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**ORIGINAL RESEARCH** 

# The Winning Edge<sup>™</sup>: Harnessing The Power Of Physical Activity To Reduce Stress

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#### Introduction

The blazing speed of the modern workplace and the frenetic pace of life leave many sprinting breathlessly to keep up. With more than eight out of 10 American workers describing their work as stressful<sup>1</sup>, employers and employees alike are searching for real solutions to increase their stamina and strengthen their stride to win the race of life. With downsizing, heavier workloads, new global pressures and sitting for long periods at work, living an active, healthy and balanced lifestyle, in the 21st century, has become a rare reality.

The goal of this white paper is to provide you and your organization with a "movement manifesto", an action plan to make physical activity and exercise a regular part of your workday and life, effectively combating stress, sitting disease and the dire consequences of an inactive, unhealthy lifestyle. In this report, you'll learn about:

- 1. Stress @ Work: The impact of stress, strain, sitting and inactivity
- 2. The scientific benefits of PLAY™
- 3. Practical physical activity and exercise strategies in the workplace

Ultimately this report will provide you with specific health and fitness strategies you can implement in your work, today, to help fortify your ability to not just keep pace, but ultimately to win the race of life.

### Stress @ Work: The Impact Of Stress, Strain, Sitting And Inactivity

When you hear the word "stress" what do you think of? For most of us, we think of persistent work demands, unpaid bills, challenging relational conflicts or just being overwhelmed under the pressure of life. Stress has been defined as any demanding "emotional experience accompanied by predictable biochemical, physiological and behavioral changes.<sup>2</sup> Stress has also been interpreted as our internal response to anything that poses a physical or emotional challenge or threat to us both negatively (work challenges, marital difficulties, finances or loss of a loved one) or positively (getting married, receiving a promotion or having a baby). Or stress expert, Dr. Brian Luke Seaward's response, "There's no one definition, but there's a consensus among professionals in the field that stress is a perceived threat—real or imagined—to one's mind, body, spirit, or emotion."<sup>2b</sup>

One thing we know, work life in the 21st century has brought significant change at unprecedented speed. What impact does this pace of living have on the health, fitness and overall well-being of American workers? According to the American Psychological Association 2013 Work and Well-being National Survey,<sup>3</sup>



- 84 percent say they experienced the same amount of stress last year.
- 78 percent say their stress level increased or stayed the same over the past five years.
- 65 percent of working Americans state work as a significant source of stress with more than onethird (35 percent) experiencing chronic stress.

#### Sleep And Stress

While most American workers understand the importance of adequate sleep, most adults in the survey report negative consequences from not getting enough sleep, for example:

- More than half (53 percent) report feeling sluggish or lazy.
- 42 percent report that their sleep quality is fair or poor.
- 43 percent report that stress has caused them to lie awake at night in the past month.
- 38 percent report feeling irritable.
- 29 percent report they have trouble concentrating.
- 25 percent report feeling no motivation to take care of responsibilities.

#### Stress And Eating

Many working adults indicate participating in unhealthy coping behaviors such as overeating due to stress and state these habits lead to unhealthy and undesirable results, such as fatigue, laziness, poor body image and an overall sense of disappointment in themselves. According to the survey:

- 38 percent of adults say they have overeaten or eaten unhealthy foods in the past month because of stress. Half of these adults (49 percent) report engaging in these behaviors weekly or more.
- 33 percent of adults who report overeating or eating unhealthy foods because of stress say they do so because it helps distract them from stress.

• After having overeaten or eaten unhealthy foods, half of the adults (49 percent) report feeling disappointed in themselves, 46 percent report feeling bad about their bodies and more than one-third (36 percent) say they feel sluggish or lazy.

#### Stress And Exercise

According to the survey, most American adults understand regular exercise is good for their personal health and well-being, reporting improved self-esteem, feeling better emotionally, enhanced body image and esteem as well as feeling less stressed, but few say they make time to exercise regularly. The survey details:

- Only 17 percent of adults report exercising daily.
- 43 percent of adults who exercise to relieve stress have actually skipped exercise due to stress.
- Half of adults (50 percent) say that being physically active or fit is extremely or very important to them, yet only 27 percent report doing an excellent or very good job of achieving this.
- 43 percent of adults who report exercising specifically to help manage stress say they skipped exercise or physical activity in the past month when they were stressed.

#### Stress And The Workplace

- Nearly half (44 percent) of adults say they are either not doing enough or are not sure whether they are doing enough to manage their stress.
- Despite growing awareness of the importance of a healthy workplace, few working Americans say their organizations provide sufficient resources to help them manage stress (36 percent) and meet their mental health needs.

Additionally, researchers from the University of Massachusetts gathered updated data related to job stress to American corporations, uncovering more than \$300 billion a year in health care costs, absenteeism and poor performance.<sup>4-7</sup>

The research indicates:

- 40 percent of job turnover is due to stress.<sup>4</sup>
- Healthcare expenditures are nearly 50 percent greater for workers who report high levels of stress.<sup>5</sup>
- Job stress is the source of more health complaints than financial or family problems.<sup>5</sup>
- Depressive illness, a common side effect of job stress, in employees is associated with nearly 10 annual sick days.<sup>6</sup>
- Insurance data indicates insurance claims for stress-related industrial accidents cost nearly twice as much as non stress-related industrial accidents.<sup>7</sup>

#### **Progress, Sitting And Stress**

For most of human history, human beings have relied primarily upon their physical prowess; fitness, strength, endurance, stamina, agility, speed and power to survive in the harsh conditions and realities of life. From traveling, hunting, gathering and fighting, our history was replete with long arduous hours of physical struggle throughout daily living. Our ancestors didn't have to think about being physically active because their very existence and survival was dependent upon their physical activity. It wasn't until the latter part of the 18th century, with the advent of the Industrial Revolution where machines began to replace some of the daily activities and functions once performed by human hands.

Fast forward to the 21st century and we see massive technological, occupational and social changes which have created an environment much more conducive to physical inactivity in a majority of the western world. In many growing economies, physical activity has been systematically removed from daily living. With elevators, escalators, automobiles, mass transit, television, computers, Xbox, smart phones, texting, Facebook, drive through restaurants and remote controls, the majority of our daily work and living is spent sitting down. According to the 2010 census, 25 percent of the population is now employed in sales/office jobs and 35 percent in management, science, and art jobs. Only about 20 percent of the American population is still employed in jobs traditionally thought of as manual labor.<sup>8</sup>

Most Americans have stopped moving. With the age of the computer, a large majority of the American workforce has now shifted to sedentary occupations, becoming "knowledge workers"—now no longer receiving compensation for physical labor—but rather what can be created intellectually. This change has created a seismic shift in the way we work and live and it is happening all over the world.

Despite the overwhelming knowledge and education regarding the health and fitness benefits of regular physical activity, individuals world wide are moving less in all aspects of life—at home, work and as they travel. Globally, about one in three people obtain little, if any, physical activity.<sup>9</sup>

For example, just 50 years ago, 30 percent of working Americans spent their entire day working in high-activity, energy burning occupations; by 2000, that number had plummeted to only 22 percent. Conversely, low activity jobs skyrocketed in the same time frame from 23 to 41 percent, with a significant amount of working Americans now sitting at their desks. Additionally, driving automobiles increased from 67 percent of all trips to work in 1960 to 88 percent in 2000, while walking and taking public transit to work decreased. Also, researchers alarmingly uncovered that our kids are moving far less as well. For example, approximately 40 percent of American school kids rode bikes or walked to school in 1969; fast-forward to 2001, and only 13 percent did so. 11

Researchers now estimate most American and other industrialized workers spend more than eight to 15 hours a day engaged in sedentary behaviors (sitting, reclining or lying down during work or waking hours), totaling nearly 60 percent of our waking hours being inactive. 12-13

What impact does this shift in work and living have upon human health?

- Researchers have identified an increased risk of cardiovascular disease and diabetes are correlated with sedentary behavior, or any prolonged unbroken sitting time where your body is at rest.<sup>14</sup>
- Scientists at the Pennington Biomedical Research Center in Louisiana analyzed the lifestyles of more than 17,000 men and women over 13 years, and found that people who sit for most of the day are 54 percent more likely to die of heart attacks.

- It is estimated that approximately 35 percent of coronary heart disease mortality is due to physical inactivity.<sup>15</sup>
- Physical inactivity has been identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths globally.
- According to research at the American Institute for Cancer Research, up to 173,000 new cases of cancer could be prevented annually in the U.S. if people sat less.<sup>17</sup>
- Shocking research from the American Cancer Society found that the health benefits gained from regular physical exercise was negated from sitting too much throughout one's day.<sup>18</sup>
- The University of Missouri discovered sitting for long periods of time actually shuts off your body's ability to burn fat efficiently. Researchers discovered a fat burning enzyme called "lipoprotein lipase" which loses its ability to be absorbed when you are seated for long periods of time. Bottom line according to researchers, is that sitting for too long shuts down your metabolism and creates a fat storing body instead of a fat burning body.<sup>19</sup>
- Is sitting the new smoking? According to a research study published in the journal *Lancet*, physical inactivity kills as many people per year as smoking.<sup>20</sup>
- Researchers world wide are identifying the impact sitting is having on human health. According to renowned Mayo Clinic physician, researcher and author Dr. James Levine, "Excessive sitting impacts our body's metabolic system. Today, our bodies are breaking down from obesity, high blood pressure, diabetes, cancer, depression and the cascade of health ills and everyday malaise that comes from what scientists have named sitting disease. It is almost like sort of owning a really cool sports car and letting it idle all day long. The engine gets gunked up. That's what happens to our bodies. The body, as we know, simply isn't built to sit all day."<sup>21</sup>

Sitting disease research is mounting. According to experts in the field of "inactive physiology" the stress to human health when we are sedentary is multiplicative, dramatically damaging muscle, bone, organs and systems throughout the human body. Here are some additional challenges our bodies experience by not moving more throughout our day:

- Declining brain function
- Muscle atrophy
- Weak core/poor abdominal strength
- Tight hips
- Leg and buttock muscles weaken and atrophy
- Poor blood circulation/deep vein thrombosis
- Weaker bones
- Strained neck
- Sore shoulders
- Inflexible back
- Upper and lower back disc damage<sup>22</sup>



The findings and conclusions in this report are those of the author's and do not necessarily represent the official position of the Wellness Council of America (WELCOA)

#### What's The Solution?

The recommendation for years to overcome physical inactivity, improve health and reduce stress has been, "Just exercise more!" Regular exercise is very beneficial to help relieve stress and is something we will dive into in a moment. However, here's the problem; recommending regular exercise is not enough. In other words, if you sit most of the day, and exercise for 30, 60 or even 90 minutes before, during or after work, but still spend the majority of your day sitting behind a desk, without moving, you are still at risk. All of the maladies just described, unfortunately, based upon the new science, cannot be remedied with just regular exercise.

#### What Can Be Done?

In the following pages, you will uncover a comprehensive "Movement" strategy called **PLAY**<sup>TM</sup> to help you and your organization win the race over stress and sitting disease.

#### The Power Of PLAY™

The approach we have developed to help you and your organization win over stress and sitting disease is a four-step method designed to effectively integrate proven stress management techniques with mini physical movements throughout your busy day. By helping you and your organization to move more frequently, you'll begin to see dramatic improvements in multiple areas such as:

- Boosting energy
- · Reducing fatigue
- Increasing happiness and joy
- Improving blood circulation
- Enhancing vitality
- Revving up metabolism
- · Increasing muscular strength and tone
- Improving flexibility
- Strengthening relationships
- Maximizing productivity for your work and life.

Below is an overview of the PLAY<sup>TM</sup> method and in the following pages you'll unwrap a summary of each section and how you can begin to PLAY<sup>TM</sup> at work.

#### What Is PLAY™?

The acronym PLAY™ stands for:

- P: Physical Activity Throughout Your Day
- L: Lengthening/Loosening Breaks
- A: Aerobic Activity And Active Games
- Y: Youthful-Resistance Training

All of the above elements found in the PLAY™ method are essential to an effective, complete and overall health and fitness program designed to help you at work. It is important to understand that the PLAY™ approach is a progressive mind and body fitness system. Anyone can benefit from this approach whether beginner or advanced fitness levels. The primary focus of all PLAY™ movement is to integrate proven stress management strategies with physical "mini breaks," providing a physical as well as mental break—what we call, "motion and emotion."

#### **Motion And Emotion**

We all know exercise is good for our bodies. It helps decrease the risk of cardiovascular disease and stroke, manage our weight, decreases the risk of various cancers, lowers blood pressure, improves metabolism, improves bone density and enhances our immune system. But did you know physical "motion" or exercise, affects "emotion?" According to fitness researcher, Michael Bracko of the American College of Sports Medicine (ACSM), the psychological aspect of exercise has been overlooked for some time now. Bracko states, "The psychological benefits of exercise are as important, if not more so, than the physical benefits. The physical needs and outcomes of exercise, whether it's to lose weight, tone muscle, or address obesity dominates what we hear about, but lots of people who exercise don't see stark physical benefits," said Bracko. "The message needs to be rewritten. When you exercise you're going to feel better. You'll feel less stress and more relaxed, you'll sleep better, and you'll likely be more confident." Researchers, like Bracko, point to various studies that have shown physical activity and exercise reduce the symptoms of stress, depression and anxiety and improve mood to the extent of working as well or better than many popular medications.<sup>22b</sup> But how do we find the time with all we have on our plates?

#### How To PLAY™

#### P: Physical Activity Throughout Your Day

So here's the good news. To begin to improve your health and fitness, you don't have to get sweaty. You don't have to put on gym clothes. You don't have to lift weights, or even get a gym membership. You don't have to take hours or even a significant amount of time. You can begin to boost your metabolism, energy, creativity, fitness and health by performing simple movements throughout your day. Recent research is now demonstrating performing these types of movements such as standing or fidgeting or just taking a break combined with effective stress management techniques even for just a minute or two, every hour throughout your day can make a big difference to your health and well-being, winning over stress and combating sitting disease.

More Breaks—More Business: Information presented in the *Harvard Business Review* identified employees work best when they take regular, brief renewing breaks throughout their busy day. The writers discovered the human body experiences different levels of energy, focus and alertness and found if an individual can take an energy break somewhere between 75-125 minutes, they will feel emotionally and mentally better, stronger, more resilient, more focused and more alert. The writers point to an experiment with Wachovia Bank: Participants who took regular "renewing breaks" to increase their energy, produced 13 percentage points greater year-after-year in revenues from loans versus the control group did. And they exceeded the control group's gains in revenues from deposits by 20 percentage points.<sup>23</sup>

Try these moves: To help you purposefully increase your physical activity during your busy day consider these movements and techniques:

- Stand on one leg and do deep breathing every hour. To help improve your balance and reduce stress, try a one-legged deep breathing balance movement. This will help break up your day as well as help you feel mentally and emotionally stronger.
- Take a fidget break. Research demonstrates fidgeting increases blood circulation as well as increasing your energy and caloric expenditure. Combine some leg shaking, hand tapping or arm swinging with deep breathing and you've got a great energy break!

- Stand And Talk. Whenever a phone call comes in, make it a goal to stand up and talk. If you are on your cell, you can also move around and do a walk and talk meeting.
- Hold A Standing Meeting. To help others in your company begin to move more during their day, set an example in your team meetings and stand for one to two minutes, even on one leg at a time, to break up the meeting. Lead your group in a deep breathing or visualization exercise and it just might become common practice—or standing meeting!

#### L: Lengthening And Loosening Breaks

Research from the American Council on Exercise, the American College of Sports Medicine and National Strength and Conditioning Association and other established health and fitness organizations have determined that regular lengthening or stretching activities performed throughout your day or before or after your workout can have a significant impact upon your health, fitness, flexibility and performance. Take a look at just a few of the benefits lengthening movements can offer you. Lengthening:

- Decreases muscle stiffness, increases range of motion and slows the physiological aging process of your joints
- Warms your body up and reduces risk of injury
- Helps relieve post-exercise aches and pains
- Improves posture and body symmetry
- Helps reduce or manage your stress
- Increases blood circulation, reduces muscular tension and enhances muscular relaxation
- Improves your body's overall functional performance
- Prepares the body for the stress of exercise
- Promotes circulation and prevents injury
- Decreases the risk of low-back pain<sup>25, 26, 27</sup>

Speaking of enjoyment, along with lengthening breaks try adding some additional laughter breaks to your day and you've got one of the most powerful and amazing health and fitness combinations.

#### Loosen Up With Laugh Breaks

Researchers agree, laughter is the best medicine. Next to regular physical activity and exercise, laughing on a regular basis is one of the most powerful forms of activity you can perform for your health.

Research indicates laughing has been shown to:<sup>28-34</sup>

**Burn Calories:** Studies have demonstrated a few minutes of laughing can burn extra calories. Not a bad way to burn off lunch!

Release Happy Chemicals: Researchers have identified that a good laugh releases the body's feel good chemicals—endorphins—which help you feel better, reducing symptoms of anxiety, physical discomfort or pain, worry, depression and stress.

**Tighten Your Tummy:** Laughing is one of the best ways to give your abs a great workout. A hardy laugh contracts muscles of the abdominal, diaphragm and back providing you with a great core workout.

**Lower Blood Pressure:** Like exercise, the result of frequent laughter breaks has been shown to decrease blood pressure levels and improve blood flow throughout your body. This is great news when it comes to combating heart disease.

**Boost The Immune System:** Laughter increases immune cell function and also decreases stress hormones such as cortisol and adrenaline and keeps your immune system strong, helping you battle against viruses.

**Enhance Memory:** Some studies are now demonstrating a regular laughter break when studying can increase your focus, learning and test scores.

**Reduce Pain And Improve Sleep:** In his ground breaking work, Norman Cousins, a researcher and author who was diagnosed with a rare and painful spinal disorder discovered through his research and

personal experience that laughing was one of the best ways to relieve discomfort and receive restful sleep.

Make You Look And Feel Young Again: It has been estimated that children laugh on average 300-400 times a day and adults only 10-15. Laugh breaks bring a sense of playfulness back to your day as well as help contracting over 15 muscles in your face and increasing blood flow and reducing wrinkles.

Mini-Lengthening And Loosening Breaks: All said and done, combining lengthening and laughter (loosening) together throughout your day can be a great mini workout and one of the most enjoyable ways to improve your day and life. When we laugh, especially when we find something particularly funny, we increase our heart rate, metabolism, core temperature and lower our blood pressure. A hardy laugh also sends oxygen throughout our body and releases chemicals that bring a sense of well-being. Lastly, a good laugh allows us to use the muscles in our face and abs for a great mini workout. Not to mention bringing a needed dose of extra joy to our busy days.

Try these moves: Set an alarm clock or your smart phone to remind you every hour to:

- Touch Your Toes And Tickle Your Funny Bone: Stretch your lower back and legs by touching your toes. When at work—every hour—throughout your day, stand from your desk, slowly reach down and touch your toes, hold for a few seconds, and repeat for a minute. Throughout, think of your favorite joke, story or anything that will put a smile on your face or laughter to your day.
- Lengthen And Laugh @ Your Computer:
   Watch a funny YouTube clip and perform
   any stretching motion for your upper or lower
   body—hold for 10-15 seconds—but laugh the
   entire time!
- Share The Laughter: Walk over to your friend's desk or station, tell them you've got a "good one," then share the "joke of the day" as you both do some simple stretching movements for your lower and upper body together.

#### A: Aerobic Activity And Active Games

Overwhelming scientific evidence from organizations such as Stanford and Harvard universities and the American College of Sports Medicine support the growing number of positive benefits for your body and health by performing Aerobic Activity and Active Games such as:

- Increasing lung capacity, muscle tone and blood flow
- Stimulating your brain, sharpening listening skills, promoting brain health, improving problem solving skills, and helping you learn new skills
- Delaying age associated memory loss
- Creating social ties/friendships
- Reducing risk of diabetes, high cholesterol
- · Lowering risk of heart disease, cancer, osteoporosis
- Strengthening immune system
- Lowering levels of depression, stress and anxiety
- Increasing self-esteem and self-image
- Managing body weight
- Increasing ability to burn fat for energy
- Better sleep
- More energy
- Increasing productivity
- And the list goes on and on. 35-39

The bottom line: Whether it's walking, jogging, swimming, cycling, tennis, basketball or something else that keeps you moving, aerobic or cardiovascular exercises helps your heart, lungs and body stay fit and healthy, reduces stress and empowers you to be young at heart. The good news is since your heart is a muscle, anything that challenges it, whether it's playing hopscotch or going for a hike or walking up a flight of stairs, you can strengthen it, just like any other muscle, making it even younger.

**Walking** \*1—According to the U.S. Centers for Disease Control and Prevention:

- Walking is by far the most popular form of aerobic exercise.
- More than 145 million adults now include walking as part of a physically active lifestyle.
- More than six in 10 people walk for transportation or for fun, relaxation, exercise, or for activities such as walking the dog.
- Walking is on the rise. The percentage of people who report walking at least once for 10 minutes or more in the previous week rose from 56 percent (2005) to 62 percent (2010).<sup>40</sup>

#### Why walk?

- It's easy to do. You don't need any special lessons, equipment or training to walk briskly and reap the many benefits to your mind, body and spirit.
- It's convenient. Walking is something you can do anytime, almost anywhere. No need for special gear, gym memberships or fancy equipment, all you need is a safe area to hoof it and you are on your way.
- It's inexpensive. One of the most common reasons cited by individuals who do not exercise regularly is the cost of exercise equipment. Walking doesn't cost anything—just the cost of a good pair of shoes.
- It's safe. Nearly everyone from young to old to pregnant can experience the many health and fitness benefits of walking without undue strain or risk of injury—unlike many "fad" fitness systems. Talk about saving on those doctor and physical therapy bills!
- It's a great way to reduce stress. Walking is a form of moving meditation. Its rhythmic patterns are perfect for helping us to relax and feel emotionally better.
- It's great for companies. Employees can walk together with a colleague, in groups, on company walking paths or participate in walking challenges.

 It's great for neighborhoods. You can conveniently walk with family, friends, neighbors and of course your dog.

Try these moves: Set an alarm clock or your smart phone to remind you every hour to do one or all of the following:

- Thankful Pacing: Take a two to five minute outdoor walk. With each step be mindful of and thankful for your health, family, friends and overall well-being.
- Walk And Talk: Go for a walking meeting with a trusted colleague—use this as a time of fellowship with others at work, share your high and low for the day.
- **Dream Jumping:** Put on your earphones and iPod and pretend you are jumping rope. Jump up and down at your desk for 30 seconds to two minutes. It's sure to put a smile on your face (and those around you too!).
- HEAT: Research demonstrates performing just a few minutes of High Energy Aerobic Training, such as chair jogging, can be very beneficial. Try to move your arms and feet at a moderate pace for 30 seconds. Then move your arms and feet as quickly as you can, imagining you are racing someone. This form of activity can have a significant impact upon your health, fitness and mental well-being.



#### **Thankful To Connect**

Research demonstrates the overwhelming power of gratitude as well as support when confronted with stress. In an experiment, researchers compared individuals who kept a "gratitude list" on a weekly basis and discovered they: exercised more regularly, reported fewer physical symptoms, felt better about their lives as a whole, and were more optimistic versus those who focused on their stress and challenges.

If you gain energy and strength from being surrounded by others who have an attitude of gratitude, make it a point to exercise regularly with them. This time of being together will be beneficial to your body as well as allow you the opportunity to share your gratitude or to laugh or to talk about something other than what may be weighing you down.<sup>40b</sup>

**Quick Tip:** Think about joining a softball, bowling or basketball league. Or think about walking or jogging with a group who are training for a 5K or ½ or full marathon. Or ask a neighbor to walk with you a few days a week.

#### Y: Youthful-Strength Training

Studies are now confirming that one of the most critical steps to recapturing our youth, vitality, resilience and health is strength training. What we call Youthful Strength Training. It will ultimately help you to be stronger, to combat stress, sitting disease and look and feel younger. Youthful strength training is one of the best things you can possibly do. Consider some of the benefits a Youthful Strength-Training program has on overall health and fitness:

- Boosts metabolism, increasing calorie expenditure during and after exercise
- Reduces body fat
- Improves posture
- Improves muscular strength
- Tones and firms muscles
- · Improves mobility and balance
- Helps prevent osteoporosis
- Reduces stress and anxiety
- Decreases risk of injury

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- Lowers risk of heart disease, cancer, high blood pressure, diabetes and arthritis
- Improves sleep
- Increases self-esteem
- Enhances performance of everyday activities and more. 41-47

Try these moves: Set an alarm clock or your smart phone to remind you hourly to do one or all of the following:

- Sitting Squats: Using your office chair, stand up and sit down 10 times. In other words, squat up and down 10 times. With each rep, think about how much stronger you are becoming physically as well as mentally. Visualize your optimal health and fitness with each repetition.
- **Desk-Ups:** Every hour, perform 10 (or as many as you can) push-ups against your desk. Remind yourself with each desk push-up how thankful you are for the ability to move your body. Also, perform some deep breathing after your 10 reps. Just think, by the end of the day, you will have completed 80 desk push-ups!

• Take A Two-Minute Tug Of War Recess: Grab some towels and have a weekly game of "tug of war" with your colleagues and teammates. It's a great way to expend energy, stress and have bragging rights weekly!

#### Next Steps

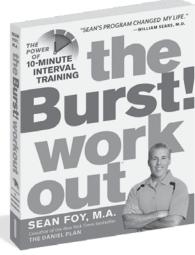
We hope this information is helpful for you and your organization to begin to make strides in combating stress and sitting disease and gaining the Winning Edge.™

As next steps we encourage you to:

- Personally commit to move every hour throughout your day as a way to win over stress and sitting disease.
- Share this information with a colleague or friend.
- Go to welcoa.org and wintoday wellness.com for "motion and emotion" resources to help you win.
- Check out these resources:
  - Fitness That Works: Seven Simple Moves that can be done during the workday to improve your employees' fitness—AND their overall health. (See image below.)

Fitness That Works & Walking 4 Wellness
Available at welcoa.org/estore

## The Burst! Workout Available at wintodaywellness.com



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- Walking 4 Wellness: Putting the steps in this book into action, you will discover a proven path to realize your personal health and wellness dreams for your very best life. (See image on previous page.)
- The Burst! Workout: Easy, fat-melting miniworkouts you can do anytime, anywhere—at your desk, in your hotel room, or at home in front of your TV! (See image on previous page.)
- Talk about your new way of moving with others share your testimonial.
- Join the "movement" at wintodaywellness.com and follow our Facebook page to learn more about how to spread the word.
- Stay in touch on Twitter: @win2daywellness

Remember, to keep your body healthy, fit and strong, and to ultimately win over stress and sitting disease, you must take time to PLAY throughout your day and watch how you'll have a smile on your face and a spring in your step.

#### References

- Everest College's Third Annual Survey Finds More Work and Less Pay Rank as Top Contributors to Job Stress; Retrieved from: http:// globenewswire.com/news-release/2013/04/09/536945/10027728/en/ Workplace-Stress-on-the-Rise-With-83-of-Americans-Frazzled-by-Something-at-Work.html
- Baum, A. (1990). "Stress, Intrusive Imagery, and Chronic Distress," Health Psychology, Vol. 6, pp. 653-675.
- 2b. WELCOA interview, "Under Pressure: A Workforce On The Brink" Retrieved from brianlukeseaward.com/downloads/under\_pressure.pdf
- American Psychological Association. (2013b). 2013 Work and Well-Being Survey. Retrieved from http://www.apa.org/news/press/ releases/stress/2013/stress-report.pdf
- 4-7. The Financial cost of Stress: Retrieved, University of Massachusetts, http://www.uml.edu/Research/Centers/CPH-NEW/stress-at-work/financial-costs.aspx
- 4. Hoel, H., Sparks, K., & Cooper, C. (2001). The cost of Violence/Stress at work and the benefits of a violence/stress-free working environment. Interntational Labour Organisation.
- National Institute for Occupational Safety and Health (NIOSH).
   Stress At Work Booklet. Publication No. 99-101.

- Druss, B. G., Rosenheck, R. A., & Sledge, W. H. (2000) Health and disability costs of depressive illness in a major U.S. corporation. American Journal of Psychiatry, 157(8), 1274-1278. (PubMed)
- 7. Perkins, A. (1994) Saving money by reducing stress. Harvard Business Review, 72(6).
- 8. The Movement Handbook, Dr. Greg Dr. Gregory Soltanoff, DC with Dr. Eric Soltanoff, DC and Emily Soltanoff. Retrieved from: http://www.census.gov
- 9. World Health Organization. Notes for the media: New physical activity guidance can help reduce risk of breast, colon cancers; 2011. Accessed January 28, 2012.
- 10. Brownson RC, Boehmer TK, Luke DA. Declining rates of physical activity in the United States: what are the contributors? Annu Rev Public Health. 2005; 26:421-43.
- 11. McDonald NC. Active transportation to school: trends among U.S. schoolchildren, 1969-2001. Am J Prev Med. 2007; 32:509-16.
- Matthews, C. E., Chen, K. Y., Freedson, P. S., Buchowski, M. S., Beech, B. M., Pate, R. R., & Troiano, R. P. (2008). Amount of time spent in sedentary behaviors in the United States, 2003–2004. American Journal of Epidemiology, 167(7), 875-881. doi:10.1093/aje/kwm390
- 13. Wilmot, E. G., Edwardson, C. L., Achana, F. A., Davies, M. J., Gorely, T., Gray, L. J., ... Biddle, S. J. H. (2012). Sedentary time in adults and the association with diabetes, cardiovascular disease and death: systematic review and meta-analysis. Diabetologia, 55, 2895-2905. doi:10.1007/s00125-012-2677-z. Retrieved from: http://www.leicestershirediabetes.org.uk/uploads/123/documents/wilmot.pdf
- 14. Hamilton et. al .2007. Role of Low Energy Expenditure and Sitting in Obesity, Metabolic Syndrome, Type 2 Diabetes, and Cardiovascular Disease. Diabetes. November 2007; 56(11): 2655-2667
- 15. Kokkinos, P., Sheriff, H., & Kheirbek, R. 2011. Physical Inactivity and Mortality Risk. Cardiology research and practice. 2011, 924945.
- 16. http://www.health.ny.gov/diseases/chronic/cvd.htm
- Rettner, Rachael. "Prolonged Sitting Linked to Breast and Colon Cancers." 3 November 2011. Scientific American. 8 December 2011. http://www.scientificamerican.com/article.cfm?id=prolonged-sitting-linked
- Hellmich, Nancy. "Prolonged Sitting Linked to Colon Cancer, Breast Cancer." 03 November 2011. USA Today. 8 December 2011. <a href="http://yourlife.usatoday.com/health/medical/cancer/story/2011-11-03/">http://yourlife.usatoday.com/health/medical/cancer/story/2011-11-03/</a> Prolonged-sitting-linked-to-breast-cancer-colon-cancer/51051928/1>
- 19. Hamilton, Marc, et al. "Too Little Exercise and Too Much Sitting: Inactivity Physiology and the need for Recommendations on Sedentary Behavior" Curr Cardiovasc Risk Rep. Jul 2008; 2(4): 292–298. doi: 10.1007/s12170-008-0054-8 Retrieved from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3419586/
- 20. Kohl, Harold et. al, "The pandemic of physical inactivity: global action for public health." The Lancet. 21 July 2012. 380(9838): 294-305

- 21. James Levine Move a Little, Lose a Lot: New NEAT Science Reveals How to Be Thinner, Happier, and Smarter. New York: Crown, 2009.
- 22. Retrieved from Washington Post http://www.washingtonpost.com/wp-srv/special/health/sitting/Sitting.pdf Interview of James A. Levine. Charles E. Matthews, Jay Dicharry. Tal Amasay
- 22b. Michael R. Bracko, Ed.D., FACSM,The American College of Sports Medicine (ACSM) 11th-annual Health & Fitness Summit & Exposition in Dallas, Texas. Retrieved from: http://www.medicalnewstoday.com/releases/66464.php
- 23. Schwartz T, McCarthy C. Manage Your Energy, Not Your Time. Harvard Business Review October 2007.
- 24. Levine JA, Eberhardt NL, et al. Role of nonexercise activity thermogenesis in resistance to fat gain in humans. Science. 1999;283(5399):212–4. Retrieved from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1847420/#!po=95.0000
- 24b. Brown PP and Gerbarg PL. The Healing Power of the Breath. Simple Techniques to Reduce Stress and Anxiety, Enhance Concentration, and Balance Your Emotions. 2012. Boston, MA, Shambhala Publications, Inc.
- Stretching Research Retrospective. Len Kravitz. Idea Fitness Journal. (2009). (See: www.ideafit.com/fitness-library/stretching-research-retrospective)
- Herman SL, et al. Four-week dynamic stretching warm-up intervention elicits longer-term performance benefits. Journal of Strength and Conditioning Research. 2008;4:1286.
- 27. ACSM Position Stand: Garber, C.E., Blissmer, B., Deschenes, M.R., Franklin, B.A, et al. (2011). Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults: Guidance for prescribing exercise. Medicine & Science in Sports & Exercise, 43 (7), 1334-1349.
- 28. Give your body a boost with Laughter (See: www.webmd.com/balance/features/give-your-body-boost-with-laughter)
- 29. "Body's response to repetitive laughter is similar to the effect of repetitive exercise, study finds." Science Daily, 26 Apr. 2010. Web. 18 Jun. 2013. (See: www.sciencedaily.com/releases/2010/04/100426113058.htm)
- 30. Grissom, J. (2005). Physical Fitness and Academic Achievement. Journal of Exercise Physiology, 8 (1), pp. 11-25.
- 31. Berk L, Tan S, Fry W, Napier B, Lee J, Hubbard R, et al. Neuroendocrine and stress hormone changes during mirthful laughter. The American Journal of the Medical Sciences 1989;298:391–6
- 32. Penson RT, Partridge RA, Rudd P, Seiden MV, Nelson JE, Chabner BA, Lynch TJ Jr. Laughter: the best medicine? Oncologist. 2005;10:651-660.
- 33. Cousins, Norman, Anatomy of an illness as Perceived by the Patient, New York: Norton, 1979.
- 34. Laughter is the best medicine; (See: www.helpguide.org/life/humor\_laughter\_health.htm)

- 35. Fresh Start. The Stanford Medical School Health and Fitness Program. Farquhar, J. W. (1996). Stanford Medical School.
- 36. Play-How it shapes the brain, Opens the imagination, and invigorates the Soul, Brown, Stuart (2010), Avery-Penguin Publishing, New York, NY
- 37. Physical Activity Guidelines for Americans. U.S. Department of Health and Human Services. (2008). (See: www.nhlbi.nih.gov/health/health-topics/topics/phys/)
- 38. American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription, 7th Edition. (2006). Lippincott, Williams and Wilkins: Philadelphia.
- Exercise and aging. Can you walk away from Father Time? Harvard Men's Health Watch. (December, 2005). (See: www.health.harvard. edu/newsweek/Exercise\_and\_aging\_Can\_you\_walk\_away\_from\_ Father\_Time.htm)
- 40. National Center for Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity and Obesity Prevention. See: http://www.cdc.gov/vitalsigns/Walking/
- 40b. Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. Journal of Personality and Social Psychology, 84(2), 377-38
- 41. American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription, 7th Edition. (2006). Lippincott, Williams and Wilkins: Philadelphia.
- 42. Resistance Training Guidelines. The American College of Sports Medicine Strength Training Guidelines, 2009.
- 43. 12 Reasons why every adult should strength train. (See: www.wellness. ma/adult-fitness/strength-training-12-reasons.htm)
- 44. Division of Nutrition, Physical Activity and Obesity. (See: www.cdc. gov/nccdphp)
- 45. Fitness That Works, Foy, Sean (2011) WELCOA Publishing, Omaha Nebraska
- 46. The 10 Minute Total Body Breakthrough, Foy, Sean (2009) Workman Publishing, New York, NY
- 47. Centers for Disease Control and Prevention. Youth Physical Activity Guidelines Toolkit. (2011). (See: http://www.cdc.gov/healthyyouth/physicalactivity/guidelines. htm)