Herbalife

EXERCISE GUIDE

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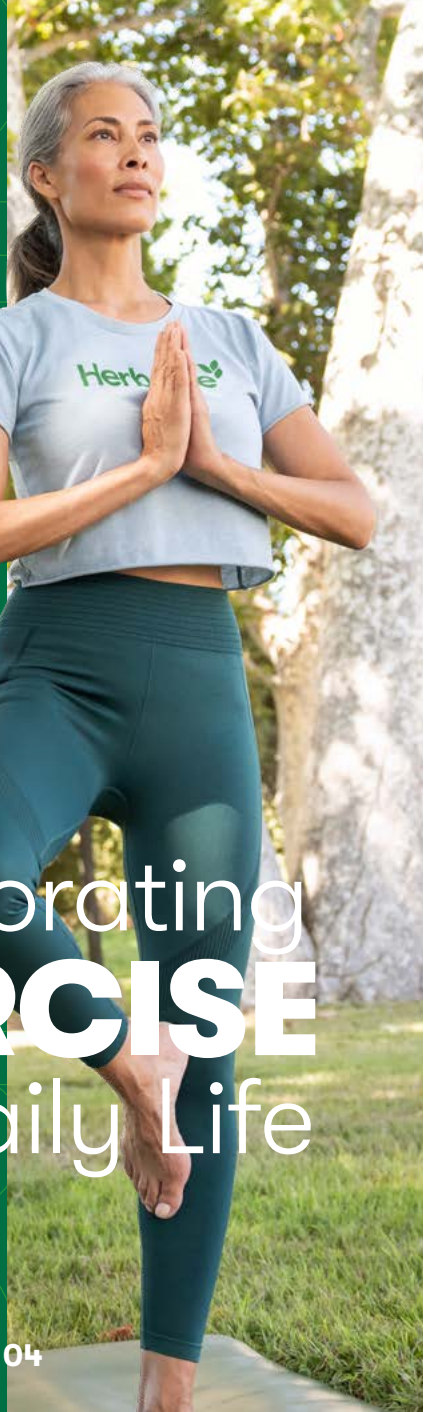
It's something you've probably heard your whole life:

A balanced diet and exercise are the key to good health. It's definitely solid advice for living your best life. But what does that actually look like day to day? And what are some things you can do to make it all easier to fit in? Our team of doctors, trainers and dietitians have put this guide together to help you understand why it's so important to get (and keep!) moving. They're also offering up tons of tips that can help you personalize your fitness journey and adapt to whatever level you're at.



Incorporating **EXERCISE** Into Daily Life

Regular exercise and physical activity are important to support and improve your physical and mental well-being. Toddlers, children, adolescents and adults benefit from regular physical activity. It really should be a part of your daily routine. People are so busy these days that it can be tough to find the time, energy and motivation to perform regular exercise. Unfortunately, many people would rather sleep in instead of taking that 6 a.m. workout class. They might reach for another cup of coffee midday instead of getting a natural energy boost from endorphins during a workout.

It's All About the Right Routine

Finding ways to integrate exercise into your daily life can be a real challenge. But there are some practical ways to develop a routine where exercise fits in. It doesn't need to be a huge time commitment to provide benefits. It might actually make more sense to spread your activity throughout the whole week rather than grinding away for hours on a few select days. You could find more consistency by splitting your training up into shorter and more frequent sessions. This may also help you enjoy exercise more and keep you motivated.

The American Heart Association has general recommendations for physical activity.

Adults

Adults

Get at least 150 minutes per week of moderate-intensity aerobic activity or 75 minutes per week of vigorous aerobic activity, or a combination of both, preferably spread throughout the week.

Kids

3- to 5-year-olds should be physically active and have plenty of opportunities to move throughout the day.

6- to 17-year-olds should get at least 60 minutes per day of moderate- to vigorous-intensity physical activity, mostly aerobic.

So, what's the best way to do that?

Kids

Plan

Plan Your Week Ahead and Stay Organized

If you find exercising first thing is the easiest way to stick to your routine, try planning out your morning session the night before. Set out your exercise clothes, shower bag and shoes. Prepare your breakfast ahead of time so that the whole process is smoother and more sustainable.

Schedule Your Training Sessions

Once you lock in a workout time, actually schedule it. Block off time in your calendar, set a reminder on your phone and reserve your spot in that class. Consider your workout time to be just as important as a business meeting or doctor appointment. That way it's harder to make the "I don't have time" excuse.

Be Creative With Daily Tasks

During the day, add in some activity to increase your daily movement totals. When possible, think about riding or walking to work, walking the kids to and from school and taking the stairs instead of the elevator. You can also try parking further away from entrances, performing bodyweight exercises during commercial breaks while watching TV and standing up at your desk every 20 to 30 minutes. If you can sneak in a walk or do some stretches during your lunch break or between meetings, you will feel a lot better throughout the day. These small things can really add up to big results.

Find What You Enjoy and Experiment

Think about what you really like. Do you prefer jogging or walking outside and getting fresh air? That's a sign that running on the treadmill won't be very motivating for you. The best way to stick with an exercise routine is to do something you enjoy. Give yourself time to explore different workout routines, classes and activities. There are plenty of options from gym memberships, spin classes, boxing classes, Pilates, yoga, and group fitness classes. Mix it up, start slowly and reflect on how you feel after these sessions. Do what works best and feels interesting.

Keep It Convenient

The more convenient your exercise routine is, the easier it will be to stick to it. If you have to drive out of your way to get to a fitness class or go through a lengthy process to log in and perform an online class, you'll probably end up skipping it. Set yourself up for success by choosing activities that can be done near your workplace or your home at the times that work best.

Lean Into the Power of the Group

If exercising alone doesn't do it for you, recruit a work colleague, friend, partner or family member to join in. Working out in a group setting can increase motivation and enjoyment and offer more accountability. Some group options include fitness classes and local park offerings like tennis, pickleball or other team sports. These settings can also take the pressure off you having to design and coach yourself through movement.

When you start looking, you'll see so many opportunities to be more active every day and get a few more steps in during your, routine activities. Remember, every move counts.

Convenient

Setting **REALISTIC** Exercise **GOALS**

As you add in exercise or change up your training routine, keep in mind that setting realistic goals is the best way to start. Everyone is different, so your goals should be specific and based on your desired long-term personal outcomes. They may be any or all of these:

1. **Build strength and power**
2. **Increase aerobic fitness**
3. **Get physically prepared for a sport**
4. **Lose body fat**
5. **Increase muscle mass**
6. **Improve flexibility and mobility**
7. **Overall health improvements**

your

Once you define your goals, it's important to assess your current physical and physiological status.

1. **Have you engaged in exercise programming recently or in the past?**
2. **Are you physically active in your life or at work?**
3. **Are you coming off an injury or do have any medical issues?**
4. **How much time do you have available each day or week?**
5. **What type of activities do you enjoy?**
6. **What equipment or facilities do you have access to?**
7. **Will you be doing this alone? With a partner? In a group?**

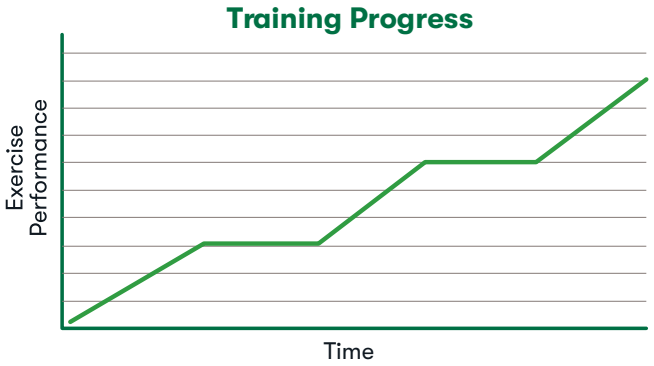
Now that you've defined your outcomes and status, you can begin to set clear exercise goals. For those who don't regularly exercise or anyone restarting a program it's important to set a foundation of strength and fitness. That will ensure you make the desired gains and stay healthy.

When trainers build out exercise programs, they do it in phases. These are called micro-cycles, mesocycles and macro-cycles. Just think of them as short-term, mid-term and long-term phases. You'll want to break it down like this to stay on track and see results faster.

Progression is the key to setting your exercise goals within these cycles. Let's say your first short-term goal (microcycle) is to run one mile without stopping, your second short-term goal (mesocycle) is to run two miles without stopping, and the third goal is to run those two miles in less than 20 minutes. That means your mid-term goal is to run two miles at 6 mph. All those may fall into your overall goal (macrocycle) of running a half marathon at the end of the year. Training within each cycle has to be designed to match the goal. It's ok to have multiple goals within a cycle as long as you aren't overextending yourself mentally or physically.

Goals

First goal/microcycle **Run 1 mile** without stopping	**First mesocycle** **Run 2 miles** at a pace of 6 mph	**Macrocycle** **Run a half-marathon** at end of year
Second goal/microcycle **Run 2 miles** without stopping		
Third goal/microcycle **Run 2 miles** in less than 20 minutes		



It's important to remember that exercise improvements are never linear. That means you'll see your fitness or strength improve, but it will likely plateau. Don't get discouraged during times of little change. During these plateaus, your body is adapting to the exercises you're doing. Once these exercises stop providing enough stimulus, you just need to change strategies. One way to do that is to change from running at a steady pace to shorter tempo runs. Expect and prepare for plateaus as you set your exercise goal and embrace them as a challenge in your fitness journey.

Along with that, there will be times where your performance decreases. Sometimes that's ok, as it's part of your overall improvement. Other times, it will require an adjustment. Expecting short-term dips in performance is part of the recovery or supercompensation process. The dips are followed by an adaptation phase. This is the moment in which you have made actual physical or physiological gains. Your body has become stronger and more resilient, so you're ready for more stimuli. That means adding reps, weight, distance or speed.

Progress

Remember,

short-term dips are good, but if you have a constant or extended decline in your performance, you may be overtraining and not giving your body enough time to recover. If that happens, just readjust your program and goals to reflect your current status. You'll also want to revisit your nutrition plan to make sure you're getting enough macronutrients.

Tracking your progress and being willing to adjust are the key to navigating the challenges that come with meeting exercise goals. Staying positive and consistent also helps!

Metrics

Now that you're focused on fitness, let's talk about how you can really start to see some results. Remember, regular exercise really is one of the best ways to improve overall health, well-being and longevity. It may sound challenging, but there are some simple ways to implement the most effective moves, find success and document your journey.

Set Goals

A key component for fitness success is goal setting. Without goals, it's hard to know where you're headed or when you will get there! Your goals should be clear and realistic. They'll determine the type, intensity and volume of your exercise program.

Define Your Metrics

Metrics need to be relevant to your goals. When your goal is to improve fitness, then metrics will revolve around cardiovascular and performance improvements. There are a bunch of physiological options that can give you a clearer picture of where you are, like heart rate recovery, your maximum rate of consumption (VO_2 max) or performance measurements.

Tracking Change

One of the best ways to track progress is to log your daily activities, performance and effort. Write down what you're doing and how you feel after. As fitness improves, you should be able to do more with less effort. This can be as simple as keeping a mileage journal and seeing the additional miles. Technology can help. There are plenty of GPS devices to track mileage and times so you can see your progression clearly. Some software programs allow you to compare your results to other runners, which can provide extra motivation and support.

Assessments

Use Specific Assessments

In addition to logging and tracking your daily or weekly workouts, several simple assessments can provide clear and specific data on your fitness progress.

1. Resting Cardiovascular Measures

Check your blood pressure and heart rate first thing in the morning. As fitness improves, resting blood pressure and heart rates tend to drop, which is beneficial for the long-term health of your heart and blood vessels. These numbers give great insight into your overall fitness level and health.

2. Heart Rate Recovery

This is a more specific heart rate metric indicative of fitness progress. It's measured by calculating your heart rate during peak exercise and again once exercise stops. Within the first minute, heart rate should drop between 15 and 20 beats per minute. A greater drop in heart rate recovery is indicative of better fitness.

3. Time Trials

In these, the goal is to cover a set distance in as little time as possible. For example, what's the fastest you run a mile or cycle three miles? A lower time is an indicator of improving fitness.

4. Maximum Distance Tests

The opposite of time trials are max distance tests. Here the goal is to cover the most distance in a set amount of time. One popular way is the Cooper Test, in which you run as far as you can in 12 minutes. As your fitness improves, so will your distance.

5. Time to Exhaustion

In this variation, exercise is performed at a set intensity until you can't maintain it anymore. How far can you run on a treadmill at 8 mph? The indicator of improving fitness is a longer duration, which also means more distance is covered.

6. Submaximal Aerobic Fitness Testing

In these, exercise intensity is below top abilities. There are several ways to measure distance covered or heart rate at certain time points. These numbers are entered into formulas designed to predict maximal aerobic fitness (VO_2 max).

7. VO_2 Max Testing

Considered by many to be the gold standard for measuring aerobic fitness, this requires specialized equipment in which oxygen consumption and carbon dioxide production are measured while wearing a mask. There are several different protocols designed to gradually build to an all-out maximum effort. VO_2 max is measured in mL/kg/min, and the higher the number, the better the level of fitness.

Before performing any tests, make sure you feel healthy and ready. Take appropriate safety precautions and consult with your physician if needed. Remember, the keys to improving fitness are setting clear goals, tracking your workout progression, and assessing and reassessing your current aerobic fitness state.

As you look for ways to improve your workouts, track your progress and stay motivated, don't forget about technology! It can really enhance your experience. There are a variety of apps and tools to track metrics, guide your workout or provide support. Let's look at some options.

Headphones and Music

One of the oldest and easiest ways to give your workout a boost is with your favorite tunes. Music has been shown to have a profound and positive influence on performance. But it works both ways, meaning if the gym is playing music you don't care for, it can have a negative effect. Of course, it's important to match your music to your mood and your workout. Heavy metal probably isn't the best choice for yoga but could be great for high-intensity interval training.

Music

Heart

Heart Rate Monitors (HR)

Heart rate monitors are another readily available technology. The most accurate ones are chest straps worn during exercise. The strap captures electrical signals from the heart and transmits data to a watch or smart device. Other options are wearing a watch, armband or ring. These use optical sensors to capture changes in the superficial blood vessels.

Your heart rate is directly related to the amount of internal or metabolic stress placed on your body. As stress or load increases, so does your heart rate. Some devices also calculate approximate calories burned, internal workload, set intensities or other metrics which can help you track your progress.

As heart rate monitors measure the internal load, other technologies measure external load, or the physical work performed by your body. They include pedometers, accelerometers and GPS that use algorithms to calculate your workload.

Pedometers

Pedometers are simple devices that measure the number of steps you take. They used to be a small device that you had to clip onto your waistband or shoe. Now, they're often embedded into your phone and are an effective way to track movement throughout the day.

Inertial Measurement Units (IMU)

While pedometers work on a single axis of direction to count steps, the next level of technology includes accelerometers and gyroscopes. These are considered tri-axial, which means they capture data in multiple directions. They track accelerations, decelerations and change of directions. They're embedded in devices or worn on the body.

Global Positioning System (GPS)

If training intensity and speed are higher than walking, GPS is a valuable tool. This is probably already built into your phone. GPS gives you advanced metrics like distance covered and velocity. At elite sporting levels, combined units are worn to harness the benefits of HR, IMU and GPS.
Many software programs also use proprietary algorithms to calculate workload based on individual variables such as height and weight. These devices use normative data in the algorithm and may over or underestimate your output.

Weight Room Equipment

The newest generation of equipment found in gyms or weight rooms includes a form of automated tracking. Most companies offer an app that directly pulls data from equipment. Some exercise bikes can track everything from distance covered and power output to exercise time in each workout intensity zone. Resistance exercise machines and associated apps track the number of reps, weight, bar speed, total volume moved, power and more.

Virtual

Remote Live Sessions

Several companies offer the ability to join live workouts remotely. This could be from your phone, tablet, or TV or directly through the equipment monitor. Maybe you've taken a live cycling, cross training or yoga class this way.

Augmented Reality (AR)

Supplemental to live, instructor-led sessions, newer devices allow for augmented reality. AR provides visuals of different locations or environments. This technology can make it look like you're riding your bike through the mountains of the Pacific Northwest or taking a run through the Swiss Alps.

Virtual Reality (VR)

Virtual reality elevates itself from augmented reality by creating a fully simulated environment. Special goggles are needed to create the experience and can make it feel like you are in a real boxing match, dance class or race.

Artificial Intelligence (AI) Training Systems

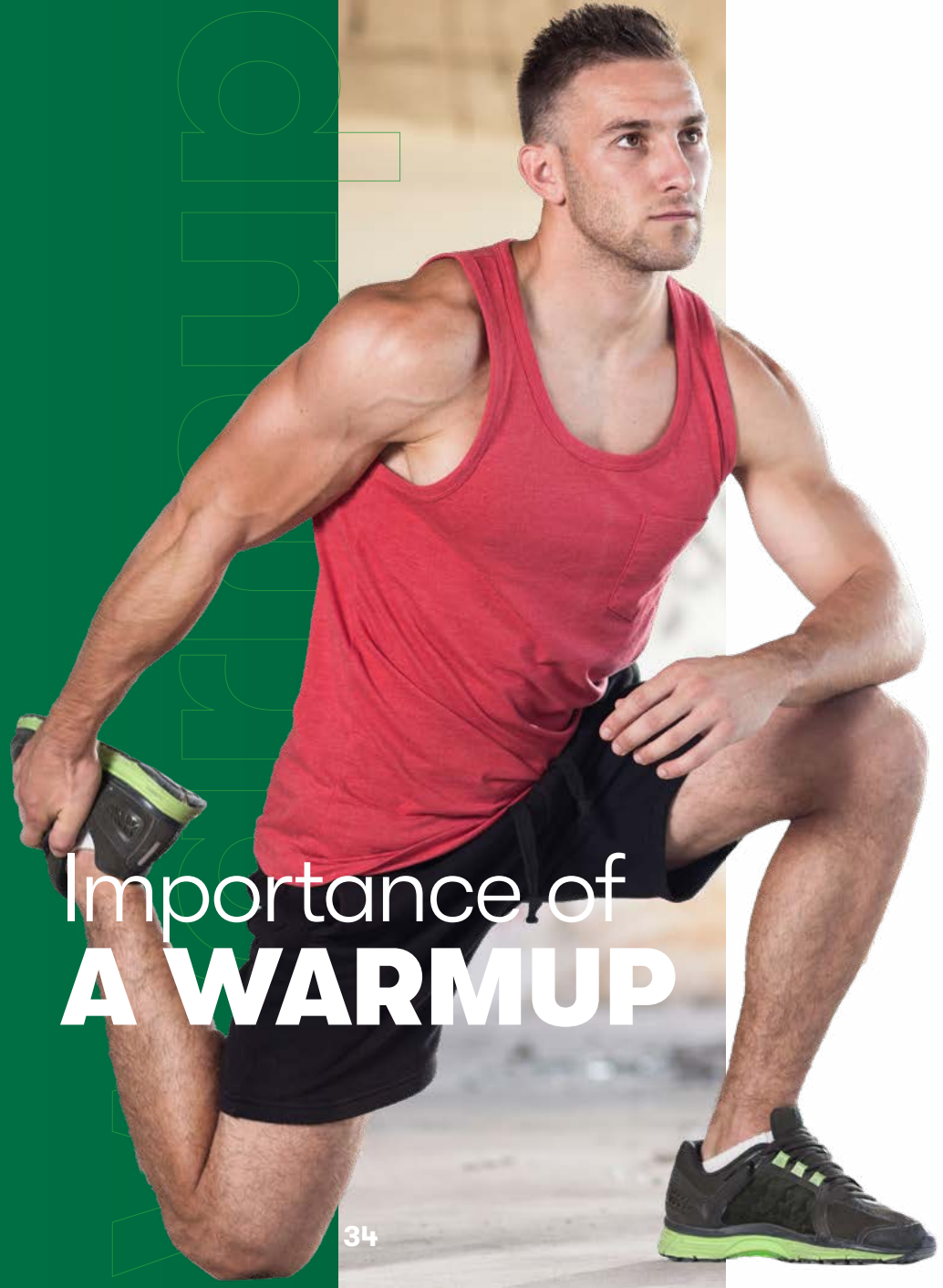
The future of fitness includes AI. With AI, exercise programs are automatically designed for your current state and goals and adjusted accordingly. Individual progress is tracked throughout, and feedback or motivation is provided to enhance results.

Other Devices

More devices and sporting equipment have sensors or other data capturing abilities with the end goal of joining the Internet of Things (IoT). There are jump ropes that track jump count and cadence. Other IoT devices include tennis racquets, running shoes or sports balls. Soon, various clothing textiles will be joining the IoT and have the potential to further enhance workouts.

With so many options, remember technology is designed to improve your life and your workouts. Experiment with different types to find what you enjoy and benefit from the most.

Reality



Importance of A WARMUP

Ok, you've set your exercise goals, and you're fired up to get moving. But your schedule is packed. It's challenging to squeeze in time for a workout, so sometimes we skip the most important part... the WARMUP. But there are a lot of reasons why you just don't want to do that.

Why is your warmup so important?

Well, for starters, it can:

Reduce Your Chance of Injury. Injuries not only cause you pain and suffering, but they also end up restricting exercising and keep you from performing your best, so be sure to warm up to prevent them.

Muscle

Increase Blood Flow and Decrease Muscle Soreness

When you warm up correctly, you slowly increase your body temperature, open blood vessels and increase blood flow to your working muscles. This allows more oxygen and nutrients to be delivered to muscles, which can improve performance, decrease muscle soreness and allow your body to move without straining muscle tissue.

Increase Range of Motion

Your warmup sends blood to working muscles, enhancing their flexibility, efficiency and overall range of motion. This helps minimize the risk of muscle strains, ligament sprains and other potential exercise injuries.

Enhance Muscle Function

Specific warmup routines can activate your nervous system, improving the coordination and responsiveness of your muscles. This enhances agility, balance and overall performance. This is helpful for athletes who are required to quickly react to sudden movements.

Elevate the Heart Rate

A thorough warmup prepares your body for the demands of exercise by gradually increasing your heart rate and breathing rate. This primes your cardiovascular system, making it more efficient at delivering oxygen and nutrients to your working muscles. By slowly raising your heart rate, you minimize stress and the pressure to pump blood suddenly to the whole body.

Help You Prepare Mentally

When you warm up your muscles, it also helps your mind. You can mentally prepare by focusing on the task at hand and forgetting about everything else. This reduces stress and anxiety and allows you to enter your workout with greater concentration and motivation.

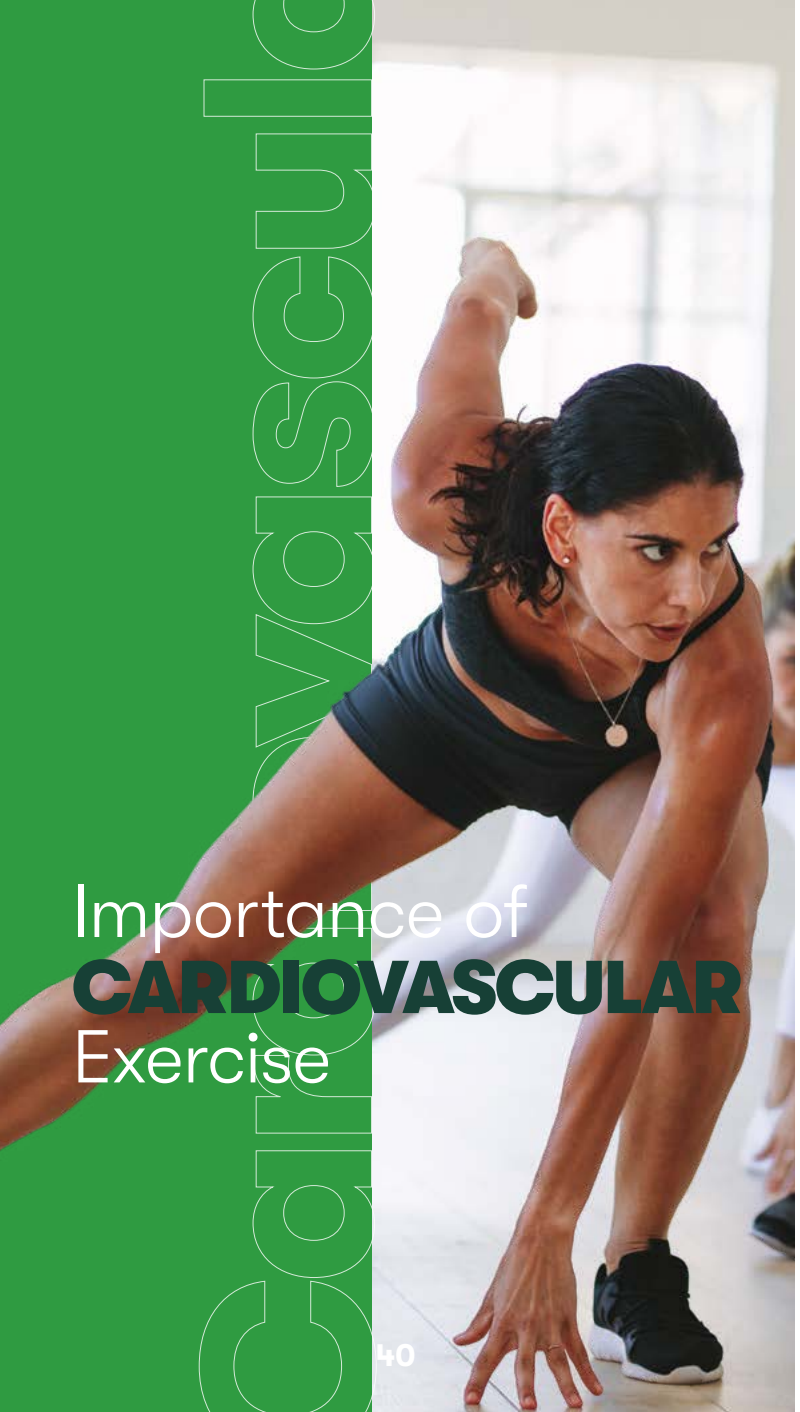
Prepare

Ideally, your warmup should activate your mind and prepare your body for what's ahead. Not every warmup should be the same. Try to match it to your upcoming session with low intensity movements and dynamic stretches that focus on the muscles and movements you're about to use. If your workout consists of jogging or running, you'll focus on warming up your legs and core.

TRY THIS: Start with a slow walk (2 to 5 minutes) and then progress into some steady jogging (2 to 4 minutes), gradually increasing speed. Add in a series of dynamic stretches focused on the lower limbs (hamstrings, quadriceps, calves, glutes, lumbar spine and core). Then do some lower limb body weight movements (lunges, squats, calf raises and glute bridges). Perform 1 to 2 sets of 6 to 10 reps, which should take about 10 to 20 minutes.

Remember,

for more intense training, more of a warmup is needed. Understanding why it's important to take the time for a well-designed warmup goes a long way in helping you prevent injuries, improve performance and increase your overall workout satisfaction.



Importance of **CARDIOVASCULAR** Exercise

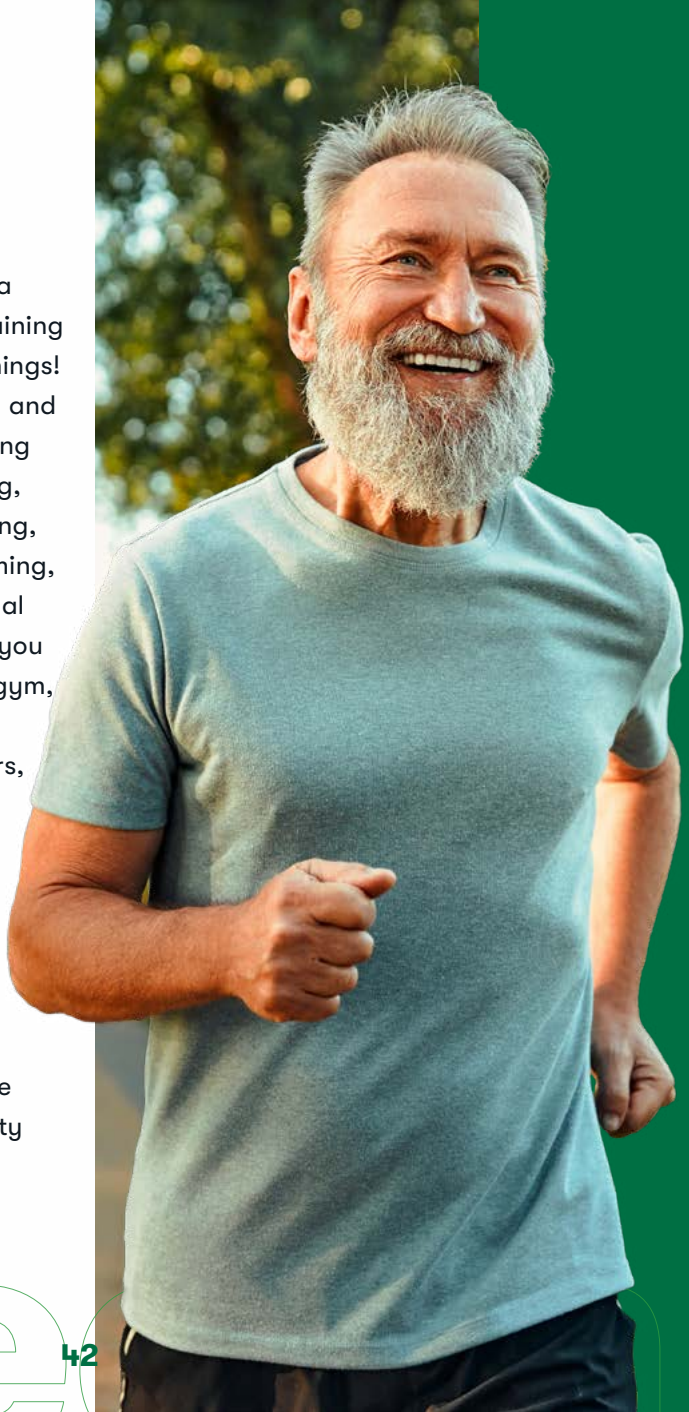
You've probably heard people talk about "doing some cardio" during their training session, but what exactly does that mean? And what are the real benefits of cardiovascular fitness? Well, let's dive into that and why it's so important to fit in this type of training each week.

Cardiovascular fitness, or aerobic fitness, is how well your heart, lungs and organs consume, transport and use oxygen throughout your workout for prolonged periods of time. So how would you rate your level of cardiovascular fitness? Considering that heart disease is one of the leading causes of death in the United States, it's an important question to ask. If you don't regularly elevate your heart rate for prolonged periods of time, and you feel breathless during basic tasks, that's a good sign you need to work in some more cardio. By improving your cardiovascular fitness, you'll boost the function of your heart, lungs and blood vessels and help minimize the risk of getting heart disease.

Plus most people swear a good cardio session clears their head,

so it's great for mental health too!

What constitutes a cardiovascular training session? Lots of things! From road cycling and mountain bike riding to running, jogging, brisk walking, hiking, rowing and swimming, as well as individual or team sports. If you have access to a gym, you can also use ellipticals, steppers, upright bikes, treadmills and rowing machines or take a group class. With that many options, you're sure to find something suitable for your age, ability and interests.



So, what is the right amount? The American College of Sports Medicine (ACSM) recommends getting about 30 minutes of cardio each day for at least five days a week. Remember, even if you happen to miss your planned cardio session, certain everyday tasks like cleaning, gardening and mowing the lawn can also count toward your goals.

More Than Just a Healthy Heart

We mentioned how regular cardio exercise strengthens your heart and helps it pump blood more efficiently throughout the body. But did you know it can also help lower blood pressure and keep your arteries healthy? It does that by raising "good" high-density lipoprotein (HDL) cholesterol and lowering low-density lipoprotein (LDL) cholesterol levels in the blood.

Weight

Improved Sleep

If you're having trouble sleeping at night, try fitting in some more outdoor cardiovascular exercise during the day. Soaking in the natural light helps your body establish a good sleep-wake cycle. It tells your body when to be alert and when to wind down. Just remember, give yourself at least two hours to decompress before bed, or it may be more difficult to fall asleep.

Weight Maintenance and Weight Loss

When combining cardio with healthy daily nutrition, you could see real results in terms of maintaining or losing weight. Spending less time sitting and more time being physically active helps burn extra calories throughout the day.

The key here is consistency!

Reduces Risk of Falling

As we age, our mobility decreases, and our chances of falling and being injured increase. Preventing falls is about more than having good strength and balance. It's also about cardio. Regular cardiovascular exercise increases your endurance levels, which can help with stability and mobility.

Affordable and Accessible

Another reason cardio is so great is that you don't need much to do it! No fancy equipment or memberships are required to get in a great workout. Getting daily cardio exercise can be as easy as taking a walk around your neighborhood or going for a jog with a friend on a local trail. There are some ways to make sure you get the most out of your cardiovascular training.

Loss

Variety Is Key

Your body adapts to specific types of training fairly quickly, so it can be challenging to achieve optimum results when you repeat the same kind of workout for a prolonged period of time. To continue enjoying the benefits of cardiovascular training, you should change up your activities and equipment frequently. Alternate between jogging, walking and biking, circuit training, and swimming to keep challenging your body and avoid stagnating.

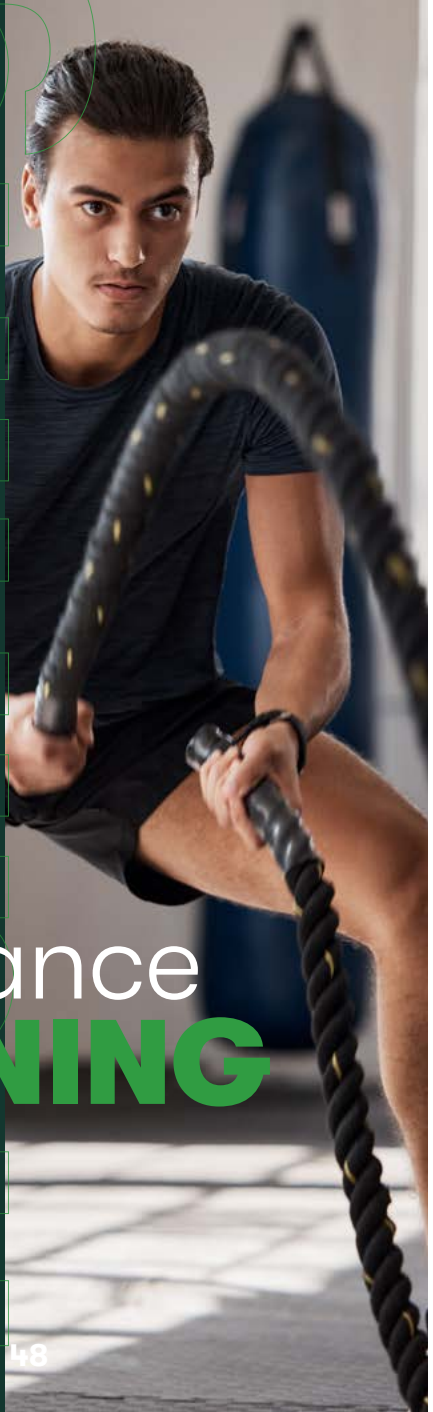
Adapt Your Intensity

You don't have to go hard to get the most out of cardio. In fact, you shouldn't. We know, it's exciting to start a new program, but you don't want to overtrain because that can lead to injury or burnout. To find that cardio sweet spot, we recommend wearing a heart rate monitor to track your training efficiency. Most fitness watches and smartwatches have this feature. Try to keep your training

Challenge Yourself

When you do regular cardio, you'll find that your workouts become easier. That's why it's important to continue to challenge yourself and improve your fitness level. You can make your routine progressively harder by reducing rest intervals, increasing repetitions or lengthening the duration of intervals. Just avoid changing more than one variable at a time, and you'll ssee real growth!

Adapt



Resistance TRAINING

Of all the things you can do to improve your overall health, resistance training (also known as strength or weight training) should be at or near the top of your list. There is so much growing evidence about its health and wellness benefits.

Resistance training involves using one or more muscle groups to perform a specific task. When you lift weights, squat or do push-ups, your muscles contract against an external resistance. Over time, this helps them maintain or increase strength, tone, mass or endurance.

Resistance training can be customized for your desired outcome, so if you don't want to bulk up, don't worry. Different types of resistance training create different results. Some include joint stability, improved muscular endurance, increased muscle strength and increased muscle size (hypertrophy), and power.

To achieve your goals, just modify the fundamental aspects of your workout, including the intensity, exercise selection, sets and reps, rest period, and velocity of movements. Depending on the type of resistance training you choose, you may not even need much equipment. Options include:

Body Weight Movements

Using your own body weight and the force of gravity to perform various movements (push-ups, squats, hip hinge, planks, pull-ups and lunges). This is free, safe and easy to do anywhere.

Free Weights

Equipment not bound to the floor or a machine (dumbbells, barbells, kettlebells, medicine balls or objects around the house).

Resistance Bands

Rubber bands that provide resistance when stretched. These come in a variety of resistances to suit your strength level.

Weight Machines

Machines with adjustable weights or hydraulics that create resistance and stress for your muscles.

Once you decide on the type of training and the equipment you'll use, get ready to see some great benefits. Results include:

Helping your muscles remain healthy and functional

Your muscles perform many types of small tasks every day, like lifting things, opening containers or even being active for prolonged periods. Keeping them strong allows you to enjoy a better quality of life.

Building lean muscle mass

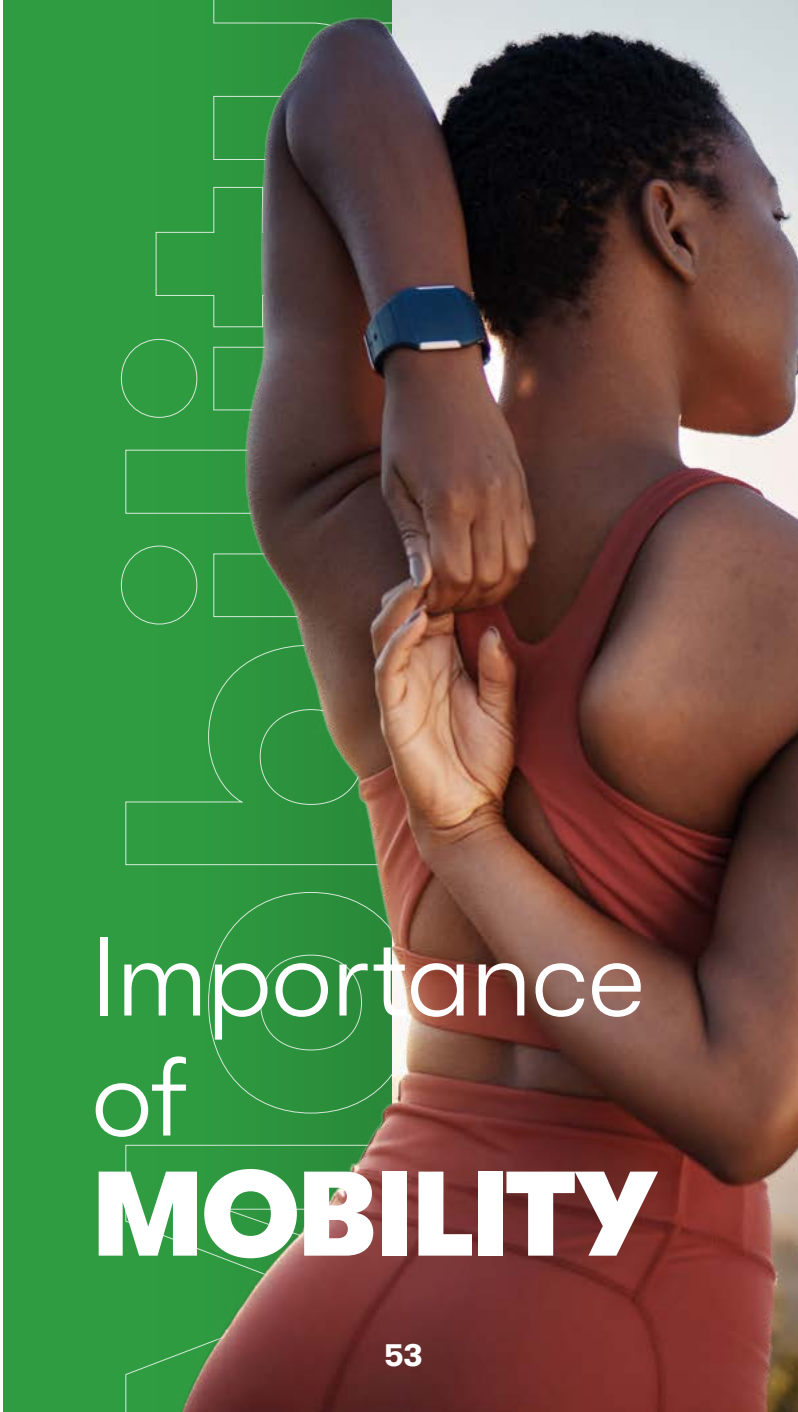
Muscle hypertrophy is a great goal for anyone, especially older adults who want to minimize muscle loss, or atrophy.

Increasing your metabolism

Resistance training could help your weight-loss goals. Since muscles require more energy to maintain than fat, having more muscle mass increases your resting metabolic rate, making it easier to maintain a healthy weight.

Strengthen bones and improve bone density
Resistance training is good for your bones and can reduce the risk of osteoporosis. Just be sure you are fighting muscle loss as you age.

So, whatever your goals are for fitness, be sure to make resistance training part of your regular routine. The ACSM recommends a minimum of two to three days each week to benefit from all the ways strength training can support your healthy, active lifestyle.



Importance of MOBILITY

Optimize

When you're training, don't forget to focus on mobility. It's a key component that is often overlooked. While it is easy to confuse mobility with flexibility (both are important), they each have unique attributes that contribute to your overall health and well-being.

Mobility training aims to maintain or optimize the movements and functionality of your body by increasing the range of motion (ROM) in your joints and surrounding muscles. Mobility exercises are based on a specific area, and the ACSM recommends getting these types of moves in five to seven days a week.

A simple way to test your mobility is to perform a deep squat. How far can you sit into your heels without falling off balance or feeling pain in your ankles, knees or hips? The depth of your squat is determined by your mobility, which affects your ROM. If you had a hard time squatting, try performing some ankle and hip mobility exercises to improve your squat pattern and depth.

Having a healthy level of mobility allows you to move freely and improves your quality of life. Performing daily activities, like putting a box up on a shelf, vacuuming, tying your shoelaces, pulling back your hair or picking up a baby, all depend on mobility. Movement outside of everyday life, like strength training, rock climbing, running, boxing, Pilates and yoga, are also impacted by mobility. When your mobility is limited, it creates bad movement patterns and can cause pain, strain and discomfort. Your body compensates for poor mobility, which puts you at risk for injury. Focusing on mobility can help prevent injuries and improve your overall exercise performance and progress.

Now that you know why mobility matters so much, how about adding in some simple moves to improve, maintain or increase your mobility? You don't need a lot of equipment, just some open floor space. If you have access to a training facility with trigger point balls, yoga blocks, roller sticks or foam rollers, that's great too, but it's not a necessity.

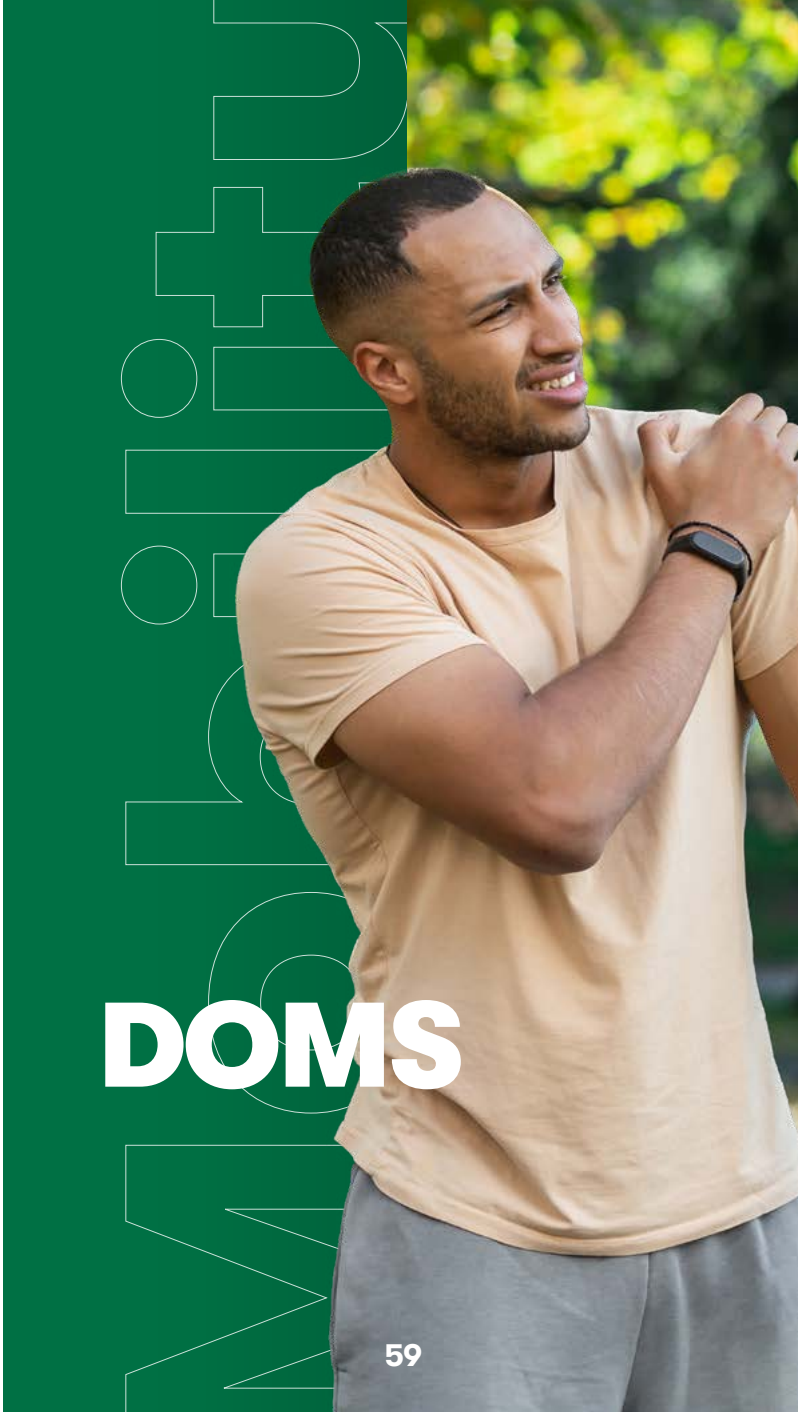
Start by adding in some **dynamic stretches** each day, targeting your legs, torso and arms. These movements should stretch muscles through their full range of motion repeatedly. Try active straight leg raises, arm circles and kneeling thoracic rotations.

Be creative with your warmups. Add a 5- to 10-minute mobility block into your warmup that replicates the movements you plan to perform. If you're going to take a boxing class, focus on thoracic spine, hip and upper limb mobility movements, since those are the muscle groups used in the session.

After Exercise,

use a **foam roller**, or self-myofascial release technique, to reduce muscle tightness and soreness. It improves your range of motion. If you don't have one of those, a lacrosse, soccer, tennis or golf ball could work too! An easy sequence is to lay on your back in a supine position and then roll through all the posterior muscles groups (calves, hamstrings, glutes, lumbar spine and thoracic spine). Then flip onto your stomach or prone position and roll out the anterior muscles (tibialis anterior / shins, quadriceps, IT bands). Spend about 30 to 60 seconds on each area, or more if you have any tightness or fatigue.

Now is also a good time to practice mindful breathing. This keeps you relaxed and focused and reduces tension in your body. All of that allows for improved overall mobility which, as you know, reduces your chance for injury and allows you to function at your peak!



Sometimes, when you try to perform at your peak, you push a little too hard during your workout. You know that feeling when your muscles are sore for a couple of days afterwards? It's called Delayed Onset Muscle Soreness, or DOMS. The exact cause has yet to be pinpointed, but it's likely due to a combination of factors in your body's inflammatory, neurological and chemical responses to exercise and part of your healing process.

Timing

The typical pattern is increased soreness one day after exercise, with the intensity peaking on day two. By the third day, DOMS begins to subside, and by the fourth day, it's usually gone.

Causes

New activity or an increase in activity intensity or load. If you increased your run from two to five miles, lifted too much weight or played pickleball for the first time, you might trigger DOMS. Eccentric-based exercises (walking downhill or plyometrics) also increase the likelihood of DOMS.

Symptoms

- Muscles that are tense, stiff and tender to the touch.
- Limited range of motion of the joints and limbs.
- Minor swelling (which is part of the inflammation and healing process).

A key difference between DOMS and pain resulting from an injury is that DOMS is broad pain, while an injury is usually localized to one specific muscle or spot. If DOMS continues to increase after a week, abnormal swelling occurs or urine becomes very dark, then a trip to the doctor is recommended to rule out a more serious orthopedic issue or medical condition (such as rhabdomyolysis).

Prevention and Treatment

The easiest way to deal with DOMS is to avoid it. Setting reasonable exercise goals and performing a proper warmup and cool down usually do the trick. If you can't prevent DOMS, there are several strategies to limit or minimize the effects.

Causes

TRY THIS

An extra activity for recovery later in the day or the following day; nothing stressful, just a little walk, bike ride or swim.

Yoga is also great for limiting DOMS and increasing flexibility and joint mobility after exercise. Foam rolling immediately after your workout also reduces the likelihood of DOMS.

Common over-the-counter pain medications have mixed results when it comes to helping with DOMS. While anti-inflammatory and pain medications may ease the pain, they can also inhibit the beneficial adaptations from exercise.

Nutrition

1. Proper hydration is critical before, during and after your workout. This will limit exercise-induced muscle damage that drives DOMS and enhance the healing process.

2. Consuming caffeine prior to exercise improves performance. Continued ingestion reduces soreness in the following days.

3. Omega-3 supplementation can reduce pain from exercise-induced muscle damage if taken consistently for a month before.

4. Branched-chain amino acids (BCAAs) reduce DOMS one to four days post-exercise.

5. Taurine supplements taken after eccentric exercise can reduce DOMS.

6. BCAAs or omega-3s in combination with taurine may have synergistic effects on reducing DOMS.

7. Antioxidant-rich foods, like beetroot and tart cherry juice, may reduce DOMS.

8. The spice curcumin has been shown to work, since it has anti-inflammatory benefits.

Modalities

1. Ice baths post-exercise reduce DOMS by slowing the inflammatory process and dulling painful nerve signals.

2. Contrast baths (alternating between a hot and cold bath every 1 to 3 minutes) are an ice-bath alternative.

3. Warm whirlpools (Jacuzzis) can help, but their benefits are greater before exercise.

4. Massage can reduce DOMS after strenuous exercise.

5. Foam rolling helps if done directly after exercise.

6. Recovery garments with compression may be worn after exercise to reduce DOMS.

7. Neuromuscular electrical stimulation units also help reduce pain.

PRO TIP

Remember that DOMS is temporary and will pass. Give your body what it needs to heal and grow, and the end result will be a stronger you!

Rest and RECOVERY

As important as a regular exercise is,

as regular exercise is, remember, more is not always better. Rest days are essential for maintaining a healthy balance and a high level of performance. Taking regular breaks allows your body time to recover and repair from the routine and stimulus of training. It's a critical part of progress, regardless of your fitness level or sport.

Skipping rest days can lead to chronic issues like overtraining or chronic fatigue. Still, it's pretty common to feel a sense of guilt when taking a day or two off. To put things in perspective, it helps to understand the benefits rest provides for your physical and mental health.

Allowing Time for Recovery

Contrary to popular belief, a rest day doesn't mean you just lay around on the couch. You should still be active in your recovery and on your day off. This is the time when the beneficial effects of training take place. If you've been lifting weights, this rest is essential for muscle tissue growth. Exercise creates microscopic tears in your muscles. Rest helps that tissue heal, grow and strengthen.

Muscles store carbohydrates in the form of glycogen. During exercise, your body breaks that down to fuel your workout. Rest gives your body time to restore energy before your next workout. If you don't get enough time off to replenish glycogen and allow your muscles to recover from damage, your performance will be compromised, and you may not see improvements at all.

Relax

Reducing the Risk of Injury and Overtraining

Regular, appropriately timed rest is good protection. When your body is overworked, you're more likely to lose motivation, become dehydrated, fall out of correct form, drop a weight or take a wrong step. Overtraining also exposes your muscles to repetitive stress and strain. Not getting enough rest or recovery days can increase your risk of overuse injuries. In the end, this forces you to take a lot more time off than planned, which can be difficult to overcome.

Relax and Recharge

Rest days give your mind a break and keep your schedule from getting too chaotic. Using these days as opportunities to spend more time with family and friends or developing on a hobby can have a lot of benefits.

Creating a healthy life is all about balance. What's the best way to manage time between home, work and fitness? Rest days allow you to give other areas of your life attention while giving your body the time it needs to fully recover from exercise.

Rest Day Activities

Wondering what else you can do on a rest day? There are distinct types of recovery, passive or active. Passive recovery involves doing very little or taking the day entirely off from exercise. It allows the body time to recover on its own rather than having exercise as the catalyst. Examples of passive recovery include sleeping in, hydrating, meditating, reading a book or getting a massage.

Active recovery is when you engage in low-intensity exercise or workouts that place minimal stress on the body. This allows your body to repair soft tissue (muscles, tendons and ligaments). Active recovery also improves blood circulation, which removes the waste from muscle breakdown that builds up during exercise. Strategies for active recovery include walking, light jogging, gentle cycling, sauna, stretching, foam rolling, Pilates and yoga.

Rest

Signs

Signs You Need a Rest Day

Regardless of your exercise schedule, it's important to listen to your body. It will usually tell you it needs a rest, even if you hadn't planned on it. If you notice any of the following signs, it's probably time to take a break.

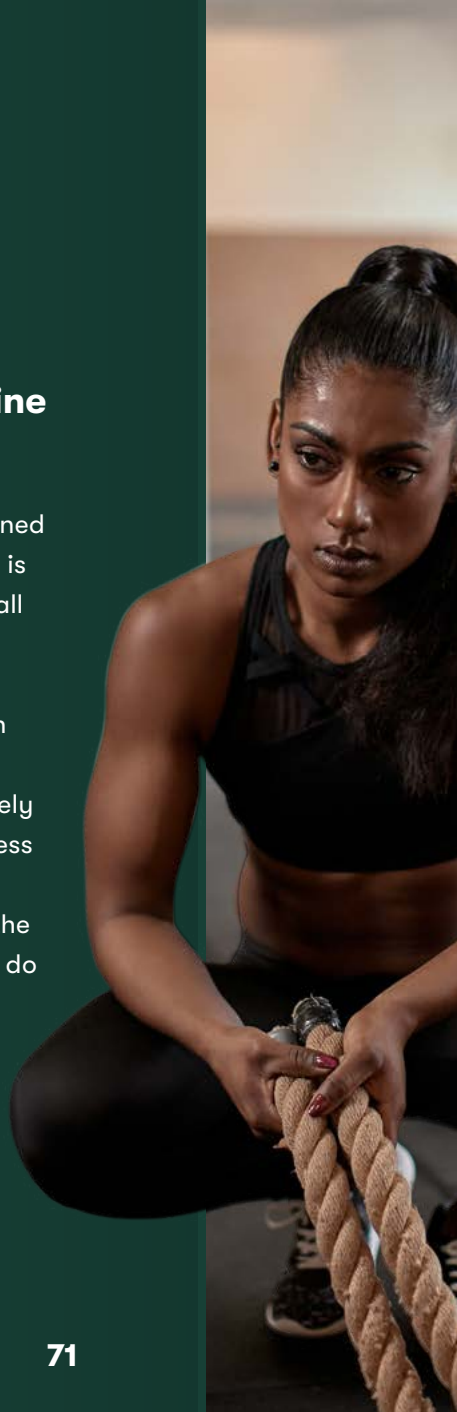
Sore muscles
While it's normal to feel some tenderness after exercise, persistent soreness is a red flag. It could mean your muscles have not recovered from past workouts and require more time and attention.

Fatigue
If you feel extreme exhaustion during or after your workout, or if the exhaustion lasts for several days, it's a sign your body needs more rest.

Pain
Muscle or joint pain is different than soreness that diminishes over time. If you have pain that does not go away, it may be a sign of an overuse injury.

The Bottom Line

Whether you're a beginner or a seasoned athlete, regular rest is crucial to your overall health and well-being. Keep in mind that without enough recovery during the week, you're less likely to achieve your fitness goals. Letting your body rest is one of the best things you can do to succeed.



We hope this guide has given you some valuable information that you can implement into your routine.

Remember, reaching your optimal well-being is a journey, and you should embrace where you are as you personalize your fitness program, and sports nutrition is a critical component when it comes to optimizing your performance.

Our team of experts, doctors, dietitians and scientists who contributed to this guide want you to keep moving, get the right nutrients and do all the things that help you live your best life!

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