informational purposes only and are not intended to be a substitute for professional medical advice, diagnosis or treatment.

This document does not provide medical advice, diagnosis or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition.