Dr. Marlene's
NATURAL HEALTH CONNECTIONS

VOLUME 7 | ISSUE 03

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CONTENTS

Lasting Relief for Achy Joints

Learn how to treat and prevent aches in knees, ankles, shoulders, hips, and the back by correcting misalignment in joints and relieving muscle spasms.

One of my patients, a lady in her 50s, came to see me because of mysterious but persistent knee pain. She had seen several doctors and had x-rays taken, but they showed nothing wrong with her knee. The doctors' advice was to take some ibuprofen, and if that didn't help, they could prescribe something stronger.

My patient wanted to get to the root of the problem rather than rely on pain medication. Other than the knee problem, she was in good health and had been fairly active. One of her habits had been taking stairs instead of elevators when possible. But she hadn't been doing any exercise that was intense enough to injure her knee.

There wasn't any logical explanation for the pain. Just one day, she felt a twinge in her knee as she started to walk up a flight of stairs. She was surprised but didn't dwell on it, assuming it would go away — but it didn't. In fact, it got worse. By the time she came to see me, she was consistently relying on elevators. And she was devastated because it seemed as though she had suddenly become "old."

The underlying reason in this case was one that I've found to be very common: misalignment in a joint. The typical places where this happens are the knees, ankles, and shoulders.[1]

Although some type of injury can lead to such misalignment, such as a sprained ankle, a fall, or some other type of impact, it most often stems from weak muscles and the way we sit, stand, or move in our everyday lives.

In the case of my patient with mysterious knee pain, routinely sitting cross-legged at her desk at work had been a major trigger. I gave her some simple exercises to do at home, which she immediately started doing on a regular basis.

Her knee pain soon disappeared, she went back to taking stairs

IN THE NEXT ISSUE:
Foods and Supplements for Healthy Joints

instead of elevators, and she no longer felt old.

I'll describe these and other exercises to correct the most common joint misalignments in a moment. But first, I want you to understand how this all-too-common type of problem comes about, and why the remedies I'll give you can help.

How Joints Work

When we move a joint, there are muscles controlling the movement. For any joint, there are two sets of muscles that work as a pair. Muscles contract, meaning tighten and get shorter, on one side and relax and lengthen on the other to bend and straighten a joint.

As an example, you use two sets of muscles to bend and straighten a knee. The quadriceps, or "quads" for short, are on the front of each thigh, and the hamstrings are on the back.

When you bend your knee, the hamstrings tighten and get a bit shorter, while the quads relax and get a bit longer. When you straighten your knee, the opposite happens: quads tighten and get shorter, while the hamstrings relax and get longer.

Developing Muscle Awareness

To get a sense of what this feels like, try this: Sit on a regular chair, the kind you probably have in your dining room, with your feet on the floor. Straighten one knee, so that your foot is in front of you and your leg is straight, parallel to the floor. If you can't lift your foot that high, lift it as high as you can while sitting up straight in the chair.

You should feel your quads on top of that thigh tightening and the hamstrings underneath relaxing. The opposite happens as you bend your knee to put your foot back on the floor.

If you aren't sure what's happening, hold one hand on top of your thigh and the other underneath it as you straighten and bend your knee to raise and lower your foot. Try it a few times. It doesn't matter how high you raise your foot, but you should feel the tightening and relaxing in those muscles.

I'm suggesting that you try these movements because it's important to be aware of which muscles are working when doing the movements I describe below to relieve discomfort or pain in various joints.

This is another way to increase your awareness of what those muscles are doing:

Sit on a chair with both feet flat on the floor and do this:

While keeping your right heel on the floor, raise the toes of your right foot off the floor. Put your hand on your right thigh and slide your right heel forward along the floor, so that you knee is straighter. You should feel the muscles on top of your thigh — the quads — become tighter.

Now, put your hand under your right thigh and slide your right heel toward you. You should be able to feel the muscles on the back of your thigh — the hamstrings — become tighter.

Muscle awareness will help you to get the most benefit when doing any of the exercises I'll describe in a moment.

How Misalignment Starts

Achy joints are more common as we get older, so you might think that the misalignment I'm talking about is simply an age-related problem. But this isn't always the case.

One of my patients was a young man in college who came to see me because his knees hurt. He was tall and thin, with a lanky frame and not a lot of muscle. He hadn't suffered any recent injuries; the pain just seemed to sneak up on him and it was getting worse.

He wasn't involved in any sports and didn't do any type of regular exercise. Aside from attending

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classes and studying, he had a part-time job delivering pizza.

I learned that he made the deliveries in his own car — a small sports car. The seats were very low and because of his height, getting in and out of the car put a lot of stress on his knees. He worked evening shifts for a local pizza shop on most days of the week, so his knees were constantly stressed.

The problem was weak muscles that support and move the knees. Doing some exercises to strengthen those muscles restored the alignment in this college student's knees. And he was able to deliver pizza — and go about the rest of the day — without pain.

Athletes and people who do a lot of exercise, at any age, can suffer from misalignment in a joint because of an injury. It doesn't have to be a dramatic event such as a collision or a fall.

For those who lift weights, for example, trying to lift too much or do too many repetitions can lead to bad form and injury. Doing only one type of exercise can strengthen certain muscles while ignoring others, leading to an imbalance and joint misalignment and pain.

In short, there are various situations that can lead to a joint becoming misaligned. I'm going to address the most common ones, and I'll give you simple exercises you can do at home to correct and prevent these problems in the future.

Knee Pain Relief

Strengthening the muscles in the thighs and buttocks will help to keep the knee joint aligned. This not only helps to prevent and relieve discomfort and pain; it also reduces risk for osteoarthritis. Studies show that weak muscles in the thighs and buttocks[2] lead to misalignment[3] and added stress on the knee joint and contribute to a wearing away of cartilage around knee joints.[4] Stronger muscles will help to protect that cartilage from damage.

Squats

Every time you sit and stand, you're doing a squatting movement. However, you may not be using the muscles that nature intended: the quads, hamstrings, and glutes. Short for "gluteus muscles," glutes make up the meaty part of your rear end, or buttocks, on which you sit.

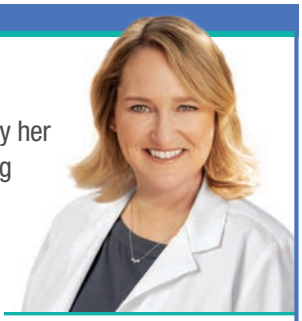
Our bodies are designed to use these three sets of muscles when we squat. However, because we don't move in perfect form in everyday life, those muscles become weak. As my story with the young college student shows, this situation doesn't affect only older people, but the longer those muscles are not fully used, the worse the situation becomes.

For example, if you lean forward and use one or both arms to hold onto and push against an arm rest to lift yourself out of a chair, the muscles I described are not working as hard as they naturally would. This also happens if you get up by leaning forward, putting your hands on your thighs, and pushing down to get up from a chair.

In these situations, the muscles become weak and unable to keep the joint stable. Misalignment — and pain — can develop.

Fortunately, you can strengthen those three groups of muscles. I'll give you two versions of squats. In doing these, the most important thing is to do the movement correctly, using your quads, hamstrings, and glutes and maintaining correct posture. That's the only way to effectively strengthen these muscles.

About Dr. Marlene



Dr. Marlene Merritt's passion for natural medicine is fueled by her drive to help others and by her own experience of overcoming a debilitating heart condition, diagnosed at the age of 20. A competitive cyclist at the time, she suddenly began experiencing severe chest pains. Forced to quit the sport, she suffered from fatigue and chest pain for another 15 years, despite doing everything that conventional, Western medical doctors told her to do.

And then, the tide turned. A physician trained in naturopathic healing recommended a whole-food vitamin E supplement. A week after starting the supplement regimen, her energy began to return, and the pain began to disappear.

Dr. Marlene is a Doctor of Oriental Medicine, has a Master's degree and is board-certified in Nutrition, and is board-certified in Functional Medicine. She is certified in the Bredesen MEND Protocol™, a groundbreaking method of addressing Alzheimer's disease, and is a Proficiency Diplomate in the Shoemaker CIRS protocol for treatment of mold-related illness. She is the author of *Smart Blood Sugar* and *The Blood Pressure Solution*, and co-author of *The Perfect Sleep Solution*. After 31 years in private clinical practice, she now focuses on writing and educating health professionals and consumers to reach more people and positively impact their health.

Unless you're familiar with how to do squats correctly, the first one, the wall squat, is the best place to start. Once you become familiar with what it feels like to use your quads, hamstrings, and glutes, add the chair squats or do them instead

Wall squats: In doing this exercise, you strengthen the muscles by holding a position — a squat against a wall. This is how to do it:

- Stand with your back against a wall, with your feet shoulder-width apart.
- Move your feet about a foot in front of you, while continuing to lean your back flat against the wall.
- Slowly slide your back down the wall, bending your knees until your thighs are at a 45-degree angle.
- Keep your feet flat on the ground and adjust their position so that your knees are directly above your ankles, not over or in front of your toes. You should feel your thigh and buttock muscles working to keep you in that position.
- Keep your back flat against the wall as you hold that position.
- Time yourself and make a note of how long you can stay in that position.
- Do this every second day, increasing the time you maintain your wall squat. For example, if you can do it for 15 seconds the first time, aim for 20 seconds the next time, and perhaps 30 seconds the times after that.

If you do this regularly, every second day, you'll be surprised at how quickly you can hold a wall squat for longer periods, as your muscles get stronger.

Chair squats: Use the type of chair that's in your dining room, not a low chair, and do this:

- Stand in front of the chair, as though you were going to sit in it, with your feet shoulder-width apart.
- Keeping your back straight and while looking forward, push your buttocks back and raise your arms straight in front of you. Imagine that your rear end is being pulled backwards while your arms are being pulled in the opposite direction, forward.
- Your knees will naturally bend a little. You should feel your thigh and buttock muscles tensing.
- Keep pushing back with your buttocks while slowly pushing down toward the seat of the chair.
- Go down as far as you can without rounding your back or losing the tension in your leg and buttock muscles.
- Push back up with your buttocks to return to a standing position.
- Repeat this as many times as you can while maintaining the correct form.
- Do this exercise every second day.

It doesn't matter how low you squat. The important thing is to do the exercise correctly. As you practice this, your muscles will get stronger and you will be able to squat lower.

If you can squat down far enough for your buttocks to touch the chair, don't relax your muscles and sit. Instead, start pushing up as soon as your rear end just touches the chair.

If you're afraid of falling, hold on to a table or another sturdy piece of furniture, but focus on using your thigh and buttock muscles.

Leg Extensions

This exercise strengthens the quads: the muscles on the front of your thighs. Here's how to do it:

- Sit on a dining room-style chair, feet flat on the floor.
- To get a feel for how this works, straighten your knees and raise your feet out in front of you. You should feel the quad muscles on the front of your thighs working. If this is too difficult, do it with one leg at a time.
- If this is easy to do, add resistance by putting a weight on your feet. If you have an old

The Shoulder Test

Here's a simple way to tell if your shoulders are aligned:

Stand and let your arms hang naturally at your sides, relaxed. Which way are your palms facing?

- If your palms face forward, your shoulders are aligned. (This is rare.)
- If your palms face the sides of your legs, your shoulders are somewhat misaligned.
- If your palms face backwards, your shoulders are extremely misaligned. If you aren't having shoulder problems now, there's a high risk that you will in the future.

The shoulder exercises on this page are beneficial in all three situations.

phone book around, try lifting it with your feet, or use another heavy book. Or you can use ankle weights or a resistance band. These usually cost less than $20.

- Aim to do 10 to 12 repetitions. If you're doing one leg at a time, aim for 10 to 12 repetitions with each leg.
- Do this exercise every second day. As you progress, gradually increase the weight.

To build and maintain strength, muscles need to be challenged on a regular basis. If you start doing these exercises and your knees feel better, don't stop, or the problem will likely reappear. It takes only a few minutes to do these, every second day.

Shoulder and Back Problems

Weaknesses and imbalances among the muscles supporting the shoulder set the stage for discomfort, pain, and injury — even among athletes.[5]

There are more than ten muscles in the shoulder area; fortunately, you don't have to do more than ten exercises to correct and prevent problems. As with other joints, muscles contract and relax to move a joint. In the shoulders, these muscles fall into two groups: those in the front of your shoulders and those in the back.

When we habitually work at a computer, use a phone, drive, or spend time doing any other activity with our hands in front of our body, the shoulders roll forward and inward — an unnatural, misaligned position.

The muscles in front of the shoulders get shorter because they are continually tight and never get stretched. At the same time, the muscles in the upper and middle back are continually overstretched.

The back muscles try to pull your shoulders back to where they should be, but they can't because the front muscles are too tight. And then, the back muscles can spasm and cause upper-back pain.

In addition, weak muscles increase the risk of injury to the shoulder, because they aren't strong enough to stably hold it in its proper place.

Shoulder Exercises

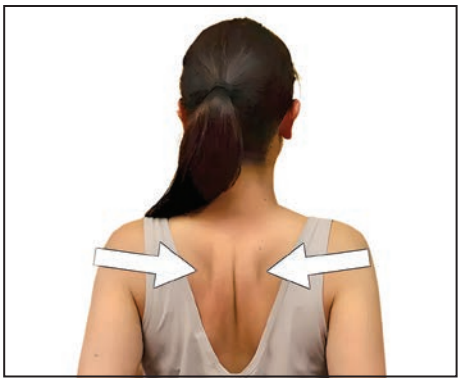
These two simple exercises will help to correct the misalignment among muscles in front of and behind the shoulders:

Doorway Stretch

Do this stretch several times each day:

- Stand in front of a doorway and raise one arm, straight out to the side, parallel with the floor, palm facing forward. Without lowering your upper arm, bend at the elbow so that your forearm is pointing straight up, like a traffic cop signaling cars to stop.
- Start to walk through the door so that your bent arm is stopped by the door frame.
- Feel the stretch in the front of your chest and hold it there until it feels better.
- Repeat on the other side.

You can vary this exercise by moving your elbow a bit higher on the door frame. You should feel a change in the area being stretched.



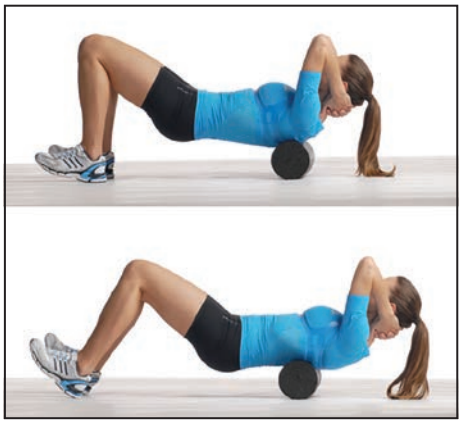
Shoulder Blade Squeeze

This move, which you can do while sitting at any time of day, tightens

and strengthens the overstretched muscles in the upper back:

- Squeeze your shoulder blades together, hold that position for a second or two, and relax.
- Repeat 12 to 18 times.

These exercises can correct shoulder misalignment, improve your posture, and relieve and prevent shoulder and upper back pain.



Try a Roller

If you have muscle spasms in your upper back, I recommend using a high-density foam roller. You can get one for about $20 or less. They come in different sizes; one that is about 2 feet long is all you need.

Lie on the floor with the roller under your upper back and support your head with your hands. Keep your knees bent and your rear end off the floor. Use your feet to push yourself back and forth, so that the roller massages your upper back.

You can do this once a day. Roll back and forth a few times — as long as it feels good. In addition to relieving muscle spasms, this helps to correct rounded shoulders.

Ankle Pain Relief

If the muscles that support your ankles are weak, it's easier to get a sprain or suffer a fall.[6] Weak ankle muscles also make it harder to recover from an injury, even a minor one, and residual pain can last for months or even years.

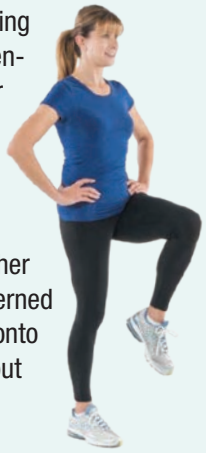
The exercises below strengthen and stabilize the muscles that keep your ankles strong and aligned. As well as relieving and preventing pain, they help to prevent sprains and other injuries.

Ankle-Strengthening Walks

Start by doing these exercises in a pair of comfortable sneakers, which provide support. As you progress, start doing these walks with bare feet, which is more challenging.

- Walk across the room with your weight on your heels, instead of on your whole foot.
- Walk back on your toes.
- Walk across the room on the inside of your feet.
- Walk back on the outside of your feet.

The Ankle Test



Before you start doing the ankle strengthening walks, test your ankle stability this way: Stand on one foot to see if you're stable. Do the same on the other foot. If you're concerned about falling, hold onto something sturdy but focus on how your ankle feels.

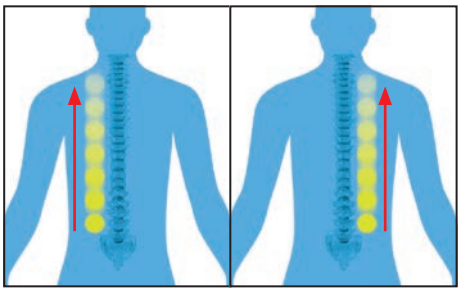
As you progress by doing the ankle exercises, repeat the test. You should find that you need less or no support and can stand on one leg for a longer time. This is a good indicator that your ankles are getting stronger.

You can do these exercises once or more per day to build strength in your ankles. They take only a few minutes but they can make a big difference by relieving discomfort, increasing stability, reducing risk of injury, and giving you more confidence in the way you move.And stronger ankles help to prevent falls.

To fully benefit, you need to do the exercises regularly. Once your ankles are stable and there's no discomfort, do them a few times each week.

How a Tennis Ball Relieves Back and Hip Pain

Muscle spasms are the most common reasons for pain in the lower back and hips. Believe it or not, a tennis ball can relieve these muscle spasms. Here's how to use one:



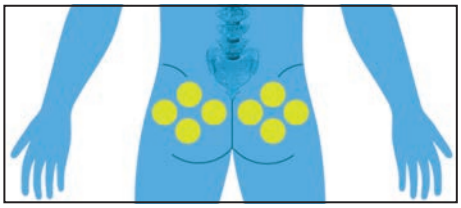
For the Back

Your back has long muscles on either side of your spine, and spasms can occur in those muscles. To stop the spasms, you can use a tennis ball to relax the spasms on one side of the spine, and then on the other side. Here's how:

- Lie on the floor, relaxed, with your knees bent.
- Put the tennis ball under the bottom of the muscle on one side of the spine, above the hip.
- Hold it there for a count of 5 while focusing on relaxing the muscle.

- Roll the ball up an inch and repeat the above step.
- Roll the ball up another inch and repeat.
- Keep repeating those steps on the same side of the spine until you get as high up the back as you can.
- Do the same with the muscle on the other side of the spine, starting at the bottom, above the hip, and working your way up.

You can do this as often as needed to relieve spasms in your back muscles. Make sure to always put the tennis ball under the muscles, never under your hip bone or spine.



For the Hips

Spasms in the glutes — the muscles that make up your rear end — are a common reason for hip pain.

To relieve the spasms, you can use a tennis ball to put pressure on different points in the glute muscles to relax the tension. Here's how:

- Lie flat on the floor and relax.
- Bend one knee and put the tennis ball under that side of your glutes. Try to put it in the middle of that butt cheek.
- Slowly straighten your knee, lowering it as far down as is comfortable, and then slowly bring it back up to a bent position.
- Move the tennis ball to another spot under the same butt cheek, in whatever direction feels right, and repeat the above step.
- Move the tennis ball to another spot and repeat.
- Once you've done these steps on three or four spots on one side, repeat them on the other butt cheek.

You can do this as often as needed to relieve tension and spasms in the glute muscles.

A Final Word

The exercises and techniques I've covered this month have helped many of my patients, and I use them myself. They are designed to correct the most common types of misalignment and muscle spasms that cause achy joints. But other factors, such as chronic inflammation, food intolerance, lack of the right nutrients, or lack of sleep, can also contribute to joint problems. And some supplements can be beneficial. I'll be covering those topics next month.

Meanwhile, if you follow my suggestions and don't feel any better, perhaps a different condition is causing the problem, such as lack of cartilage to cushion a joint as a result of osteoarthritis. Or perhaps you would benefit from a physical therapist who works with you one-on-one. You can ask your doctor for a referral.

One word of warning: Don't just try an exercise, feel a bit better, and then forget about it. It takes consistent work to keep your joints in good condition. However, the approaches I've covered don't take a lot of time and the results are well worth the effort.

Related to This Topic

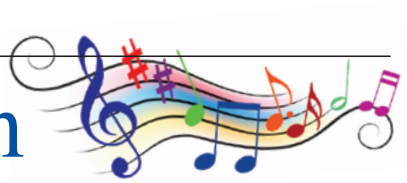
These are some earlier issues of this newsletter that address related topics:

Related Topic	Volume	Issue	Title
A Healthy Low-Carb Diet	7	1	My Low-Carb Diet — Fine-Tuned
Shoes	4	6	Best Shoes to Reduce Knee Pain (page 9)
Arthritis	2	5	The 90-Day Program to Relieve Arthritis
Sleep	5	4	Restful Sleep: How to Get Enough
Inflammation	4	4	How to Calm Harmful Inflammation
Joint Replacement	5	2	Joint Replacement: Who Needs One? (page 8)

Access these online by logging in to www.NaturalHealthConnections.com.

1 Neme, J.R., "Balancing Act: Muscle Imbalance Effects on Musculoskeletal Injuries." Mo Med. 2022 May-Jun;119(3):225-228.
2 de Zwart, A.H., et al. "Factors associated with upper leg muscle strength in knee osteoarthritis: A scoping review." J Rehabil Med. 2018 Feb 13;50(2):140-150.
3 van Tunen, J.A.C., et al. "Association of malalignment, muscular dysfunction, proprioception, laxity and abnormal joint loading with tibiofemoral knee osteoarthritis - a systematic review and meta-analysis." BMC Musculoskelet Disord. 2018 Jul 28;19(1):273.
4 Oiestad, B.E., et al. "Knee extensor muscle weakness is a risk factor for development of knee osteoarthritis. A systematic review and meta-analysis." Osteoarthritis Cartilage. 2015 Feb;23(2):171-7.
5 Page, P. "Shoulder muscle imbalance and subacromial impingement syndrome in overhead athletes." Int J Sports Phys Ther. 2011 Mar;6(1):51-8.
6 Cattagni, T., et al. "Ankle muscle strength discriminates fallers from non-fallers." Front Aging Neurosci. 2014 Dec 19:6:336.

How Music Enhances Health



For many people, music is one of life's greatest pleasures. And while we may think of it mostly as a form of entertainment, music does a lot more, according to a recent poll of 2,657 adults between the ages of 50 and 80. The research, by the University of Michigan in Ann Arbor, found that listening to music delivers quite a few health benefits, including reducing stress and enhancing mood, energy, and motivation. And sometimes, it can help to ease pain.[1]

The survey is part of the university's National Poll on Healthy Aging, which examines various aspects of life as people live longer. Altogether, it found that 98 percent of those surveyed reported at least one health-related benefit of music.

Best of all, you don't have to be a singer or musician to reap the rewards. Most people experienced health improvements by listening to music at home, watching a musical performance on television or online, or — less often — by attending a musical performance.

In addition, one in five adults surveyed reported singing every day, and 46 percent sang a few times a week. Less often, there were those who sang in a choir or played a musical instrument, by themselves or with others.

Other Benefits of Music

These are some other benefits found in earlier studies:

- Listening to relaxing music can be as effective as sleeping pills for mild to moderate insomnia. For some people, somewhat upbeat music also works well.
- Brain scans showed that music can slow age-related loss of grey matter in the brain. This benefit was documented among older people taking piano lessons or music awareness classes, in which they learned to identify different instruments and styles while listening to music.
- Guided singing exercises and singing in a choir can help stroke victims recover the ability to speak.
- Singing training can improve breathing among people suffering from COPD, long COVID, or other chronic respiratory conditions.

Recent Research Highlights

Benefits of listening to music reported by participants in the University of Michigan National Poll on Healthy Aging	How many survey respondents reported this benefit
Relieves stress or relaxes	75%
Brings joy	73%
Improves mental health, mood, or attitude	65%
Motivates or energizes	60%
Helps keep the mind sharp	31%

Did You Know?

Alzheimer's patients often recognize and remember music from far in their past, as this part of their memory survives the longest.

What to Do

We all have individual tastes in music. Whatever you like, make a habit of listening to it. If you have a collection of records or CDs, listen to them. If you play a musical instrument or would like to learn how, it can be fun. And don't hold back on singing, whether it's in the shower, while doing chores, or in a singalong with friends.

Beware of the Snack Trap

Snacks typically make up one-quarter of the day's calories — often more than breakfast — according to a recent analysis of American snacking habits.[2] Yet, snacks don't provide the nutrition that meals do.

Unhealthy snacks are the most likely contributors of carb overload, which leads to diabetes, high blood pressure, and other chronic health conditions.

I'm not against snacks. In fact, I recommend them to maintain stable levels of blood sugar and prevent cravings between meals. But snacks need to be low in carbs and to contain some fat and protein, so that they're satisfying. Good ones include a spoonful of nut butter, a small handful of nuts, beef jerky, or vegetables dipped in hummus or ranch dressing.

1 Kullgren, J., et al. "The Sound of Music." Institute for Healthcare Policy and Innovation. National Poll on Health Aging. University of Michigan. February 2024. 2 Heitman, K., et al. "Snacks contribute considerably to total dietary intakes among adults stratified by glycemia in the United States." PLOS Glob Public Health. 2023; 3(10):e0000802.

Vicki wanted to lose weight, but she hated exercise — so how the heck did she drop 32 pounds in two months?

If you're having trouble losing 15 pounds or more, just see what happened to Vicki...

Like most of us hitting middle age, Vicki started packing on a few extra pounds each year. Her weight crept up so gradually she hardly noticed. But eventually, Vicki, her husband, and her doctor became concerned. As you might imagine, Vicki's self-esteem took a big hit.

Vicki tried to lose weight by depriving herself of all her favorite foods. She forced herself to eat boring salads and tasteless frozen diet meals. And she exercised like crazy (even though she hated it). But the extra pounds just wouldn't budge.

That's when a friend suggested Vicki try **Smash-It!** This nutrient-infused slimming shake was developed by Primal Labs — a leader in nutritional supplementation.

In the first month alone, Vicki lost 3.5 inches from her belly and 2 inches from her waist, hips, and thighs. And when you hear Vicki tell the story, you'll see why she feels like a different person. "I have so much energy. Oh my gosh, my co-workers noticed within two weeks I was dropping weight," she said. "I was walking around with a big smile on my face."

It's easy to see why Vicki had a big smile. She lost 18 pounds in just 30 days merely by substituting one meal a day with Smash-It! But she wasn't done...

In the second month, Vicki lost an additional 2.5 inches off her belly and waist, and 1.75 inches off her hips. **In only two months, Vicki lost a grand total of 32 pounds!**

What's more, Vicki lost all this weight with only minimal exercise. Which just shows you proper nutrition is 90% of successful weight loss. Because if you're eating the wrong foods, you can't exercise enough to get rid of unwanted fat.

And that's the secret of **Smash-It!**, the delicious meal-in-a-glass that works better than any diet or weight loss program.

Smash-It! has been scientifically formulated to fix the #1 reason most people can't lose weight: **TOXIC FAT CELLS**. Most people get stuck with unwanted pounds, not because of *too much* fat, but rather because of too much of the *WRONG kind* of fat.

This was proven in a landmark study at Temple University. Researchers studied fat cells of overweight people and found them to be toxic, inflamed, and unhealthy. Worse yet, these toxic fat cells "affect blood pressure, blood sugar, triglycerides, and cholesterol," according to *Future Medicine*.

Fortunately, a delicious **Smash-It!** meal replacement shake is an amazing improvement over any meal replacement, protein supplement, or "nutrition shake" you may have tried. In fact, by drinking a daily **Smash-It!** shake, you can:

1. FIX those toxic fat cells for good...
2. FIRE UP your metabolism and supercharge your health...
3. TAKE INCHES AND POUNDS OFF your hips, thighs, and waist, giving you the body you've been dreaming of...

Discover everything you will get with Smash-It! on the next page!

Here's What You'll Find in Smash-It!

First, you'll get 21 grams of **quality protein** in a proprietary Quadsource Blend. This includes whey and pea protein, and even cranberry seed protein to help boost your metabolism and give you the nutrition you need.

Next, a patented *Spectra Blend* contains 29 of nature's most powerful, health-boosting fruit, vegetable, spice, and herbal extracts, including green tea, turmeric, broccoli, bilberry, cinnamon, blueberry, acerola, and many more.

You'd have to eat several servings of fruits and vegetables to get the **antioxidant power** you'll find in *Spectra Blend*. As you know, antioxidants fight the free radical damage that comes with aging. Plus, they increase nitric oxide production to support healthy blood pressure levels and brain function.

In **Smash-It!**, you'll also get:

- ✓ 3 grams of gut-healthy **fiber**, including oat fiber, xanthan gum, and blue agave inulin to help support healthy lipid levels
- ✓ 8 special **enzymes** to help you better digest your food
- ✓ 6 special **probiotics** — "friendly" bacterial strains to support regularity and immune function
- ✓ Biotin and chromium to help maintain healthy blood sugar levels
- ✓ Vitamins A, C, E, B, and D for more health benefits, including support for bone and brain health, as well as healthy blood pressure
- ✓ L-leucine, an amino acid that helps minimize the loss of lean muscle tissue — something to guard against as you age (and when losing weight)
- ✓ And many more vitamins, minerals, and other nutrients to maintain your good health

But what about fat? You know you need fat to feel full and satisfied, so you won't be tempted by unhealthy carbs and sweets. But it has to be *good* fat, not the bad fats typically found in fast and processed foods.

Well, **Smash-It!** contains the absolute **best kind of fat** — medium chain triglycerides found in coconut oil that your body easily burns for energy. And as an added bonus, these fats help support cognitive health.

What's more, the Primal Health team knew that if it didn't taste great, you wouldn't drink it. So, **Smash-It!** comes in rich chocolate, strawberry, and vanilla caramel flavors. It's sweetened with monk fruit that's actually sweeter than sugar. **Smash-It!** contains just one gram of sugar per serving. Compare that to Ensure, with its unhealthy 15 grams of sugar.

With **Smash-It!**, you can **safely and easily melt off up to 15 pounds in just one month**. And enjoy all these benefits in just 30 seconds a day — with minimal exercise and NO impossible-to-maintain diet. What's not to love?

And no worries... Try **Smash-It!** completely risk-free with a no-questions-asked 100% money-back guarantee.

Just like Vicki, now YOU can start shedding those unwanted pounds. Imagine looking and feeling years younger... Fitting into your skinny clothes again... Sounds amazing, doesn't it? Say hello to your new life.

TRY IT TODAY! Smash-It! Nutrient-Infused Slimming Shake

GetSmash-It.com/NHC3

For Faster Service, call 1-888-309-0629

Monday-Friday 7 a.m. to 6 p.m. CST • Saturday-Sunday 8 a.m. to 5 p.m. CST

Tai Chi Lowers Blood Pressure

Tai chi is sometimes described as meditation in motion because it is a gentle, flowing form of exercise based on an ancient Chinese martial art. But it can have powerful effects on your health. In a new study, tai chi lowered blood pressure more effectively than aerobic exercise.[1]

Study Details

The study was done in China, where tai chi is a popular form of exercise. It included 342 people between the ages of 18 and 65. For 12 months, half the participants followed a tai chi program while the other half followed an aerobic regimen of brisk walking and other low-impact exercises that raised heart rate. Both programs consisted of hour-long supervised exercise sessions, four times per week.

At the start, participants' systolic blood pressure (the top number) ranged between 120 and 139 mmHg. At the end of the year-long study, systolic blood pressure tests showed an average drop of 7.01 mmHg in the tai chi group (9.01 mmHg is the average drop for a blood-pressure drug). The drop in the aerobic group was significantly less: 4.61 mmHg. Diastolic blood pressure (the bottom number) also dropped more among those doing tai chi, compared to aerobic exercise.

What Does This Mean?

If blood pressure is elevated, lowering it by 5 mmHg may reduce risk for a heart attack or stroke by about 10 percent.[2] And the group doing tai chi beat that mark.

Tai chi has been shown to provide other benefits, such as lowering stress and anxiety, improving balance, helping to relieve stiffness and pain, strengthening muscles, and lowering risk of falls. Keep in mind that other types of exercise also provide some of these benefits.

For lowering blood pressure, high-intensity interval training has been shown to be more effective than moderate aerobic exercise at a steady pace.[3] You can do interval training while walking: Walk normally for a few minutes, walk as fast as you can for a minute, slow down for a few minutes, walk fast for a minute, and keep repeating this for 20 minutes or so.

What to Do

My recommendation is to vary the types of exercise you do. If you are not currently active, tai chi may be a good way to get started, or it may be a good addition to an exercise program that you are already doing. Local community centers sometimes offer tai chi classes for older adults or you can follow online videos.

A Case of Severe B12 Deficiency

A 64-year-old woman in Tunisia was hallucinating, couldn't remember things, and was incontinent. When she showed up at a doctor's office, she appeared to be suffering from dementia, but it turned out to be an extreme deficiency of vitamin B12.

The woman had been taking metformin for type 2 diabetes — for 30 years. Doctors diagnosed her condition as "acute-onset reversible dementia with seizures due to metformin-induced vitamin B12 deficiency." Such a severe case is so rare that they wrote about it in a medical journal.[4]

Metformin is known to deplete vitamin B12. If you take the medication, be sure to take extra B12 supplements and get your blood level of B12 checked when you see your doctor. An optimal level is above 500 pg/mL. If you take more than your body can use, B12 is not toxic; it just gets excreted.

Vitamin B12 is a necessary supplement for most older people and those with heartburn, as low stomach acid in these situations decreases absorption of the nutrient. Anyone who doesn't eat animal foods — the only food sources of B12 — should also take the supplement.

Known symptoms of low B12 include apathy, agitation, poor concentration, insomnia, delusions, hallucinations, and disorganized thinking. And lack of B12 can make you more susceptible to feeling cold.

1 Li, X., et al. "Effect of Tai Chi vs Aerobic Exercise on Blood Pressure in Patients With Prehypertension: A Randomized Clinical Trial." JAMA Netw Open. 2024 Feb 5;7(2):e2354937. 2 Canoy, D., et al. "How Much Lowering of Blood Pressure Is Required to Prevent Cardiovascular Disease in Patients With and Without Previous Cardiovascular Disease?" Curr Cardiol Rep. 2022 Jul;24(7):851-860.
3 Keating, S.E., et al. "High-Intensity Interval Training is Safe, Feasible and Efficacious in Nonalcoholic Steatohepatitis: A Randomized Controlled Trial." Dig Dis Sci. 2023 May;68(5):2123-2139.
4 Laroussi, S., et al. "Reversible dementia and seizures due to metformin-induced vitamin B12 deficiency." Encephale. 2024 Feb 17:S0013-7006(24)00020-4.

Q&A

Q: Thank you for all the great information. I have lowered my A1C from 7.9 to 6.2 following your suggestions! I still have "high" blood sugar in the morning. During the night it's around 100, then without any food it will go to 125 or 145–150. Why does this happen? *— Patricia D.*

A: Wow! Great job in taking your A1C from an uncontrolled diabetic level to merely a prediabetic level. Keep it up!

I have seen high morning blood sugar many times and it can be confusing. It mostly has to do with the daily circadian rhythm — the natural changes that happen in a human body during each 24-hour period.

Cortisol, our main stress hormone, influences blood sugar. When cortisol goes up, so does blood sugar. Cortisol is lowest in the evening, so it isn't driving up blood sugar. In the morning, cortisol is highest about 40 minutes after waking.

Some people are very sensitive to the effect of cortisol, causing their blood sugar to rise in the morning. I have seen this in people of all ages, including healthy high-school athletes.

I would continue the great work you're doing and see if your A1C falls further. A1C is an indicator of the degree of damage caused by elevated glucose in your body. When A1C is high, large blood-sugar fluctuations during the day can be harmful. However, if A1C gets down to 5.6, which is a normal level, a morning spike in blood sugar is unimportant, as blood-sugar fluctuations are no longer causing any damage.

A continuous glucose monitor (CGM) is a helpful tool to further lower your A1C. A CGM can show you what raises and lowers your blood sugar throughout the day, including different meals, snacks, and beverages, various types of exercise, and stressful events. You can use that data to fine-tune the terrific work you're already doing and enhance your progress.

Q: Could you tell me the pros and cons of antacids like Tums and Pepto-Bismol? *— Carol B.*

A: Antacids can be helpful for relief from occasional heartburn or indigestion. However, using them frequently means that you have a digestive issue that is not being fixed, and that concerns me. Acid reflux, left unhealed, will continue to cause damage.

Heartburn occurs because of a problem with a ring of muscle fibers at the bottom of the esophagus — the tube that food travels down into the stomach. That ring of muscle — the lower esophageal sphincter — works like a valve. It opens to let food into the stomach, then it's supposed to close and remain closed as the food gets broken down by stomach acid.

Problems occur when that valve-like ring of muscle doesn't stay closed. Then, acidic stomach contents creep up the esophagus and cause heartburn.

Most often, this is why it happens: There isn't enough stomach acid to efficiently break down food. The food lingers in the stomach, partially digested stomach contents exert pressure on the valve, it doesn't stay shut, and acidity moves up your esophagus. Lack of stomach acid can also cause bloating and other discomfort in the digestive system.

Increasing stomach acid, by taking one serving of a betaine hydrochloride supplement with the first few bites of a meal, can usually solve the problem. Over time, this can help to restore your body's natural production of stomach acid. However, because levels of stomach acid generally drop with age, some people need to keep taking the supplement with meals long-term.

Persistent heartburn or other digestive problems can also be symptoms of underlying medical conditions and should be checked. You can read more about digestion in an earlier issue of this newsletter: Volume 1, Issue 6, *The 6-Minute Heartburn Remedy*.

Do you have a question for Dr. Marlene?

Send your health-related questions to drmarlene@naturalhealthconnections.com. Please include your first name and the initial of your last name. Although she cannot answer each question directly, Dr. Marlene will select a few in each newsletter and will address other questions and concerns in articles in future issues. Answers are intended for educational purposes only and should not be viewed as medical advice. If you need help with your subscription or have questions about Primal Health supplements, email support@primalhealthlp.com or call 877-300-7849.