

Click to verify

































How to improve your muscular endurance? Who wouldn't, right? Below you will learn everything you need to know about muscular endurance, including the best exercises and workout plans for improving it. Muscular endurance is the ability to repeatedly exert force and remain active over time. Muscular endurance is based on long term measurements of energy. Although muscular endurance is a physical ability, a big part of it comes down to mental fortitude. Muscular endurance training requires serious determination, and many people think it is more challenging mentally than training for strength. Why is muscular endurance important? There are 4 main aspects to general fitness: Muscular Strength, Muscular Endurance, Flexibility, and Balance. Even though muscular endurance is one of the 4 pillars, many people don't put much focus on it. A vast majority of people who lift weights train for strength and hypertrophy, so their endurance is not great. This is a vital mistake as muscular endurance training will improve both strength and hypertrophy potential. Moreover, there are many benefits that come with elevating your muscular endurance. Benefits of muscular endurance: For the general population, muscular endurance training is important because it... Increases your ability to do daily activities: Housework & chores, carrying groceries or your kid, sex. Reduces your risk of injury: If you have poor muscle endurance, your muscles will become weak during activities which could lead to injuries (falling, twisting ankle, etc.) Helps maintain a healthy body weight: With better muscular endurance, you can perform activities for longer which will help you increase your metabolism and burn more fat each day. Builds stronger muscles, joints, bones: Muscle endurance goes hand-in-hand with muscular strength. By increasing muscle endurance, you will be able to get stronger muscles and increase bone density. Improves balance: Poor balance is often caused by a lack of muscular endurance. Once your muscles get tired, your balance will become worse. Increases energy levels (this is its main purpose after all) Helps you sleep better: Studies how endurance training leads to better sleep quality. All in all, muscular endurance training can help improve many aspects of your life, especially your strength training workouts. Plus, all the benefits you get from muscular endurance will create their own benefits, which really compounds the positive effect muscular endurance has on your existence. Muscular endurance in sports Sports require serious muscular endurance. So, for athletes, improving muscular endurance is essential. Muscular endurance training is highly emphasized in athletes training regimens. There are 3 types of muscular endurance that athletes work on: Power Endurance: The ability to be explosive again and again over long periods of time, with little rest. Think wrestlers, boxers, baseball players, tennis, football. Short-term Endurance: The ability to exert maximum force for short periods of time, such as sprint workouts where you might produce max effort for 60 seconds, repeatedly. Think football players, sprinters, soccer players, basketball. Long Endurance: The ability to remain active with peak performance for long durations. Think basketball players, rowers, marathon runners, cross country runners, boxers. Many sports require an overlapping ability of all three types of muscular endurance. Muscular Endurance Test Trainers can assess their clients and athletes with muscular endurance tests before deciding on specifics for a training plan. These tests are also good for anyone who wants to see how good their muscular endurance is. Push Up Test: Perform as many proper push ups as you can until failure/as long as you can. Sit Up Test: Perform as many sit ups as you can until failure/as long as you can. Plank Test: Perform a strict plank hold for as long as you can. Wall Squat Test: Get into a squat position with your back against the wall, and legs at a 90 degree angle. Keep your heels on the ground and see how long you can hold this position. You can also do this test with one foot off the ground... These are all very popular tests so you should be able to find data online or simply ask your friends to try them too to see how you stack up with other people. Slow Twitch Muscle Fibers vs Fast Twitch Muscle Fibers If you want to really understand how muscular endurance works, you need to learn about the two muscle fiber types that all of your muscles have. Slow Twitch Muscle Fibers Slow twitch muscle fibers are the first to respond to physical activity. They are designed to sustain low force over long durations. Activities that recruit slow twitch muscle fibers: running, swimming, power walking, cycling - aerobic exercises. Fast twitch muscle fibers are for short bursts of strength and power, while slow twitch is endurance (or stamina). I.e. - Slow Twitch: Running 5 miles or Doing 50 bodyweight squats. I.e. - Fast Twitch: Doing a max lift at the gym or a 100 meter sprint. By doing endurance activities that train your slow twitch muscle fibers, you will be improving your muscles oxygen capacity, which makes it so you can perform longer before tiring out. Can you isolate slow twitch muscle fibers? The two can not be isolated during an exercise, but certain training methods will emphasize one more than the other. Sprints for example will train your fast twitch muscle fibers, but if you do longer duration sprints, like 60 seconds instead of 10 seconds, you can improve your slow twitch muscle fibers as well, making you able to sprint more times in one session rather than just making you faster at sprinting. Facts about Muscle Fibers: Your muscles have an equal amount of fast and slow twitch muscle fibers, on average. Muscular endurance training is the strengthening of slow-twitch muscle fibers Slow twitch muscle fibers won't grow like fast twitch muscle fibers, but they can to a certain extent which is enough to make a big difference in your endurance ability. HOW TO IMPROVE MUSCULAR ENDURANCE? There are two main ways to go about improving muscular endurance - aerobic endurance training and anaerobic endurance training. Anaerobic endurance involves the exertion of force, consistently and repeatedly, over short periods of time (i.e. bodyweight squats for around 60 seconds), while aerobic endurance involves the ability to exert a steady sub-maximal force over a longer period of time (i.e. a 40 minute run). Aerobic Exercise: Aerobic = with oxygen. Aerobic exercises include running, swimming, cycling, rowing etc. These exercises should be done at a steady and not too fast pace so your heart can supply enough oxygen to the muscles. It is cardiovascular fitness but it also trains your muscles to not get fatigued aerobically. If you change the pace and run quicker, then slow, uphill, then downhill, you will be doing a method called Fartlek Training or "Speed Play" which adds an element of "anaerobic" to your aerobic training. For aerobic training, you want to try to rest at all for the duration of the workout. Anaerobic Exercise: Anaerobic = without oxygen. Anaerobic exercises include weightlifting, sprints, bodyweight training, etc. Anaerobic exercises are performed in short, fast bursts where the heart can't supply enough oxygen to the muscles. Anaerobic training will improve your muscle's ability to maintain exertion without enough oxygen, which is when lactic acid is produced. This is the true meaning of muscular endurance - to repeatedly produce force at low to moderate intensities for extended periods of time. There are many different training methods for anaerobic exercises, such as circuit training, interval training, weight training with low weight and high reps, and more. We will get into those a little further below. For anaerobic endurance training, you want to keep your work to rest ratio about 1:1. So if you do a 1 minute set, rest for 1 minute then go again... Muscular Endurance vs Aerobic Endurance: Aerobic endurance and muscular (anaerobic) endurance train your muscles for endurance in different ways. Anaerobic exercise is good for short term endurance against resistance at a higher intensity, while aerobic endurance is good for long term endurance at a lower intensity (it helps you keep a good supply of oxygen for the muscles to keep going). Both are vitally important in sports, especially sports like football, basketball, soccer, boxing and MMA. So, if you want all-around improvements in muscular endurance, you will want to have a good mix of both anaerobic and aerobic exercise. Upper Body vs Lower Body Aerobic Endurance: If all you do is running for aerobic endurance, your lower body aerobic endurance will be good, but your upper body aerobic endurance will not be on par with your lower body aerobic endurance. This is why mixing up your aerobic exercises - swimming, rowing, cycling, running - is good. As we know swimming, rowing, cycling and running is best for aerobic endurance (long endurance), so we will now talk about the best exercises specifically for muscular endurance as it relates to anaerobic training. Best Exercises For Muscular Endurance If you want to improve short-term and power muscular endurance (vital for athletes like football players and basketball players), then you need to focus on compound movements that work large muscle groups and perform sets for longer durations. Best Bodyweight Muscular Endurance Exercises: Squats Push Ups Inverted Rows/Pull Ups Dips Handstands Pike Push Ups Lunges Best Free Weight Muscular Endurance Exercises: Squats Deadlifts Bench Press Military Press Rows For core exercises, both compound isometric exercises (i.e. Planks and Side Planks) and isotonic exercises (v-ups, leg raises, sit ups) are great. If you want to improve muscular endurance, isolation exercises are not very effective (moreover, they are not efficient). Compound exercises are all you need in terms of strength and endurance. Multipanar Exercises! Ideally, exercises that incorporate multiple ranges of motion are the best. Certain training tools lend themselves to multipanar training. HOW LONG SHOULD MY SETS BE FOR IMPROVING MUSCULAR ENDURANCE? Aim for a minimum of 30 seconds, but 45-60+ seconds is best for muscular endurance training. REP RANGE FOR MUSCULAR ENDURANCE: For Bodyweight Exercises - 20+ repsFor Free Weight Exercises - 15+ reps (using about 50-60% of your 1RM) You want to focus on maximum tension and time under tension with each set. You should be fatiguing your muscles with each set. 8 Training methods for muscular endurance: What's the best training method for improving muscular endurance? Here are some of the best training methods for muscular endurance. 1. Continuous (or Cardio) Training Cardio training is a great way to improve your aerobic muscular endurance. The best cardio is running (outside), cycling, rowing, and swimming. Swimming is really great as it works your entire body rather than cycling and running which is mostly training your lower body's slow twitch muscle fibers. Cardio is best when done for 30+ minutes. 2. Circuit Training Circuit training involves a series of exercises done in order. Circuit training is a form of repetition endurance, so you will perform a movement with a weight that's light enough to allow you to do the exercises for a longer duration (60+ seconds). Circuit training using weights or bodyweight exercises is an effective way to boost muscular endurance. For example: Push ups: 1 minute Bodyweight squats: 1 minute Dumbbell shoulder press: 1 minute Barbell rows: 1 minute Rest 1 minute then repeat Circuit training for muscular endurance won't require maximum exertion but it will be mentally tough as you need to sustain the repetitions for long durations. repeat... Push ups: 1 minute Rest 1 minute Bodyweight squats: 1 minute Rest 1 minute Dumbbell shoulder press: 1 minute Rest 1 minute Barbell rows: 1 minute Rest 1 minute then repeat Circuit training for muscular endurance won't require maximum exertion but it will be mentally tough as you need to sustain the repetitions for long durations. 3. Interval training Interval training involves alternating between high intensity exercise and rest/active rest. It will improve speed and muscular endurance. High Intensity Interval training is great because it is a good mix of strength training and endurance training. You will not get bulky doing HIIT workouts, but you will maintain lean muscle mass. 4. AMRAP As many reps as possible (AMRAP) bodyweight workouts are effective for training muscular endurance as you will be pushing yourself to the limits in a way that allows you to do continuous reps for longer periods of time. 5. Isometric Training Isometrics are another effective method to build both strength and endurance. It's also known as tension endurance. It's a big part of a rock climber's training regimen. Isometric exercises involve holding a position (i.e. plank) for a set time without moving your joints. Isometrics will work both your slow and fast twitch muscle fibers. We did a whole article on isometric exercises that you can read over so you know exactly what to do and the benefits that come with isometric training. 6. Complex Training A complex workout is a series of exercises, each done for a set number of reps, one after the other, without resting until you finish the last exercise. Complex training involves one training tool, which is challenging but light enough to not have to put it down for around 2-5 minutes of continuous exercises. An example of a complex using a barbell with plates (approximately 135lbs total weight, for a man with good conditioning): Squats x 8 reps Overhead presses x 8 reps Stiff-legged deadlifts x 8 reps Bent over rows x 8 reps Then rest. If you are doing a complex workout, 20-30 minutes of work with little rest as possible is ideal. This is another method that will boost both strength and endurance. 7. Weight Training When it comes to weight training for muscular endurance, you must use low weights - around 50% of your max lift is good - and do high reps. This is one of the most popular ways to train muscular endurance. Here is a good weight training workout plan to improve both muscular strength and muscular endurance: Day 1 - Upper body (endurance) Day 2 - Lower body (endurance) Day 3 - Rest Day 4 - Upper body (strength) Day 5 - Lower body (strength) Day 6 - Cardio Endurance Day 7 - Rest If you are doing a 5 day split (chest, back, legs, etc.), you can simply combine endurance and strength into one workout. So basically, some exercises or sets within your workout are focusing on strength and some on endurance. You could do a pyramid structure to accomplish this: Set 1 x 25 Set 2 x 20 Set 3 x 15 Set 4 x 10 Set 5 x 8 Remember, compound exercises are the way to go, so to save time, throw any isolation exercises out of the workout. 8. Bodyweight Training Bodyweight exercises are also good for endurance training for those who have enough strength to handle their bodyweight fairly easily. If you are able to perform very high reps of a bodyweight exercise like bodyweight squats or push ups, then you will be working your muscular endurance tremendously well when doing so. Optimal Workout Plan for Muscular Endurance Training For most people, and for most athletes, we don't just want to focus on endurance training, we want to also build muscular strength as strength and endurance go hand-in-hand. You need strength to have endurance. So, here are a few different workout plans that you could do to get the best of both worlds. Workout Plan - Option 1: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 2: Monday: Upper Body Weight Training (Strength) Tuesday: Lower Body Weight Training (Strength) Wednesday: Aerobic Endurance Training (Cardio) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 3: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 4: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 5: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 6: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 7: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 8: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 9: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 10: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday: Upper Body Weight Training (Strength) Thursday: Rest Friday: Aerobic Endurance Training (Cardio) Saturday: Lower Body Weight Training (Endurance) Sunday: Upper Body Weight Training (Endurance) Do this for 6-8 weeks. Workout Plan - Option 11: Monday: Aerobic Endurance Training (Cardio) Tuesday: Lower Body Weight Training (Strength) Wednesday

and a rucking session each week. Muscular Endurance Finisher #1 Chinups, 2-4 sets of max reps with 3 second static top hold each rep Barbell or dumbbell romanian deadlifts, 2-4 sets of 15-25 reps Farmer’s walks with dumbbells, kettlebells, or trap bar (4-8 sets, varying the load and distance each time) Muscular Endurance Finisher #2 Pushups, 3-5 sets of max reps Face pull with external rotation using cable stack or resistance bands, 3-5 sets of 15-50 reps Prowler, sled, or vehicle pushing and pulling, 2-10 “sets” of 1-2 minutes each Full Muscular Endurance Training Session Pullups and pushups density block, 20-30 minutes: do as many total reps of pullups and pushups as possible within the allotted time. The number of sets and rest periods are up to you and can change with each session. Beat your total rep PR each week or increase the allotted time. Muscular endurance circuit (2-5 sets of 25-50 reps on each of the following movements): Kettlebell swings, bodyweight inverted row, kettlebell crush curls, pushup-position plank (1-2 minutes per “set”) Use an explosive tempo for the concentric portion of all reps, a two-second lowering tempo for sets of fewer than 25 reps, and a one-second lowering tempo for sets of 25 reps or more (except for kettlebell swings, of course). Rest for 1-2 minutes between sets, or shorter periods if you’re using supersets or circuits. And make sure you achieve some form of progression each week in each session by increasing sets, reps, or duration where appropriate. If you aren’t yet able to do a “real” pullup or pushup, use scaled versions like band-assisted pullups or pushups from your knees for your high-rep muscular endurance workouts, but also make it your goal to do the full version(s). Once you can do at least one full bodyweight pullup (or pushup), you can “grease the groove” by performing singles or low-rep daily sets of pullups (or pushups) throughout the day, every day, for rapid progress. Conclusion Muscular endurance is an incredibly valuable aspect of overall fitness, but unless you’re looking to set a PT record, it should rarely be your primary focus. One school of thought holds that muscular endurance is actually a subset of max strength. For example, an individual whose max squat is 315 pounds can inevitably perform more reps with 135 pounds than someone with a max squat of 135, no matter how much the latter individual specializes in muscular endurance. For the highest levels of muscular endurance and overall fitness, organize about 90% of your training routine each year around prioritizing strength and aerobic fitness, with the remainder of your effort going to boosting muscular endurance. Whether you should schedule a specific muscular endurance training block or consistently dedicate a portion of your training program to it depends entirely on your training goals and needs. Finally, never attempt to increase muscular endurance during intense fat loss or a severe caloric deficit. Instead, make sure to eat a caloric surplus (at least temporarily) from plenty of nutrient-dense foods, including lots of protein to ensure you recover fully between sessions.