"Thousands of candles can be lighted from a single candle, and the life of the candle will not be shortened. Happiness never decreases by being shared."

—Siddhartha Gautama, the Buddha, Indian spiritual leader and founder of Buddhism (563–483 BC)

How Well You Manage Stress May Affect Training Results

The time you invest in stress management may pay off in faster training results. A growing body of research shows that stress levels predict healing speed—people who experience more stress recover more slowly from illness or injury than those with less stress. Stress may come from life circumstances, such as a death or disaster, or may stem from an individual’s perception of stress, such as feeling overwhelmed by work or family matters.

Researchers from the University of Texas, Austin, and Yale University, New Haven, Connecticut, decided that since exercise is widely recommended as a health improvement method, it would be valuable to determine whether psychological stress affects a person’s muscular recovery after strenuous resistance training.

Researchers evaluated the relationship between mental stress and physical recovery after a bout of resistance training among 31 college students aged 19–21. The investigators collected data regarding the students’ perceived stress and life-event stress, as well as data on how each student experienced recovery over the 4 days following the workout.

Data analysis showed that students with higher levels of either life-event stress or perceived stress had worse recoveries. Recovery was measured in terms of maximal isometric force levels and feelings of energy, fatigue, and soreness. Study authors concluded that people who are under undue stress may need to pay more attention to allow for an appropriate recovery period before undertaking another strenuous training session.

High-Intensity Training for People With Parkinson’s?

Researchers at the University of Alabama, Birmingham (UAB), recently conducted a small study to learn whether a training program designed to challenge strength, power, endurance, balance and mobility could produce benefits for people with Parkinson’s disease.

Fifteen patients with moderately advanced Parkinson’s participated in the 16-week program, which consisted of three 40-minute sessions per week. According to the authors, “The core prescription for strength and power development consisted of progressive resistance training (RT) for the major muscle groups with five exercises (leg press, knee extension, chest press, overhead press, lat pull-down) … Subjects also completed 3 sets of abdominal crunches each session. … Between RT sets, subjects performed 1–2 body weight exercises (e.g., squat, push-up, step-up, lunge, side lunge, modified dip) for 45–60 [seconds, or did a 60-second interval on a treadmill or stationary cycle].” Control group members included 15 age-matched individuals who did not have Parkinson’s disease and who did not take part in any exercise protocol.

Study author Marcus Bamman, PhD, a professor in the department of cell, developmental and integrative biology at UAB, said in a university news release, “We saw improvements in strength, muscle size and power, which we expected after rigorous weight training; but we also saw improvement in balance and muscle control … [and] in cognition, mood and sense of well-being.”

“These are all indications that strength training produced a major improvement in the ability to activate muscles, to generate power and to produce energy,” said Bamman. “All of which can contribute to improved quality of life and reduction of injury risk from falls.”

The findings were reported in the Journal of Applied Physiology (2014; doi: 10.1152/japplphysiol.01277.2013). More research is needed with a larger sample size.

Ai Chi May Help People With MS

Ai chi, a form of water exercise developed by Jun Konno and inspired by tai chi, qigong and Watsu, may benefit people with multiple sclerosis, according to preliminary research published in NeuroRehabilitation (2013; 33, 431–37).

Lead study author Deniz Bayraktar, PT, MSc, from Gazi University in Ankara, Turkey, told IDEA Fitness Journal that he and his colleagues conducted the study because “we sadly realized that our [MS] patients got bored and even stopped coming for physiotherapy sessions. We decided we needed to find something new and enjoyable, and we came across Ai Chi.”

The study included 23 women with mild to moderate MS symptoms who were divided into two groups: an ai chi group that participated in 1-hour classes, two times per week, for 8 weeks; and a control group that did home exercises for the arms and legs, along with breathing exercises.

Ai chi group members improved in static standing balance, functional mobility, upper- and lower-extremity muscle strength, and fatigue levels. Control group members experienced no improvements. Bayraktar noted that the difference between ai chi specifically and water exercise in general lies in the focus on balance.

“The nature of Ai Chi challenges the patient with lots of balance exercises. [Since] risk of falling and loss of balance are major problems for MS patients, Ai Chi is useful exercise. MS patients can do many balance maneuvers, such as one-legged stances, that they could never try on land due to the risk of falling and injuring themselves.”

Bayraktar noted, “Scientific guidelines like the Canadian Physical Activity Guidelines for Adults with Multiple Sclerosis recommend that MS patients perform exercise for aerobic capacity and strengthening at least two times per week. As seen from our Ai Chi study, Ai Chi has potential both for improving aerobic capacity, even though we did not evaluate it, and for strengthening … People with MS need to move and exercise. Encourage finding the exercise program—such as Ai Chi, tai chi or Pilates—that best suits the person. In our physiotherapy center … if a patient does not like water, we say, ‘Why don’t you try Pilates?’”

Researchers recommended that future studies further explore the benefits of aquatic exercise for people with MS.

To learn more about ai chi, go to www.ideaft.com/fitness-library/ai-chi. >>
Happy Older Adults Are Also More Fit

Having a positive outlook as we age may not only be related to mood; it may also be reflected in our physical well-being. A large longitudinal study of 3,199 men and women aged 60 and older in Great Britain has revealed a relationship between happiness and better physical function.

Lead study author Andrew Steptoe, DSc, at University College London, said to IDEA Fitness Journal, “This research suggests that enjoyment of life contributes to a healthier and more active old age. It suggests that among other things, we should think about the positive aspects of life and experience [for] older people. Not only are these important issues in themselves; they may also have benefits in terms of physical function. These [benefits] could in turn help us contain the spiraling costs of social and health care among older sectors of society.”

Researchers conducted the study to discover whether life enjoyment also predicted a reduced risk of physical impairment over an 8-year period in a large population sample. Investigators collected data on physical health, walking speed and mobility, depression, enjoyment of life, and levels of impairment in daily activities, among other categories, at baseline and every 2 years afterward. Data analysis showed strong associations between physical function and life enjoyment. Steptoe said in a Canadian Medical Association news release, “This is not because the happier people are in better health, or younger, or richer, or have more healthy lifestyles at the outset, since even when we take these factors into account, the relationship persists.”

In his remarks to IDEA Fitness Journal, Steptoe added, “We have previously shown that positive well-being and enjoyment of life are predictors of longer life. So older people who report greater enjoyment are less likely to die over the next 5–8 years than those with lower enjoyment of life. What this study showed was that older people who enjoy life are also at lower risk for developing problems with activities of daily living, and for showing declines in physical function.”

Steptoe recommended that “fitness professionals should make efforts to increase the enjoyment of life in their older clients. Most fitness professionals and physical activity educators enjoy physical activity—otherwise, they would probably be doing a different job. But this is not necessarily true of everyone in the population. The challenge is to enhance enjoyment and pleasure in life for those who don’t find vigorous activity very appealing.”

YOGA AND OTHER CAM METHODS FOR SMOKING CESSION

Among the various mind-body approaches out there, yoga and meditation-based therapies show the most promise for helping people to quit smoking, according to the National Center for Complementary and Alternative Medicine’s NCCAM Clinical Digest in January 2014. While more studies are needed, a research review of 14 clinical trials by investigators from Oregon Health & Science University in Portland found positive results from the practices of yoga, meditation and breathing exercises for people wanting to kick the smoking habit.

In another small pilot study, researchers from Brown University in Providence, Rhode Island, compared the results of 55 women smokers who were assigned to either an 8-week vinyasa yoga program or a general health and wellness program. At the end of the treatment, women in the yoga group had a higher abstinence rate. They were also more successful at remaining smoke-free 6 months later; however, the difference between groups after 6 months was not statistically significant.

Advantages of complementary and alternative methods for smoking cessation include no need for drug therapy, no unwanted side effects and the fact that subjects may enjoy other positive benefits. For example, in the Brown University study, women in the yoga group experienced less anxiety and an improved perception of health and well-being compared with control group members.

The review study was published in Drug and Alcohol Dependence (2013; 132 [3], 399–410). The yoga study is available at www.ncbi.nlm.nih.gov/pmc/articles/PMC3304243/. Resources to help smokers quit are available at http://smokefree.gov.

Can Pilates Improve Sleep?

Pilates offers more than good exercise for the body; consistent practice leads to real improvements in life quality, notably better depth and quality of sleep, says recent research. A preliminary study with 30 young adults showed that participating in two 1-hour Pilates mat classes per week for 12 weeks improved both sleep quality and life quality. Subjects were healthy, inactive adults aged 20–24, who provided self-reports on how the Pilates tice affected these factors.

Study authors noted that while the protocol resulted in benefits for practitioners, the sample size was small and there was no control group. More research is warranted. The study appeared in the Journal of Bodywork & Movement Therapies (2013; 17, 5–10).
Intensive Exercise: Feasible for People With Dementia?

Historically, fitness and health practitioners have been reluctant to steer people with dementia into more intensive exercise programs. Researchers from the University of Arizona, Tucson, and the University of Heidelberg, in Germany, believed that customized, more intense exercise programs could significantly improve care even for older male and female inpatients with dementia. Their study findings indicate they may be right.

“Our recent findings suggest that an intensification of exercise training is feasible in patients with dementia if trainers use specific guidelines to promote exercise training and if a progressive high-intensity resistance and functional training program is developed according to established exercise guidelines for older adults,” said lead study author Michael Schwenk, PhD, research associate at the University of Arizona Interdisciplinary Consortium on Advanced Motion Performance, to IDEA Fitness Journal.

“Low-functioning patients may benefit the most from the presented training program.”

According to Schwenk, “People with dementia have a threefold risk of falling compared to those without cognitive impairment. Exercise can be an important tool for maintaining everyday motor functions (such as walking), which are hallmarks of mobility-related quality of life and independence.”

Schwenk emphasized that “trainers should have a certificate assuring their knowledge about specific strategies for promoting exercise in the cognitively impaired.” He provided these practical guidelines:

- Speak slowly and clearly, repeating instructions several times.
- Make simple direct requests (“Mrs. Brown, please stand up”) rather than indirect requests (“Mrs. Brown, can you stand up for me?”).
- Use pictorial instructions (“nose over toes”) rather than directional instructions (“Lean forward”).
- To overcome initial reluctance, praise any response to exercise instructions, and encourage people to try again.
- Provide tactile and rhythmic cues to ensure correct execution of movements.
- Avoid carrying out unexpected moves on an unprepared patient, as they may cause distress.
- Encourage patients to give each task their maximum effort and to carry out tasks independently if possible.
- Focus a lot of attention on emotional aspects, such as reassurance and empathy toward each patient, as is described in dementia-care guidelines.

The study is available in the Journal of Alzheimer’s Disease (2014; doi: 10.3233/JAD-130470).

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