

Research Support

1. Deep Breathing

- a. A systematic review of deep breathing interventions
 - i. <https://pubmed.ncbi.nlm.nih.gov/31436595/>
- b. Five minutes of deep breathing led to reduced anxiety, stress, and physiological arousal, particularly in older adults
 - i. <https://pmc.ncbi.nlm.nih.gov/articles/PMC8481564/>
- c. 15 minutes of deep breathing led to improved attention, mood, and stress in adults:
 - i. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5455070/>
- d. Deep breathing, especially if using a “4-7-8” technique, in which a person inhales for 4 seconds, holds for 7 seconds, and exhales for 8 seconds was associated with lower anxiety and higher quality of life among people just after surgery
 - i. <https://pubmed.ncbi.nlm.nih.gov/36480101/>

2. Mindfulness Meditation

- a. A systematic review of 6 RCTs of online mindfulness meditation interventions lasting 2-6 weeks, involving 10-30 minutes of daily engagement
 - i. <https://pmc.ncbi.nlm.nih.gov/articles/PMC8835139/>
- b. A single 14-min mindfulness session was associated with improved attention
 - i. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3705166/#:~:text=Findings%20suggest%20that%20a%20brief,the%20ERN%20or%20behavioral%20performance.>
- c. Four weekly sessions of mindfulness mediation led to reduced anxiety and improved response to stress among college students compared to an active control group
 - i. <https://s3.wp.wsu.edu/uploads/sites/2111/2018/05/Shearer-MindfulnessAccademicStress.2016.pdf>
- d. 15 minutes of mindfulness meditation was associated with improved emotional processing compared to a control group
 - i. <https://www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2019.01074/full>

3. Art Making

- a. Coloring reduced test anxiety among college students
 - i. <https://pubmed.ncbi.nlm.nih.gov/30908136/>
- b. Coloring a mandala improved mood among veterans with PTSD
 - i. <https://pubmed.ncbi.nlm.nih.gov/38918742/>
- c. Art making, including coloring, improved mood and reduced stress for caregivers in an oncology setting
 - i. <https://pubmed.ncbi.nlm.nih.gov/31557665/>
- d. Healthy adults had reduced cortisol levels after coloring

- i. <https://www.tandfonline.com/doi/pdf/10.1080/07421656.2016.1166832>
- 4. Walking Breaks
 - a. Metabolic benefit of “micro-walks” (<4 min)
 - i. <https://royalsocietypublishing.org/doi/10.1098/rspb.2024.1220>
 - ii. Popular article about the scientific article:
<https://www.prevention.com/health/a62749830/short-micro-walks-could-improve-health-study/>
 - b. Metabolic benefit of 5 min walks every 30-60 minutes
 - i. https://journals.lww.com/acsm-msse/fulltext/2023/05000/breaking_up_prolonged_sitting_to_improve.9.aspx
 - ii. Popular article about the scientific article:
<https://www.cuimc.columbia.edu/news/rx-prolonged-sitting-five-minute-stroll-every-half-hour>
 - c. Hourly 5 min walks improved mood more than one 30-min walk
 - i. <https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-016-0437-z>
 - d. Preliminary findings of short walking breaks’ effect on physical and mental health in a sample of 20,000:
 - i. <https://www.npr.org/2023/12/22/1213518650/changing-our-sedentary-screen-filled-habits>
- 5. Animal Videos
 - a. Viewing photos of puppies and kitten improved attention and fine motor dexterity
 - i. <https://pubmed.ncbi.nlm.nih.gov/23050022/>
 - b. Watching a 3-minute puppy video improved mood and reduced stress for college students more than control condition videos
 - i. <https://www.tandfonline.com/doi/abs/10.1080/08927936.2023.2210439>
 - c. Videos of animals improved students mood and attention during class:
 - i. <https://pubmed.ncbi.nlm.nih.gov/28960127/>
 - d. Dog videos may improve self-reported stress and mood
 - i. <https://www.tandfonline.com/doi/abs/10.1080/08927936.2021.1999606?journalCode=rfa20>
 - e. One study found that watching a video of cute animals reduced stress by 50%; however, a peer-reviewed publication associated with this study was unable to be found:
 - i. <https://biologicalsciences.leeds.ac.uk/school-biomedical-sciences/news/article/273/what-are-the-health-benefits-of-watching-cute-animals>
- 6. Gratitude

- a. A three week gratitude intervention (writing down 3 good things daily using a gratitude app) was associated with improved mood and less work-related stress among healthcare providers
 - i. <https://ojin.nursingworld.org/table-of-contents/volume-28-2023/number-3-september-2023/articles-on-previously-published-topics/gratitude-practice-to-decrease-stress/>
- b. Single session of writing down things for which one is grateful led to reduced stress and improved mood
 - i. <https://www.tandfonline.com/doi/full/10.1080/17439760.2023.2170823>
- c. A six-week gratitude intervention improved wellbeing relative to an active control condition
 - i. <https://link.springer.com/article/10.1007/s10902-020-00261-5?fromPaywallRec=false>
- d. A two-week gratitude intervention improved stress and mood relative to a control condition for parents of preschoolers
 - i. <https://link.springer.com/article/10.1007/s44202-023-00099-x>
- e. A systematic review of 8 studies examining gratitude list interventions among workers found that the interventions reduced stress and improved mood:
 - i. <https://pmc.ncbi.nlm.nih.gov/articles/PMC8582291/>