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# How Low Can You Go? Forgotten Benefits of Deep Squats

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## STORY AT-A-GLANCE

- Many health benefits are associated with deep squats, including improved bowel elimination, production of synovial fluid in the hips and knees, muscle growth that is associated with glucose metabolism and insulin sensitivity, improved balance and better communication between your brain and muscle groups
- In Western cultures people don't often squat outside the gym, and even then, they don't perform deep squats. A deep squat involves keeping your feet flat on the floor and dropping until your hamstrings touch your calf muscles
- Long hours of sitting tighten calf muscles and hip flexors. This alters your posture and increases the risk of back pain. Appropriate stretches for your ankles, calves and hips may be necessary before you can achieve a deep squat
- Consider incorporating deep squats into your daily routine, such as squatting to pick up your child or items off the floor. Resting squats can be used while watching television or reading. Squatting outside while barefoot allows for the exchange of electrons between your body and the earth, also known as grounding or Earthing

**Exercise is a powerful health-building tool that greatly influences the development of chronic disease and your ability to live independently as you age. Squatting, when it's incorporated into a strength training regimen, is one of the best functional exercises. It requires no equipment, is relatively simple to perform and can be done just about anywhere.**

Although they're often regarded as leg exercises, squats benefit your entire body, including your core. But what about when you incorporate squatting into your everyday routine?

In many developing nations, children and adults use the squatting position to rest or to work. Paradoxically, in Western nations, people equate sitting with resting. But, while squatting takes your hips and knees through a full range of motion, sitting for long periods can cause your hip flexors to shorten and become tight. This often leads to lower back pain and problems with posture.

Staying fit and strong, especially as you age, requires consistency and dedication. Although many believe exercise is about shedding excess weight or getting toned abs and glutes, this is just a fraction of what exercise can do for you, no matter how old you are. By incorporating deep squats into your daily routine, you're taking the next step and moving your joints through a full range of motion as a matter of routine.

## Why Does the Western World Avoid Squatting?

It is important to remember that squatting is not a part of a past we left behind as man evolved. A large portion of the planet's population still uses the squatting position to share a meal, use the toilet, cook or rest. For example, people in Asia normally use squat-style toilets and in rural areas around the world, people squat over pit latrines.

As children around the world learn to crawl, sit, stand and walk, they move through a consistent set of motions, including learning how to stand from a squatting position without assistance. Yet, many people see squatting as uncomfortable and undignified and only necessary at the gym. Bahram Jam, a physical therapist and founder of the Advanced Physical Therapy Education Institute (APTEI) in Ontario, Canada, commented in HuffPost:[1]

> *"We squat as children and in our teens, but as we in the Western world get older we completely stop deep squatting in our daily lives unless we intentionally do*

> *it as a form of exercise or in yoga. A true sign of aging is the inability to squat or sit on the floor and be able to get up independently again."*

While speaking with a reporter from Quartz in 2017, Jam explained:[2]

> *"It's considered primitive and of low social status to squat somewhere. When we think of squatting, we think of a peasant in India, or an African village tribesman, or an unhygienic city floor. We think we've evolved past that — but really, we've devolved away from it."*

Fitness trainers often refer to the differences between a deep squat, also called the Asian squat or resting squat, and the Western squat. In the gym, a Western squat involves the thighs stopping either parallel to the ground or just beyond. However, the Asian squat involves squatting with your heels on the floor and your hamstrings touching the calf muscles.

Many physical limitations found in people living in the Western world are self-imposed. As cultural norms infringe on basic and anatomical movement, it's necessary to question the value of those changes.

## Getting Grounded in a Deep Squat

Author and osteopath Phillip Beach is known for pioneering the idea of "archetypal postures." These are positions which he says are "deeply embedded into the way our bodies are built" and include the deep squat with feet flat on the floor, kneeling on knees and heels or sitting cross-legged.[3]

Beach promotes squatting and believes it is an evolutionary impulse. He says the "floor of life" is key and Quartz reports, "He argues that the physical act of grounding ourselves has been nothing short of instrumental to our species' becoming."[4] Grounding, also called Earthing, is the phenomenon in which there is an exchange of free electrons between the Earth's surface and your body.

It has a potent antioxidant effect that can help reduce inflammation, improve sleep, reduce blood viscosity, speed wound healing and relieve pain.[5] While data demonstrate the value of grounding, until you experience it for yourself, it may be difficult to believe. Although rubber or plastic-soled shoes effectively insulate your feet from the weather, they also disconnect you from the flow of electrons between you and the Earth.

Grounding is not a treatment but helps your body maintain a natural connection with the Earth in order to function properly. It could be described as a lifestyle habit that supports optimal health.

Exercising barefoot outdoors is inexpensive and a powerful way to incorporate grounding into your daily life. It's easy to combine grounding outdoors in the summer months with deep squats. Simply take off your shoes and do your gardening while in a deep squat position.

## Active Rest Supports Better Bowel Movements and More

Deep squats, also called active rest, offer many health benefits, not the least of which is better bowel movements. In the squat position, the anorectal angle is straightened, increasing rectal pressure and lowering anal pressure. This reduces strain and is associated with a decreased time on the toilet.

While squatting over a toilet is next to impossible, a defecation posture modification device such as the Squatty Potty can help you achieve the correct angle. Jam discussed the benefits of deep squats to joint health with Quartz, saying:[6]

> *"Every joint in our body has synovial fluid in it. This is the oil in our body that provides nutrition to the cartilage. Two things are required to produce that fluid: movement and compression. So if a joint doesn't go through its full range — if the hips and knees never go past 90 degrees — the body says 'I'm not being used' and starts to degenerate and stops the production of synovial fluid."*

Although you may think that squats work only on your legs and glutes, they also build muscle throughout your core and tone your abs. When exercise squats are done

properly, they help improve muscle mass by releasing testosterone and human growth hormone. Building more muscle also helps increase your metabolic activity and may help you burn more fat.[7]

Building muscle also helps regulate glucose metabolism and insulin sensitivity, which in turn protects against obesity, diabetes and cardiovascular disease. Importantly, deep squats also help improve your mobility and balance. Strengthening your legs and core helps build the muscles that stabilize balance and improve the communication between your brain and muscle groups.

Together, these improvements help prevent falls and promote independent living as you age. Squats also help strengthen smaller stabilizing muscles, ligaments and connective tissue. This helps prevent athletic injury and helps improve flexibility in your hips and ankles.

Improving leg and core strength is also important for healthy brain and nervous system function. A 2018 study[8] published in Frontiers in Neuroscience demonstrated how neurological health is as dependent on signals from your large leg muscles as it is on signals from your brain to your muscles. In other words, the neurological pathway is a two-way street and neither direction is more important than the other.

According to the press release,[9] the finding "fundamentally alters brain and nervous system medicine — giving doctors new clues as to why patients with motor neuron disease, multiple sclerosis, spinal muscular atrophy and other neurological diseases often rapidly decline when their movement becomes limited."

Performing squats, even with just body weight, can help build your leg muscles and strengthen your core. In my interview[10] with osteopathic physician Dr. Gabrielle Lyon, we discuss what I believe may be one of the best health-optimizing strategies, which is **strength training**. Lyon has spent a good part of her professional career focusing on increasing strength and muscle mass.

Data show that muscle mass is "inversely associated with the risk of death"[11] and a systematic review and meta-analysis[12] found resistance training was associated with a

21% lower risk of all-cause mortality. Another benefit is that you do not need weight to get the benefit. Bodyweight exercises, such as squatting off and on during the day, are an effective form of resistance training.

When researchers[13] evaluated physical parameters in a small group of young women after 10 weeks of body weight exercises, they found improvements in muscle endurance, aerobic capacity, flexibility and lower body power.[14] Another 2021 study[15] also found bodyweight exercises with minimal time commitment enhanced cardiorespiratory fitness in inactive adults.

## Sitting Is a Separate Problem From a Lack of Exercise

Although many know about the dangers of inactivity, they might believe the alternative to a sedentary lifestyle is a 30-minute workout or a gym membership. However, as the reporter from Quartz points out, the number of hours most people sit is a separate issue from the amount of exercise they get.[16]

By incorporating squatting into a daily routine, you have an alternative means of active resting that helps build leg and core muscles and reduces the time you spend in a chair. Sitting is associated with poor health outcomes[17] in children and adults, including promoting cardiometabolic disorders, depression, obesity and all-cause mortality in adults.

In children, prolonged sitting is linked with anxiety, obesity and symptoms of depression. Sitting for long periods during the day is associated with increased musculoskeletal symptoms, such as low back pain and appears to accelerate aging at the cellular level.[18]

A 2017 study of 1,481 women from the Women's Health Initiative found those who sat the longest were, on average, biologically eight years older than the women who moved around more often. The researchers concluded, "… avoidance of a highly inactive lifestyle may provide health benefits at the cellular level."[19]

Separate research, published in the American Journal of Preventive Medicine,[20] further found that sitting for more than three hours a day causes 3.8% of all-cause deaths in the

54 countries surveyed. According to Dr. James Levine, author of the book "Get Up!: Why Your Chair Is Killing You and What You Can Do About It," and the inventor of the treadmill desk:[21]

> *"Excessive sitting has insidiously swept through society so that chair addiction has become a hallmark of modernity. Sitting kills more people than smoking because more people sit excessively than smoke, and the health sequelae of sitting are more numerous."*

One of the consequences of sitting for long periods is tight hip flexor muscles, which leads to problems with your posture and back pain. Additionally, sitting can weaken hip muscles, which affects your gait and can trigger pain in your knees and back.

## Don't Miss the Stretch

After years of sitting, it is likely impossible to drop directly into a deep squat without first addressing tight hip, calf and ankle muscles. Yoga teacher and restorative exercise specialist Jenni Rawlings often writes about biomechanical problems that impact the ability to do yoga and other exercises. She cites tight calf muscles as the main issue with people who can't do squats, and writes about the type of stretch that gives the greatest benefit:[22]

> *"Improving your squat requires that you have adequate flexibility in both gastrocnemius and soleus. But in order to stretch the soleus, we need to dorsiflex our ankle while the knee is flexed, not extended.*
>
> *This is because if we try to stretch the soleus with an extended knee, the more superficial muscle tissue of gastrocnemius will stretch first, preventing the stretch from layering down to the deeper soleus. In order to truly stretch and strengthen our soleus, we must first slacken the overlying gastrocnemius by flexing the knee."*

The difficulty with deep squats also rises with poor ankle mobility, which is linked to tight calf muscles. When you sink deeper into a squat, your heels may lift, which causes

you to lose your balance and fall. Ultimately, your success in getting into a deep squat is tied to your flexibility and mobility. Although it may initially be challenging, with stretching and practice you'll quickly notice improvements.

It's important to stretch after warming up to prevent overstretching or tearing muscles. Once you're able to start squatting, make it a part of your everyday activities. For instance, if you need to pick up something from the floor, squat instead of bending over. Pick up your children from a squat position or watch television or read while squatting.

## Sources and References


- [1] HuffPost, August 22, 2022
- [2, 3, 4, 6, 16] Quartz, November 9, 2017
- [5] Journal of Inflammation Research, 2015; 8
- [7] Science Daily, September 22, 2021
- [8] Frontiers in Neuroscience 2018; 12
- [9] EurekAlert! May 23, 2018
- [10] BitChute, April 8, 2022
- [11] Plos One, 2018;13(4)
- [12] European Journal of Preventive Cardiology, 20/20; 26 (15)
- [13] Polish Journal of Sport and Tourism, 2015; doi: 10.1515/pjst-2015-0014
- [14] Harvard Health Publishing, February 15, 2022
- [15] International Journal of Exercise Science, 2021;14(3)
- [17] International Journal of Environmental Research and Public Health, 2019;16(19)
- [18, 19] American Journal of Epidemiology, 2017; 185(3)
- [20] American Journal of Preventive Medicine, 2016;51(2)
- [21] Mayo Clinic Proceedings, 2014;89(8)
- [22] Tune Up Fitness, December 16, 2015