

Interval Walking Training – Going Beyond Step Count

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STORY AT-A-GLANCE

- › Interval Walking Training (IWT) was observed to help improve lower blood pressure, depression symptoms and stroke risk while enhancing muscle strength and immune system function
- › Moderate-intensity exercise like walking is highly beneficial, with benefits increasing from 2,000 to 12,000 steps daily without apparent upper limits on positive effects
- › Japanese researchers have developed innovative walking techniques, including IWT and slow running, offering accessible solutions for people of all ages and fitness levels
- › Slow running and light-intensity exercise activates brain genes, increases neural activity in the hippocampus and provides mental health benefits without requiring athlete-like levels of discipline
- › Walking is enhanced through various methods like weighted vests, Nordic walking, outdoor nature walks, social walking and using the time for creative thinking and personal development

The global struggle against physical inactivity is more relevant than ever, with the World Health Organization (WHO) identifying it as the fourth leading risk factor for death worldwide. In America alone, many people don't get enough physical movement, and that even just a slight increase will already have profound effects on your health.

According to a report published in the National Cancer Institute:¹

"If U.S. adults aged 40 to 85+ increased moderate-to-vigorous physical activity by 10 minutes per day, approximately 6.9% of annual deaths could be averted – 111,174 preventable deaths per year. Greater benefits were associated with larger increases in physical activity."

To curb health risks associated with a sedentary lifestyle, health experts and government health agencies are now encouraging people to exercise more. And one of the most effective solutions available to everyone is walking. It's the simplest and most accessible form of exercise, and new research puts it at the center of a new fitness movement that will lead to improved overall health.

Japanese researchers have pioneered two transformative methods – interval walking training (IWT) and slow running. These approaches are not only effective but also adaptable for various lifestyles and physical conditions.

An Overview of Interval Walking Training

In a documentary titled "New Findings on Walking and Running,"² Medical Frontiers host Erica Angyal investigates the rising popularity of IWT and slow running in Japan as solutions to curbing physical inactivity, especially among middle-aged and senior citizens.

Originating from Shinshu University in Matsumoto, Japan, IWT is a structured form of walking that alternates between three minutes of slow, relaxed walking and three minutes of brisk walking. Initially developed for athletes, IWT has since been adapted for all age groups and fitness levels.³

To quantify the effectiveness of IWT, the research team conducted a study involving three groups – one that didn't walk, one that walked 10,000 steps daily and one that did 30 minutes of IWT. The study revealed striking results:⁴

- Systolic blood pressure in the IWT group dropped four times more than in the 10,000-step group. Diastolic blood pressure decreased by two and a half times

- Researchers believe that the risk of stroke will decrease by up to 40% when participants follow through this habit for five years
- Symptoms of depression were reduced by 50%
- Sleep efficiency increased by 12%

These results underscore ability of IWT to significantly improve cardiovascular health and mental well-being. Additionally, IWT enhances muscle strength, particularly in the hamstrings, as well as boosts aerobic endurance. Specifically, the researchers noted that participants who did IWT for five months had 12% stronger hamstrings compared to the group who only completed 10,000 steps.⁵

Another notable benefit of the increased physical activity is a stronger immune system. "I used to get sick often, but now, I rarely catch colds. It's a major change," one participant says.⁶ And this statement is not just anecdotal – published research has shown that exercise boosts your immune system. Specifically, it produces anti-inflammatory cytokines, neutrophils, leukocytes, natural killer cells and lymphocytes.⁷

How to Get Started with IWT

Walking is one of the best ways to boost your fitness level and mental health. That being said, IWT is an ideal choice because it's easily implemented. Nose Hiroshi, the creator of IWT, outlines how to do it below:⁸

1. Start by properly stretching your muscles.
2. Walk with a small stride. You'll know you're at the right intensity when you're able to enjoy a conversation with a walking partner.
3. Up the intensity by walking with bigger strides. Your heels are supposed to touch the ground first, then your toe.
4. Bend your arms at a right angle and swing them back and forth widely to help you walk with big strides naturally. Aim for a speed that slightly tightens your calf muscles.

5. Alternate between three minutes of slow walking and three minutes of fast walking.
6. Aim for a total of 60 minutes of fast walking weekly, spreading your IWT sessions in several days.

Slow Running – Upping the Intensity from Walking

What if you want to do up the intensity now that you've gotten used to IWT? Here's where slow running enters the picture. According to Medical Frontiers, slow running requires more effort than IWT, but not so much as higher-intensity exercise. In essence, slow running is regarded as a light-intensity exercise, but will provide similar benefits to moderate-intensity exercise.⁹

The great thing about slow running is it allows you to reap the benefits without having the high discipline needed to be an athlete. As noted by Soya Hideaki, Ph.D., a fitness researcher at Tsukuba University, "Continuing moderate- to vigorous-intensity exercises requires high motivation."¹⁰

Hideaki also notes that despite the lighter intensity, your mental health will still benefit. Based on his research, slow running activates genes that improve hippocampal function similarly to running normally. For context, the hippocampus is involved in learning and memory, and prior research notes that exercise boosts the size of this region in your brain.¹¹

Hideaki and his team also conducted another experiment in his lab. They monitored three groups of mice for six weeks – the first did no exercise, while the second did light-intensity running and the third had vigorous-intensity running. After conducting tests, the light-intensity group increased their hippocampal neurons 1.7 times compared to the no-exercise group. Meanwhile, the vigorous-intensity group increased their hippocampal neurons 1.3 times.

Experiments involving humans have corroborated these findings. Using MRI (magnetic resonance imaging) scans, Hideaki noted that participants who did a light pedaling

exercise had increased neural activity in the hippocampus compared to when they didn't do any exercise. This resulted in better accuracy scores in a post-exercise exam.

So, how does one do slow running? According to the documentary, the key is to run slow enough that you're able to maintain a smile on your face. Be sure to maintain a pace that's similar to fast walking while keeping both feet off the ground when doing your strides. For comparison, there is always one foot on the ground while walking.

Walking Is an Exercise That Can't Be Overdone

Many Americans do not get enough exercise these days. And while getting back to moving your body will improve fitness and overall health, don't go overboard with it — evidence shows that excessive vigorous exercise will also backfire. This observation was published in a study¹² by Dr. James O'Keefe and colleagues from the Mid-America Heart Institute at St. Louis Hospital in Kansas City.¹³

In the study,¹⁴ the researchers noted that for sedentary people who start exercising, a dose-dependent improvement in various health markers is observed. These include reduced mortality, diabetes, depression, sarcopenia, fall risk and osteoporosis. However, upping the intensity does not automatically mean the benefits increase. In short, there's a cut-off point to exercising to promote better health before it worsens.

Essentially, the study shows that participants engaging in high volumes of vigorous exercise begin to lose longevity benefits. For instance, individuals in their 40s and 50s participating in full-distance triathlons face an up to 800% increased risk of atrial fibrillation.

From the team's observations, it was noted that moderate-intensity exercise (defined as activity that leaves you slightly breathless but still able to converse) shows a clear "more is better" approach without apparent upper limits. This means that it can't be overdone, allowing you to safely reap the physical and mental benefits of exercise over and over.

In addition, moderate exercise, which includes walking (and by extension IWT and slow running), is around twice as effective as vigorous exercise in improving all-cause

survival rates. Based on this information, there's a "**sweet spot**" achieved through moderate-intensity exercise that is consistent, instead of going for intense workouts. When seeking the Goldilocks Zone for walking, O'Keefe advises:

"Clearly, more is better. You get the big gains going from sedentary lifestyles – 2,000 to 3,000 steps a day – up to 7,000 or 8,000. [Here] you have this very steep reduction in mortality, improvement in survival. It continues to about 12,000 steps a day. Most of the studies show that it plateaus at 12,000."

Take Your Walking Routine Further

Most people will benefit from walking. Barring any serious health condition, I recommend you incorporate it into your routine as part of a healthy lifestyle. The great thing about walking, or any moderate-intensity exercise (IWT or slow running), is that it's free and can be done anytime, anywhere.

Learning how to walk as an exercise creates a strong foundation that will allow you to add other forms of exercise. In fact, there's already different ways to enjoy walking once you've increased your fitness level and you're looking for bigger challenges. Here are different ways to spice up your walking routine:

1. **Walking with a weighted vest** – The extra weight engages more muscles, helping you build strength and endurance.¹⁵ Be aware that if the weight is not evenly distributed or if you compensate by altering your gait, it will lead to posture imbalances and musculoskeletal issues, such as back pain or shoulder strain.

To minimize these risks, it's important to start with a light weight and gradually increase the load as your body adapts, while ensuring proper fit and weight distribution of your vest.

2. **Nordic walking** – This involves walking with fixed-length ski poles and uses 90% of your muscles, providing a lower and upper body workout in one. It also requires about 18% to 25% more oxygen consumption compared to walking without poles at the same speed.¹⁶

3. Walking outdoors – Engaging in outdoor walks, especially in forested areas, provide substantial psychological advantages beyond those of regular walking. These nature-immersed strolls have been shown to significantly improve mental health by diminishing a range of negative emotional states.

Participants often report decreased feelings of depression, reduced tension and anxiety, lowered anger levels, and less fatigue and confusion.¹⁷ Walking outside at solar noon – wearing minimal clothing – will also maximize the benefits of sun exposure. For tips on safely optimizing this powerful tool, read my article "[The Role of Sun Exposure in Optimizing Your Cellular Health.](#)"

However, if you haven't eliminated vegetable oils from your diet, I recommend avoiding intense sun exposure, as this can cause the omega-6 linoleic acid in your skin to oxidize and cause sunburn. Go outside during early morning or late afternoon instead. Once you've removed vegetable oils for at least four to six months, you can go out during solar noon.

4. Walking with a friend – Adding a social element to your walks adds to the benefits. According to my interview with O'Keefe:

"Exercising and making social connections at the same time, that is an absolute goldmine of a longevity activity. That means that even walking with your dog or your friend ... is huge ... The whole thing is to move your body in a fun, playful manner and make it social."

5. Walking with a purpose – Take advantage of the time you spend walking for creative purposes, learning or productivity. In addition to listening to audiobooks or podcasts, use the time for self-reflection or brainstorming.

Deborah Grayson Riegel, who teaches leadership communication at Duke University's Fuqua School of Business, wrote in Harvard Business Review, "Charles Darwin, Friedrich Nietzsche, William Wordsworth and Aristotle were all obsessive walkers, using the rhythm of walking to help them generate ideas. And while any

form of exercise has been shown to activate the brain, walking is a proven creativity booster as well."¹⁸

Sources and References

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