

Regain Your **SUPERPOWERS**

How simple changes in your diet and exercise
can help improve your quality of life

by Jason Luchtefeld, DMD, FAGD, FICOI

Dr. Jason Luchtefeld, Dentaltown's live events CE director, earned his dental degree from the Southern Illinois Dental School. Before entering private practice, he served a general practice residency at the VA Medical Center in Denver. He is a member of, and active in, multiple dental organizations.



Luchtefeld has taken numerous postgraduate education courses, with recent courses on implants, lasers, cosmetics and sleep disorders. He is also in demand as a lecturer and has been interviewed twice on television. He is an active participant in the community, volunteering as a cavity crusader and working to eradicate periodontal disease. In his spare time, he enjoys cycling, running and reading.

Being a dentist is risky.

It was recently reported that dentistry is the second-most damaging job for overall health.¹ As a dentist, you help provide for your family, your employees (or co-workers) and your patients; there is a lot riding on your shoulders. But, luckily, you can handle it and perform with skill, care and comfort.

How is your health? Are you struggling with heart disease, diabetes or another systemic ailment? Have you tried every diet only to see the weight come back? Are you ready for something that will improve your health and turn you into a superhero?

The time has come when you can have super healing powers. I guarantee you will have less sickness and disease while also improving your energy and well-being. No, I am not a wizard. It's the science of fitness. In as little as 20 minutes per day you too can unleash your own superpowers.

Based on a variety of data collected over the last several years, the Centers for Disease Control and Prevention (CDC) has revealed a summary of the benefits of physical activity.² Before you jump up and go for a run, make sure you are OK'd by a physician. If you would like to go for a quick walk right now go ahead, I'll wait.

OK, welcome back. If you are interested in more moderate to intense exercise please visit a physician first.

Let the perks begin

Let's start with the first perk of exercise: weight loss and/or control.

The weight loss industry is huge with approximate annual revenues of more than \$60 billion and the National Institutes of Health (NIH) funding more than \$900 million.³ You've seen the ads and heard the stories. There are companies of all kinds peddling weight loss plans, products and more. Many of the stories end with a failure. The failure to maintain the weight loss is a topic unto itself so it won't be addressed here other than to say, "It's complicated." You should know, though, that any diet can work if there is a calorie deficit.⁴ The calorie deficit is an important part of which exercise can help. If you simply eat the same but add 20 minutes of exercise, you will find a slight calorie deficit that will add up over time. With weight loss, 80 percent will generally come from food consumption while exercise contributes about 20 percent. Even this rule of thumb is being challenged depending upon how much and how intensely you exercise.⁵

The macronutrient profile (carbs, protein and fats) may be more important for some than others. Several articles could be written on this topic alone. The adage of "calories in/calories out" for weight loss still holds true for some while for others the type of calorie matters a lot. Luckily, there is now plenty of data to support a variety of diet types, so find the one that fits for you.⁶

Reducing the risks

Exercise can reduce your risk of Type 2 diabetes and metabolic syndrome. Type 2 diabetes is well-known (and all too common). If you are not familiar with metabolic syndrome then let's define it: too much fat around the waist, high blood pressure, low high-density lipoprotein (HDL) cholesterol, high triglycerides and high blood sugar.¹

Both conditions are often related to being overweight but are not exclusive. As stated above, food choices have a huge influence on either of these developing. Exercise can help burn that food and keep diabetes at bay in addition to better controlling both



Tell us your fitness stories

Dentaltown's message boards include a forum dedicated to exercise for dental professionals. Recent posts have include everything from cryogenic therapy to gym etiquette, with lots of questions and opinions. To join the conversations, head to dentaltown.com/messageboard and click "Health Topics."

conditions so they do not get worse. There are specific diets suggested for those with diabetes.⁷ Lately there has been some new research indicating a more focused diet (low carb, high fat) would be even better.⁸

Strengthen your mind and body

Exercise can improve your mental health and well-being. If you have depression, you should see a qualified professional for treatment. With that said, exercise has been shown to be an effective treatment for anxiety and mild depression.⁹ Exercise releases endorphins, which are associated with positive feelings. The sense of satisfaction from completing any planned exercise (walking, running, tennis, etc.) also helps reinforce positive mental health and well-being. There is truly something powerful about going for a run after a long day of seeing patients. The run, for me, clears my head and allows me to think straight again.

Recent data shared in *Psychology Today* shows that as little as 60 minutes of light-intensity exercise per week can protect against depression.¹⁰ Some of the research indicated even less exercise could still have mental health benefits. Everyone can find 10 minutes per day to go for a walk—it's time to find yours!

Exercise also strengthens your bones and muscles. Drink milk for strong bones, right? That's what the ad says, anyway. However, resistance exercise works much better than milk. The stress put on the bones from exercise causes them to get stronger over time, which means fewer problems later in life!¹¹ According to Goodpastor et al., loss of muscle strength is a determining factor in the physical decline associated with aging. Muscle-strengthening exercises may increase your quality of life.¹²

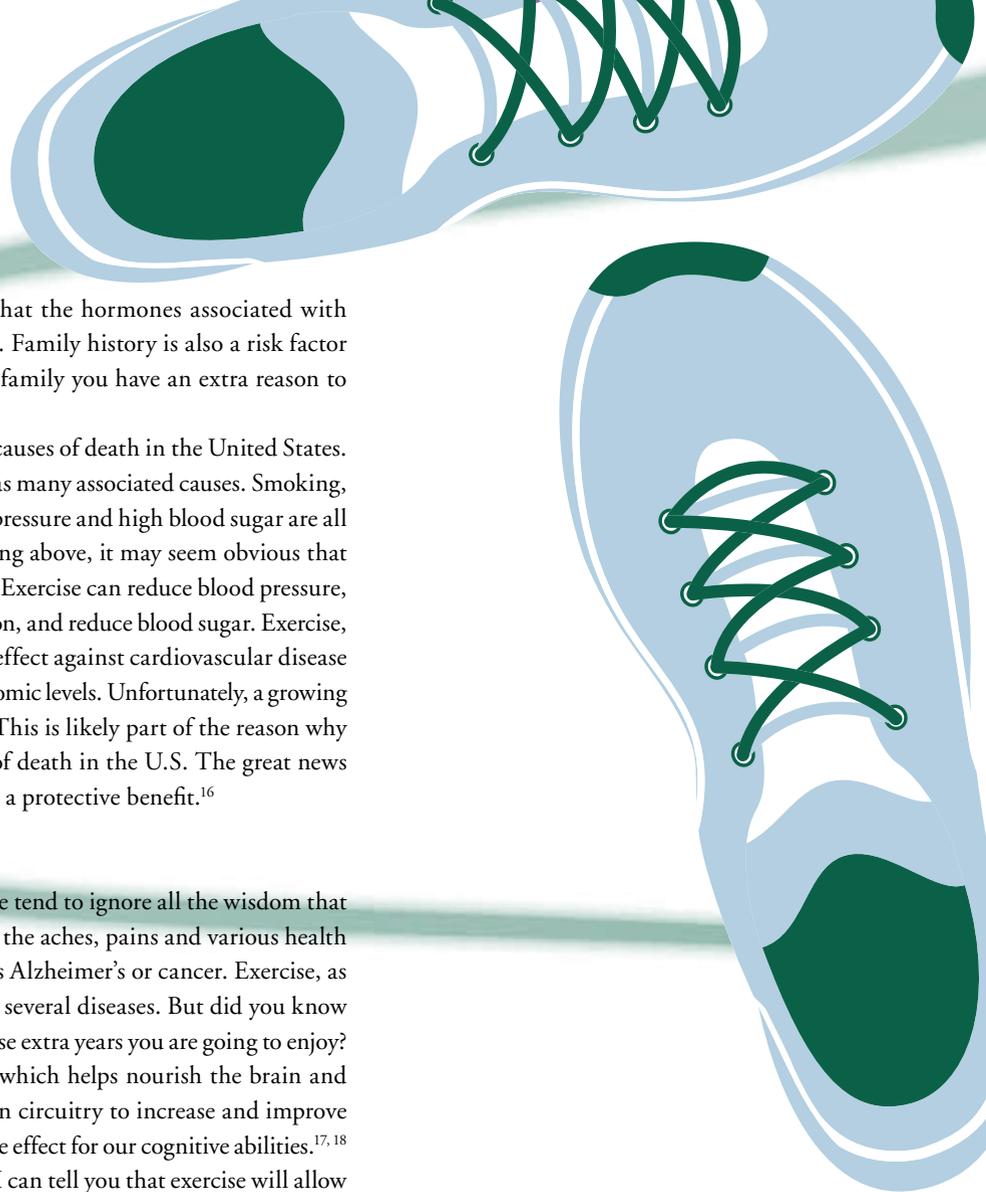
My personal interest in these topics started here. I found that getting stronger helped with some of my everyday aches and pains. I spend a lot of time in uncomfortable positions around the office. It finally dawned on me that I felt better when I moved more. As I gained insight and strength I noticed the aches and pains decreased dramatically. (Keep an eye out for a future article dedicated to this topic.)

The added benefit of stronger bones and muscles is the ability to avoid falls, perform activities and play with grandkids. Resistance exercise increases bone and muscle strength while cardiovascular exercise helps promote coordination and blood flow.

Other health benefits

In addition to its other perks, exercise can reduce the risk of some cancers. Specifically, colon and breast cancer risks have been shown to be modified by moderate exercise.^{13,14} How exercise influences these two cancers is still up for debate. It is thought that exercise helps increase stool movement throughout the colon, thereby reducing the risk





of cancer. In breast cancer, it is thought that the hormones associated with breast cancer are modified through exercise. Family history is also a risk factor for both cancers, so if either one is in your family you have an extra reason to get out there and move.

Heart attack and stroke are the leading causes of death in the United States. Cardiovascular disease is well-studied and has many associated causes. Smoking, certain fats in the blood vessels, high blood pressure and high blood sugar are all known risk factors.¹⁵ After reading everything above, it may seem obvious that diet can influence most of these risk factors. Exercise can reduce blood pressure, increase capillary and mitochondria formation, and reduce blood sugar. Exercise, in fact, has been shown to have a protective effect against cardiovascular disease for people of all races, religions and socioeconomic levels. Unfortunately, a growing number of people are becoming sedentary. This is likely part of the reason why cardiovascular disease is the leading cause of death in the U.S. The great news is that even light-intensity exercise can have a protective benefit.¹⁶

Live long and prosper!

Not many people like to get older and we tend to ignore all the wisdom that comes with age. We eventually worry about the aches, pains and various health issues that are associated with aging, such as Alzheimer's or cancer. Exercise, as already mentioned, can reduce your risk for several diseases. But did you know that it can also keep your brain happy for those extra years you are going to enjoy? Exercise increases blood flow to the brain, which helps nourish the brain and remove free radicals. It also acts on the brain circuitry to increase and improve connections, which ultimately has a protective effect for our cognitive abilities.^{17, 18}

I can't promise you will live forever, but I can tell you that exercise will allow you to enjoy those added years. There are few things as powerful as exercise that extend life and improve its quality. In fact, seven hours of physical activity a week reduces chances of an early death by 40 percent.¹ OK, seven hours may seem like a lot, but don't be discouraged. Remember, even 20 minutes a day has health benefits. Slowly work your way up to seven hours and enjoy the benefits for the rest of your life—may it be long and prosperous!

The benefits of exercise are cumulative. If you start today and keep it going, you will reap the benefits of less disease, improve mental health, and enjoy a stronger body and longer life.

References

1. <http://www.businessinsider.com/the-most-unhealthy-jobs-in-america-2013-11#2-dentists-and-dental-hygienistsassistants-and-dental-lab-technicians-14>
2. <https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm>
3. <http://time.com/magazine/us/4793878/june-5th-2017-vol-189-no-21-u-s/>
4. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2763382/>
5. <http://run-fit.com/isdietmoreimportantthanexerciseforlosingweightandlookinggood/>
6. <https://www.dietdoctor.com/science>
7. <http://www.mayoclinic.org/diseases-conditions/diabetes/in-depth/diabetes-diet/art-20044295>
8. <https://www.ncbi.nlm.nih.gov/pubmed/25071075>
9. <http://www.mayoclinic.org/diseases-conditions/depression/in-depth/depression-and-exercise/art-20046495>
10. <https://www.psychologytoday.com/blog/the-athletes-way/201710/one-hour-exercise-week-protects-against-depression>
11. <https://www.bones.nih.gov/health-info/bone/bone-health/exercise/exercise-your-bone-health>
12. <https://academic.oup.com/biomedgerontology/article/61/10/1059/600461/The-Loss-of-Skeletal-Muscle-Strength-Mass-and>
13. <https://academic.oup.com/ijel/article-abstract/17/4/743/627482>
14. http://radonc.wdfiles.com/local--files/part-2/RANZCR_Stats_1996b.pdf
15. <https://www.ncbi.nlm.nih.gov/health/health-topics/topics/hdu/causes>
16. [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(17\)31634-3/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)31634-3/fulltext)
17. <http://www.brainrules.net/exercise?scene=>
18. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0182155>