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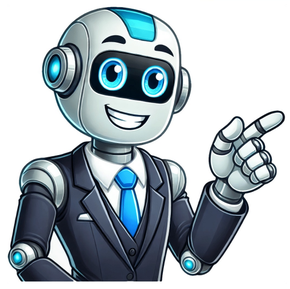

When you think of a swimmer’s body, you probably imagine- broad shoulders, big lats, and well-defined abs- but something many overlook is the leg muscles. Just as the upper body plays an essential role in swimming, so does the lower half. And it’s probably no surprise that in some swimming events, the legs might even be more dominant than the upper body. So if you want to become a better and faster swimmer, then optimizing your leg muscles’ strength and power is critical. This is why, in today’s article, we’ll focus on some of the best leg exercises for swimmers to strengthen all of the leg muscles. We’ll also have a quick look at some other aspects, such as the vital role the legs play in swimming. What The Exercise Does: The single-leg Romanian deadlift primarily strengthens your glutes, hamstrings, calves, and oblique muscles, as well as strengthening a few of your back muscles. The exercise also improves balance and posture while developing a powerful kick and good body position in the pool. How To Do It: Hold a weight such as a dumbbell or a kettlebell in one or both hands, depending on what you find most comfortable. Then draw your shoulder blades together and down and brace your core. Next, lift one leg slightly off the floor. While focusing on maintaining a neutral neck position and straight back, bend your hips forward so that your torso moves towards the floor. Your one leg will naturally extend out behind you. Continue moving towards the floor as far as possible while ensuring your shoulder blades stay back and your chest slightly out. You should feel a nice stretch in your glutes and hamstrings. Once the weight is hovering just above the floor, start moving back up again. You can briefly touch the floor with your foot to regain balance before going into the next rep. Remember to repeat the exercise on both legs. Reps And Sets: 8-15 reps per leg for 3-4 sets. What The Exercise Does: Primarily builds explosive power in the quads, glutes, hamstrings, calves, and core while also adding some strength. Highly important for developing solid starts and push-offs as well as a fast and powerful kick and underwater. How To Do It: Stand with your feet hip-width apart and face a plyometric box. Brace your core, lower into a half squat, and tilt your upper body slightly forward. As you jump onto the box, make sure to use your arms for momentum and balance. Start by using a lower box and work towards more height as you become better at the exercise. Make sure to land with both feet simultaneously, and ensure that the entire length of your feet is on the box as you land. Make it your goal to land as quietly as possible, as it will mean your muscles absorb most of the impact and not your joints. Reps And Sets: 6-10 reps for 2-3 sets. What The Exercise Does: Strengthens the entire posterior chain, including the glutes, quads, hamstrings, calves, and core. Builds strength and power, ensuring strong kicks, push-offs, underwaters, and starts. How To Do It: In the squat rack, stand with your feet roughly shoulder-width apart in a comfortable and robust stance. Ensure that your hands are even on both sides of the bar. Take a deep breath, brace your core, lift your chest and unrack the bar. Then walk 1-2 steps back, and make sure that all your muscles are still tight and braced. Next, squat down until the bottom of your glutes are just below your knees. Afterward, push back up into the starting position and repeat. Make sure that your back stays straight, and your core braced throughout the entire exercise. Also, ensure that your knee doesn’t move over your toes as you perform the exercise. I recommend starting with a lighter load or simply with the bar alone while perfecting your technique. Once your form is good, slowly add weight as you get stronger. If you do not have the required equipment, you can try bodyweight squats or goblet squats. Reps And Sets: 5-12 reps for 3-4 sets. What The Exercise Does: Strengthens the abductors, adductors, quads, hamstrings, glutes, and calves. It also opens up the groin and hip flexors, improving hip rotation vital in swimming, especially in strokes such as breaststroke. How To Do It: Stand with your feet flat on the ground and wider than shoulder-width apart while keeping your toes pointed forward. Squat onto your one leg, keeping the other leg completely straight and placing the weight on the squatting leg’s midfoot to heel. Ensure that your butt moves back directly behind your body as with a regular squat and not to the side. Go down as low as you can, but no lower than the standard squatting position. Also, make sure that your knee never goes over your toes. Once there, push back up into the starting position while ensuring the opposite leg stays completely straight. Repeat for several reps, then switch legs. If you initially find it hard, try squatting into a chair as you learn the ins-and-outs of the exercise. Reps And Sets: 8-15 reps each leg for 3-4 sets. What The Exercise Does: Strengthens the hamstrings, glutes, lower back, and hip flexors. These muscles play an essential role in a strong kick and optimal body position in the water. How To Do It: We’ll be using the physioball hamstring curl, but you are welcome to use the machine variation if you have access to it and prefer it. The mechanics are very similar- just reversed onto your stomach. Start the exercise by laying on your back with your heels on an exercise ball. Place your arms next to your sides for support. Activate your core and glutes to lift your lower body off the floor while ensuring your body forms a straight line. Next, contract your hamstring muscles and bend your knees as you roll the ball with your heels towards your butt. Make sure your hamstrings reach maximum flexion before reversing the movement into the starting position and repeating. Ensure that the hamstrings are doing most of the work by actively engaging them and keeping your butt high in the air throughout the entire movement. To make the exercise harder, you can perform it with one leg at a time. Reps And Sets: 12-15 reps for 3-4 sets. What The Exercise Does: Strengthens the glutes, hamstrings, and lower back. It also contributes to a better body position in the water, a better upkick, and stronger underwaters. How To Do It: Start by laying on your back with both feet positioned flat on the floor, roughly hip-width apart. Place your arms by your side for extra support; the further you place them away from your body, the less support they provide and the more balance you have to maintain. Next, activate your core and glutes as you press down through your heels to lift your hips off the floor. Push your hips into the air until you create a 90-degree bend with your knees, or else just go as high as you find comfortable. Then, slowly lower back down until your hips sit just above the floor and repeat the movement. As you get stronger, you can make the exercise harder by slightly lifting one foot off the ground and pushing down using only the other leg. Make sure to exercise both legs equally. If you have the equipment available, you may also opt for the weighted variation of this exercise. Everything stays the same, except now you place your back on a bench while a weighted barbell comes across your hips. Reps And Sets: 8-15 reps (each leg) for 3-4 sets. What The Exercise Does: Great exercise developing strength and power primarily in the quads and glutes while also engaging the hamstrings, calves, adductors, and core muscles. Furthermore, it helps to develop a strong kick, start, and push-offs. How To Do It: Stand about half a meter (2 feet) in front of a bench facing away from it. You can perform the exercise with only your body weight, or you can hold a dumbbell in each hand to make it harder. Place one leg behind you with the top of your foot on the bench facing down and pointing directly back. Maintain good posture, pull your shoulders backs, and keep your chest high. Then brace your core and squat down with the front leg until your back knee is just above the ground. Make sure that your front knee doesn’t go over your toes. Push back up and repeat all your reps on one leg before switching to the other. Reps And Sets: 8-12 reps for 3-4 sets. What The Exercise Does: Develops explosive power and strength in the quads, hamstrings, glutes, and calves. Great for developing a good start and push-offs. It also helps to build fast and powerful underwaters. How To Do It: Place your feet slightly wider than shoulder-width apart with your hands behind your head or locked together and positioned just in front of your chest. Brace your core and squat down until the bottom of your butt is just below the knee joint while ensuring your knees stay behind your toes throughout the movement. Once you reach the bottom position, jump up vertically as explosively as you can. Make sure to position your feet for landing while you are in the air. As you land, move back into the squatting position and explode back up again. Repeat this for a few sets. Take care to land softly and gracefully with your muscles absorbing most of the impact. Reps And Sets: 12-20 reps for 3-4 sets. What The Exercise Does: It’s an excellent all-around leg exercise that strengthens the quads, hamstrings, glutes, and calves while working your balance. Additionally, it helps to develop a strong kick. How To Do It: Stand with good posture while you position your feet roughly shoulder-width apart. You can place your hands on your hips or hold a dumbbell in each to make the exercise more challenging. You may also opt for a barbell if you have access to it. Next, brace your core and if you’ve opted for dumbbells, make sure to pull your shoulder blades back and down. Take an exaggerated step of around half a meter (2 feet) forward, then lower your hips until your front leg is parallel to the ground or as far down as you feel comfortable and your back knee is sitting just above the floor. Make sure that your front knee doesn’t go over your toes as you step forward. Then, step up so that both your legs are next to each other again. From there, step forward with the opposite leg so that it’s now the front leg. Continue alternating with each step until you’ve completed your set. Reps And Sets: 8-15 reps per leg for 3-4 sets. The leg muscles play many critical roles in swimming- more than you might initially think. Let’s have a look at some of them. One of the most prominent and essential roles of the legs in swimming is the kick. Whether you are a sprinter or long-distance swimmer, a fast and robust kick in the water is crucial for achieving maximum speed and performance. One study published in the BioMed Research Journal found that the leg kick alone contributed to an average of 31% of the generated force for a 30s fully tethered freestyle swim. This might be slightly lower than you would expect. Nevertheless, it’s still a significant contribution to the overall force. And It can have a substantial effect on swimming speed when maximized. It’s also important to remember that the legs will most likely contribute to a higher percentage of force depending on the stroke and event. Additionally, theye’ll also come into play in things like starts, turns, and underwaters which we’ll cover in a bit. For example, breaststroke is much more leg dominant than freestyle. In another example- throughout a 200m freestyle, the legs will most likely contribute more overall force when compared to a 50m freestyle. On the contrary, another study found that legs could sustain a far greater power output than the arms during a simulated swim using isokinetic dry-land ergometry where the legs generated a total average power output of 435 W compared to the 304 W generated by the arms. Strong starts have become far more dominant in the modern-day sport of swimming, with some swimmers such as Caeleb Dressel dominating the rest of the field based on his start alone. The start is very much a whole-body movement and can get technically very complicated as well, but one thing is sure- strong and powerful legs play a significant role in developing a good start that can put you well ahead of the rest of the field. Being able to implement powerful push-offs after every turn is one sure way to improve your swimming performance. Almost every swimmer can improve their push-offs. Developing power and explosiveness in the legs will ensure that you can push off every wall with maximum force, almost always guaranteeing you a competitive advantage in the water- especially when swimming short course. One of the most technically essential aspects of every swimming stroke is maintaining a good body position while swimming. As with most things in swimming, a good body position will require the whole body’s contribution. That said, developing strong glutes, hamstrings, and hip flexors will make it easier for you to maintain a high body position in the water with your lower body. Good underwaters are single-handedly one of the most important aspects of becoming a faster and better swimmer. Top coaches worldwide are implementing various tactics and training techniques to improve their swimmers’ underwaters. Once again, underwater dolphin kicks consist of a whole-body movement. Still, undoubtedly the legs play an essential role in developing a fast and powerful underwater dolphin kick. Leg exercises (as with all dryland exercises) are a great way to boost your swimming performance and become a more well-rounded swimmer. Remember to always warm up properly before performing any dryland or strength training workout and use the correct technique for each exercise to avoid injury. Furthermore, I recommend focusing more on exercises that work the glutes and hamstrings instead of quad-dominant exercises, as swimmers often lack strength in these muscles. Try to maintain at least a 1:1 ratio between hip-dominant exercises, such as Romanian deadlifts, and knee-dominant exercises, such as squats. That said, a 2:1 ratio may sometimes be preferable, depending on the swimmer. Ready to unlock your full potential in the pool? Here are the best strength training exercises for swimmers to unleash the beast on your personal best times. When it comes to swimming fast, every fraction of a second counts. Swimmers go to considerable lengths (puns!) to swim their best on race day. Whether that means shaving down, investing in wildly expensive tech suits, or completing countless laps in their pursuit of swimming excellence. While nothing replaces the time in the pool, including mastering technique and developing the right energy systems, a comprehensive and targeted strength training regimen can play a pivotal role in a swimmer’s journey to success. The right strength training exercises improve power and strength so that swimmers can explode off the blocks faster, hold a more efficient body position in the water, surge out turns, and maintain the muscular strength to hold their strokes together at the end of a race. However, not all strength training exercises are created equal, and not all resistance exercises will help them pursue chlorinated excellence. (Sorry, bicep curls.) In this guide, we look at the best strength training exercises for swimmers, the research that supports them, tips for implementing the exercises into your routine, and more. Let’s dive in. Strength Training Exercises for Swimmers While there is a long list of strength training exercises swimmers can do to develop strength and power, in this guide, we will focus on 7 specific exercises. They include: Bench press Squats Pull-ups Bench pulls Broad jumps Squat jumps Planks Next, we will look at each exercise, the benefits for swimmers, and how to add them to your training routine for peak performance. 1. Bench Press The bench press is a classic upper-body strength training exercise that can be done with a barbell or dumbbell. The bench press builds upper body strength, which is crucial for swimmers to generate power during the pulling motion of their strokes. The bench press is also a great core-building exercise (especially with dumbbells) and works the pecs, shoulders, and triceps. A study published in the Journal of Strength Conditioning Research, titled “The Influence of Upper- and Lower-Body Maximum Strength on Swim Block Start, Turn, and Overall Swim Performance in Sprint Swimming,” found that maximum strength in the bench press explained 50-65% of swimming power and 45-62% of performance variance in sprint swimming events. Alrighty then! Swimmers who want to add the bench press to their strength training routine should consider using the dumbbell bench press. There are a lot of reasons I prefer DB vs. barbell, including increased safety (dumbbells are easier to ditch), neutral hand grip, and more scapular stability. Dumbbells also allow for more variation, whether that means doing single-arm dumbbell bench press (absolutely LIGHTS your core on fire) or alternating dumbbell bench press, which more closely imitates the alternating arm movement of swimming freestyle or backstroke. 2. Squats Squats are a compound strength training exercise that targets the lower body, especially the quads, glutes, hamstrings, and lower back. Squats give swimmers the power to push off the wall with force, kick with more power, and launch themselves off the block like a rocket blasted into space. They are also a sneaky exercise for a stronger trunk, which can help streamline the body and exert power through the upper body and the lower body. A study with a group of internationally-ranked male swimmers showed that start performance—how long it took for swimmers to reach 15m—was linked to lower body power and strength. Another paper we mentioned earlier (Keiner et al., 2021) noted that 1RM squat strength positively correlated with swimming power and swim start performance. Implementing squats into your strength training routine can be approached in a few different ways. Beginner swimmers untrained in the gym have a bunch of squat variations they can use to master the movement, including: Bodyweight squats – Great for learning to balance when squatting and learning proper depth. Box squats – One of my favorites for overloading weight on the barbell, box squats are also an instructional squat variation for mastering depth and control. Wall squats – I still have nightmares about doing extended wall sits during my age group swimming days, with the memory of burning quads still fresh in my memory. Nevertheless, wall sits are great for teaching proper squat posture. Goblet squats – Holding a dumbbell close to your chest, Goblet squats are the next step in mastering the squat technique with light to medium resistance. Front squats – A more advanced version of the barbell squat, front squats are excellent for improved posture and, even though you use less weight, recruit as much leg muscle as back squats (Gullet et al., 2009). Squats provide the strength and power foundation for more explosive strength training movements that swimmers can later implement into their routines. Additionally, as you become proficient with squats and begin to crank up the weight, you will feel that extra power boost when pushing off the wall. 3. Pull-Ups The pull-up is a classic strength training exercise for swimmers. It’s very versatile as well and can be done purely with body weight, with a band for assisted pull-ups, or by attaching weight plates to a dip belt for even more resistance. Pull-ups work many muscles through the upper body and trunk, but swimmers primarily use them to target the latissimus dorsi, better known as the lats. The latissimus dorsi is the “swimmer muscle” for a reason—it does a lot of heavy lifting (ha! Lifting pun!) for three of the swimming strokes (freestyle, backstroke, and butterfly). The lats provide stability for the shoulder joint and assist with generating power in overhead movements. Like when your hands are cutting into the water at the top of the stroke, and you are about to grab a whole handful of water. Nathan Adrian, longtime national team member and Olympic gold medalist in the 100m freestyle, credits doing weighted pull-ups with improving his catch. The trick with pull-ups, like any strength training, is control and technique. A study titled “Relationship Between Dryland Strength and Swimming Performance: Pull-Up Mechanics as a Predictor of Swimming Speed” examined the link between pull-up technique and swimming speed. See also: 10 Dryland Workouts for Swimmers The researchers found that the fastest swimmers in the pool also had the best pull-up technique on the bar. The number of total reps didn’t predict speed in the pool; the athletes who were most technically proficient on the pull-up bar blazed fastest across the length of the pool. Just like your technique in the pool, focus on nailing the pull-up basics really, really well, and the gainz will come in short order. 4. Bench Pulls The swim start is a huge part of swimming fast on race day. Just ask anyone who has competed against Olympic champion and world record holder Caeleb Dressel and ask them how stoked they are to surface from the breakout half a body length behind in a 50m race. A lot goes into having an excellent start, including explosiveness, technique, and mobility. One of the underrated ways to improve the swim start is with upper body pulling strength that can be developed with bench pulls, also known as a seal row. Why bench pulls? And why for swimmers? Well, the swim start requires power to pull the body forward once the starter’s gun goes off. We will draw on research from luge athletes, who perform a swim start-like pulling motion at the beginning of each race to launch themselves down an icy track. The study took a group of elite luge athletes and examined flexibility, trunk strength, isometric leg strength, and bench pull performance. The key difference between the athletes with a lightning-quick start and those who struggled to get out of the start was bench pull performance. This intuitively makes sense: if a swimmer can “pull” on the block more powerfully, they will generate more power and velocity off of the blocks. Prop yourself up on a high-mounted bench (a regular height bench won’t do for this resistance exercise). Set up a barbell with the desired weight underneath the bench. Pull the weight up in a controlled manner, pause at the top, and lower. Keep your head in line with the spine and focus on pulling forcefully through the entire range of motion for maximum effect. Australian sprinter Cam McEvoy, who at the 2023 World Championships swam a blistering 21.06 in the 50m freestyle, uses this specific exercise in his strength training. Video courtesy of Brett Hawke: 5. Broad Jumps Plyometrics and jumps have a pivotal role in strength training exercises for swimmers. Unleashing power and velocity off of the starts and turns are crucial for maximizing performance on race day. One of the exercises every swimmer looking for a faster start should incorporate into their strength training is broad jumps. Unlike squat or countermovement jumps, which focus on vertical power and have a mixed record in the research literature of being linked to improved swim start performance, the broad jump is a plyometric long jump focused on horizontal power. In other words, broad jumps help you get more distance and speed horizontally away from the block on race day. A study published in the Journal of Strength Conditioning Research took a group of ten competitive swimmers and had them perform nine weeks of broad jumps. The exercise was done twice a week, with 8×2 reps for two weeks, then progressed to 15×2 reps for the remainder of the intervention, with 15 seconds of rest between reps. The swimmers took a two-minute break between sets to maximize power and jumping velocity. Note: The platform for the jumps replicated the angle of a block used in competition. By the end, the swimmers generated an additional 7% of horizontal force. Velocity was even better, with swimmers increasing horizontal velocity by a whopping 16%. Pretty awesome for just two sessions per week and minimal time. Broad jumps are a bodyweight exercise that doesn’t require any additional equipment, just a nice landing surface, full hip extension when performing the movement, and an athletic stance when you land after launching yourself across space and time. 6. Squat Jumps Squat jumps are another plyometric exercise that is also a variation of squats. So, the best of both worlds! Squat jumps help increase leg power, perfect for swimmers who want a more powerful kick and explosive push-offs. One study (Sammoud et al., 2019) with competitive swimmers showed that adding squat jumps within an 8-week plyometric training program significantly increased overall jumping ability and swimming performance, particularly sprint efforts. With squat jumps, the goal isn’t brute force. It’s controlled and explosive speed. A typical mistake athletes will make with this exercise is to use too much weight, slowing down the velocity and turning it into a struggle session to get off the ground. Squat jumps are not about moving heavy weight slowly, they are about moving light weight at lightning speeds. A study published in the Journal of Strength and Conditioning Research titled “Power output in the jump squat in adolescent male athletes” showed peak power happened when athletes used just their bodyweight. With squat jumps, go light and go fast. 7. Planks Core strength is vital for swimmers. With optimal core strength, swimmers can transfer power through the limbs, whether by exerting more force in the pull, kicking harder, or exploding off the blocks with more velocity. A strong core also helps to minimize the risk of injury, locks in your streamlines, and can even help facilitate stronger breathing. A study with international-level swimmers showed a 6-week core strengthening program significantly improved 50m swim speed, increased velocity off the start, and increased turn speed. Not a bad list of benefits! When it comes to core exercises for swimmers, nothing is more versatile than the plank exercise. It’s the Swiss Army knife of core exercises. Suitable for beginners and adjustable for even the most experienced swimmers, planks make the cut when it comes to the best strength training exercises for swimming thanks to convenience, core strengthening, postural control, and versatility. Here is a sample plank progression that swimmers can use to build core strength: Front planks – The O.G. can be done in a push-up position or on your forearms. Build up until you can hold it for 60-90 seconds. Side planks – Excellent for building lumbar stability, oblique strength, and anti-rotational strength. Planks with hip extension – Elevate one leg and hold for a 2-count in a regular plank position. Repeat on the other side. Two-point planks – Raise one arm and the opposite leg so that you only have two points of contact to the ground. Excellent for mastering stability. Weighted planks – Grab two jump squat boxes (or weight benches), attach a weight plate to a dip belt so that it dangles under your abdomen, and add resistance to this bodyweight exercise. The goal with planks isn’t just to be able to do long, extended holds of 2 minutes or longer. But continually progressing with varying stimuli and difficulty to continue challenging and strengthening the core. How much volume should swimmers do with strength training exercises? Swimmers already face a challenging schedule with in-the-pool training. The two-a-days, the multi-hour swim workouts, and so on. This means finding the time and energy to devote to strength training can be challenging. When it comes to programming reps and sets, lean towards the lower side of volume. A paper titled “What Is the Optimal Strength Training Load to Improve Swimming Performance? A Randomized Trial of Male Competitive Swimmers,” took a group of competitive swimmers and had them perform strength training at different volumes. The swimmers who lifted 3-4 sets of 3-5 reps at 85-95% intensity improved muscle strength and swimming performance as much as the other groups who did significantly more volume. With strength training, especially when paired with the demands of swim training, more isn’t always better. Should I combine resisted swimming with strength training? Yes! While this article is focused on strength training outside of the pool, combining it with resisted swimming can help you get even faster. While I will go wade further into the deep end with resisted swimming in a future article, here’s a quick teaser. A paper published in the International Journal of Environmental Research and Health had a group of competitive swimmers do 9-weeks of concurrent resistance training in the water combined with strength training. The in-the-water resistance training consisted of twelve 15m efforts with paddles and a swim parachute twice a week. This group showed significantly greater improvement than their unfortunate peers relegated to the control group. In one example, the strength group averaged 13.14 for a sprint 25m before the intervention and improved to 12.24 at the end. Nearly a full second of improvement! The control group improved as well, but by less than two-tenths of a second, starting at 13.13 and ending 12.97. Wrapping Things Up Nothing beats getting faster in the water. And the good news is that no matter what level of swimmer you are, there are strength training exercises you can do to improve performance, whether that means getting off the blocks faster, tightening up your streamline, or delivering tsunami-like waves when dolphin kicking. Incorporate these top swim-specific strength exercises into your training routine and dive into improved performance. Image credits: The author Disclaimer: Before beginning a new workout regimen and hitting the weight, remember to consult with a physician or healthcare professional to ensure that it’s the right fit for you. ABOUT OLIVIER POIRIER-LEROY Olivier Poirier-Leroy is a former national-level swimmer, author, swim coach, and certified personal trainer. He’s the author of YourSwimBook, a ten-month logbook for competitive swimmers. He’s also the author of the recently published mental training workbook for competitive swimmers, Conquer the Pool: The Swimmer’s Ultimate Guide to a High-Performance Mindset. It combines sport psychology research, worksheets, anecdotes, and examples of Olympians past and present to give swimmers everything they need to conquer the mental side of the sport. Ready to take your mindset to the next level in the pool? Click here to learn more about Conquer the Pool. Pool Exercises to Strengthen the Legs Image Credit: GeorgeRudy/iStock/GettyImages Strong legs stem from working the muscles until the fibers break down and repair themselves to become bigger. On land, that might be done through weight-training or leg-focused cardio, such as biking or running. If those exercises hurt your joints, though, or if you're just a fish at heart, you can also strengthen your leg muscles in the pool. Before you hop in the water, prep yourself by donning water shoes to help with traction on the pool floor and have a pool noodle or floatation belt nearby to keep you upright in the deeper water. Remember, too, that you won't notice any sweating during your workout, but your body still gets dehydrated and needs plenty of water after a hard muscle-building session. Start in the shallow end of the pool to get your sea legs before moving into the deep end. Stand next to the pool wall and hold onto it lightly. Lift your leg out to the front, like you're kicking but with your knee straight. Return it to the first position, and then kick it to the side. Return again to the starting position and kick it backward. Do three sets of 10, and then switch to the other leg. Face away from the pool wall with both of your feet on the floor. Bring one knee up, like you were marching in place, and then kick your leg out and straighten the knee. Bend and straighten that knee 10 time, return to the starting position and then switch to the other leg. Standing against the pool wall is good for a beginner's balance, but move away from the wall for added challenge. If you feel comfortable in the water, doing these exercise sans floatation device will make them extra challenging. However, those who are timid shouldn't hesitate to grab a pool noodle or floatation belt. Bring your knees up so your thighs are perpendicular to your body and then imagine that you're riding a bike by making large circular motions with your leg. If you need a little extra help, hold onto the pool wall with one hand. Start with your legs pressed together, hanging straight down. At the same time, kick one leg forward and one leg backward, like a pair of scissors opening. Return to the starting position and alternate the direction of your legs. Once you're comfortable with the movement, kick your legs out repeatedly in a smooth motion rather than stopping in the middle. We speak English Hablamos español Мы говорим по русски Strong legs are essential for effective swimming. Powerful kicks drive swimmers forward, while strong, stable legs help maintain body position and balance in the water. This guide covers targeted exercises and drills that help swimmers build leg strength, enhancing kick power, stability, and endurance. Incorporate these exercises into your routine to maximize your swimming performance and efficiency. 1. Flutter Kick Drill (Pool Exercise) Why It’s Effective: Flutter kicks build strength and endurance in the hip flexors, quads, and calves, helping to improve kick speed and efficiency in freestyle and backstroke. How to Do It: Hold onto a kickboard with your arms extended, and keep your body streamlined. Start flutter kicking, keeping your legs straight with a slight bend at the knee. Focus on small, quick kicks that create a steady rhythm. Aim for 3 sets of 1-2 minutes each, increasing duration as you build endurance. Tip: Keep your head down and body aligned to reduce drag, focusing on generating power from your hips rather than your knees. 2. Vertical Kicking (Pool Exercise) Why It’s Effective: Vertical kicking helps develop power and control by isolating the leg muscles, making it an excellent drill for building strength and stability. How to Do It: Stand vertically in the deep end of the pool with your arms crossed or held out of the water. Begin flutter kicking to keep your head above water, maintaining an upright position. Try for 3 sets of 30 seconds, increasing to 1 minute as you progress. Tip: If this becomes too easy, try it with your hands above your head or holding a weight to make it more challenging. 3. Dolphin Kick on Back (Pool Exercise) Why It’s Effective: Dolphin kicks work the core, glutes, and lower body, making it an ideal drill for developing power and flexibility in the legs, especially for butterfly and freestyle swimmers. How to Do It: Lie on your back, with your arms by your sides or in a streamlined position above your head. Begin the dolphin kick motion by undulating your body in a wave-like motion from your hips, keeping your legs together. Complete 3 sets of 25-50 meters each. Tip: Focus on generating the movement from your hips and core rather than just kicking from the knees. A smooth, consistent motion will help improve strength and rhythm. 4. Wall Sit (Dryland Exercise) Why It’s Effective: Wall sits target the quads, glutes, and hamstrings, building endurance and stability in the legs—qualities that transfer directly to swimming. How to Do It: Stand with your back against a wall, then slide down into a seated position with your knees bent at a 90-degree angle. Hold this position for 30-60 seconds, then rest and repeat for 3-4 sets. Tip: Keep your core engaged and your back flat against the wall. As you get stronger, increase the duration of each set. 5. Squat Jumps (Dryland Exercise) Why It’s Effective: Squat jumps build explosive power in the quads, hamstrings, and glutes, which helps swimmers generate strong kicks for sprints and quick starts. How to Do It: Start in a squat position, feet shoulder-width apart, and lower yourself until your thighs are parallel to the ground. Explode upward, jumping as high as possible, and land softly back into the squat position. Perform 3 sets of 10-15 reps. Tip: Focus on landing softly with control, engaging your core, and keeping your knees aligned with your toes. 6. Lunges with Twist (Dryland Exercise) Why It’s Effective: This exercise strengthens the quads, hamstrings, glutes, and core, building stability and improving balance, which helps swimmers stay streamlined in the water. How to Do It: Stand with feet hip-width apart, then step forward into a lunge with one leg, bending both knees to 90 degrees. Twist your torso over the front leg, then return to center and push back to the starting position. Complete 3 sets of 10-12 reps per leg. Tip: Keep your core engaged and avoid letting your knee extend beyond your toes. Use light weights or a medicine ball for added difficulty. 7. Resistance Band Leg Extensions (Dryland Exercise) Why It’s Effective: Resistance band exercises improve leg strength and flexibility, targeting the quads, hamstrings, and glutes for a powerful, controlled kick. How to Do It: Secure a resistance band around a stable object and loop the other end around your ankle. Stand facing away from the anchor point, and extend your leg backward, feeling the resistance. Perform 3 sets of 15-20 reps on each leg. Tip: Keep the movement slow and controlled to maximize muscle engagement. 8. Box Jumps (Dryland Exercise) Why It’s Effective: Box jumps increase explosive power and endurance in the legs, helping swimmers generate stronger kicks and improving take-off strength for dives. How to Do It: Stand in front of a sturdy box or platform, feet shoulder-width apart. Bend your knees slightly and jump onto the box, landing softly with both feet. Step back down and repeat for 3 sets of 10-12 reps. Tip: Start with a low box and gradually increase height as you build strength and confidence. Focus on landing softly to protect your joints. 9. Kicking with Ankle Weights (Pool Exercise) Why It’s Effective: Adding resistance to your kicks with ankle weights helps increase strength and endurance in the hip flexors, quads, and calves. How to Do It: Wear light ankle weights while holding onto the pool wall or a kickboard. Begin flutter kicks or dolphin kicks, keeping your movements controlled and steady. Try for 3 sets of 1-2 minutes, resting between each set. Tip: Start with light weights and increase gradually. Avoid using ankle weights if you have joint issues or are new to swimming. 10. Underwater Vertical Dolphin Kick (Pool Exercise) Why It’s Effective: This drill builds strength in the core, glutes, and legs, which helps swimmers develop a stronger dolphin kick and maintain better control in the water. How to Do It: In the deep end, hold onto a kickboard or a pool buoy vertically in the water. Perform a vertical dolphin kick, moving your legs in a wave-like motion to stay afloat without moving forward. Aim for 3 sets of 30 seconds, increasing time as you build endurance. Tip: Keep your core tight and focus on generating power from your hips rather than your knees. Conclusion Incorporating leg-strengthening exercises into your swim training will improve your kick power, stability, and overall performance in the water. By combining pool-based drills with targeted dryland exercises, you’ll build endurance, develop explosive power, and refine your kicking technique. Consistent practice with these exercises will help you achieve a stronger, more effective kick, enhancing your speed and control as a swimmer. FAQs How often should I do leg-strengthening exercises? Aim to incorporate leg-strengthening exercises 2-3 times per week, balancing pool drills and dryland workouts for well-rounded strength. Are these exercises suitable for all swim strokes? Yes, these exercises improve general leg strength and can benefit all swim strokes, though some exercises (like dolphin kick drills) target specific strokes. Should I increase weight or resistance over time? Gradually increasing weight or resistance can help you build strength progressively, but avoid heavy weights that may strain your muscles. How soon can I expect results from these exercises? With consistent practice, most swimmers notice improvements in leg strength and kick power within 4-6 weeks. Can beginners try these exercises? Absolutely. Start with bodyweight exercises or lighter resistance, and gradually increase intensity as you become more comfortable and stronger. I enjoy every opportunity I get to coach, whether it is a national level university swimming team or a kid who just started exploring one of the greatest sports - swimming. Embark on a journey to unlock the power of your legs in swimming, a crucial yet often underrated aspect of the sport. Whether you’re propelling through the water with a powerful kick in freestyle or mastering the rhythmic motion of the butterfly, understanding how to effectively use your legs can transform your swimming performance. From enhancing speed to improving endurance, let’s dive into the techniques that will make your legs your greatest asset in the water.I’ve always been fascinated by the power and grace of swimming. It’s not just about splashing around; every movement is a complex interaction between the body and water. As an avid swimmer, I’m excited to break down how our lower limbs play a critical role in this dynamic sport.Kicking is to swimming what rhythm is to music—it’s foundational. In all strokes, a well-executed kick does more than move you forward; it stabilizes your body position, contributing to a streamlined form. Here’s how legs fuel your swim:Propulsion: Each kick generates force, propelling you through the water. It’s all about the combined actions of the feet and legs, whether it’s the flutter kick in freestyle and backstroke or the whip kick in breaststroke.Muscle Engagement: Your legs are powerhouses, filled with muscles that demand engagement. When you swim, your quadriceps, hamstrings, calves, and glutes work in harmony, converting strength into speed.Hip Rotation: In freestyle and backstroke, the legs aren’t just kicking; they’re part of a full-body motion. The hips play a starring role, rotating in sync with your strokes for maximum efficiency.Mastering leg techniques in swimming can feel as complex as a dance, but it’s exhilarating. Think of the sensation when your kick is so spot-on that every movement is effortless, and you’re slicing through the water like a blade—there’s nothing quite like it.In the thrilling world of swimming, mastering leg techniques is a game-changer. I can’t emphasize enough how a swimmer’s success hinges on their kick’s power and efficiency. Let’s dive into the specifics of each stroke’s kick, and see how fine-tuning our leg movements can propel us through the water like a torpedo!The freestyle kick, or flutter kick, is my bread and butter. It’s a rapid, alternating motion that originates from the hips. My legs are straight but relaxed, the toes pointed, creating propulsion with every beat. The movement is consistent and should be:Continuous: No pausing between kicks.Controlled: Kicks are narrow, without excessive splash.The breaststroke kick, sometimes likened to a frog’s movements, demands precise technique.Bend the knees: Legs are drawn up towards the body.Turn the feet out: Toes point outward to catch the water.Kick back and together: Push water backwards with the soles, snapping legs closed for a powerful thrust.Here, the flutter kick lights up the show again, but with me on my back. The sky’s the limit when it comes to how crucial it is that my legs kick with steady rhythm, remaining just below the water surface to:Minimize dragMaximize speedAnd finally, the dolphin kick steals my heart in the butterfly. My legs are pressed together moving in a wave-like motion. It’s all about the hips – where the magic happens! The kick is a harmonious, undulating movement that powers from the core and transfers through the legs:Concise undulation: Both legs move as a single unit.Power through the hips: The impulse starts at the hip, not the knees.Swimming with efficient leg techniques gives me an edge, transforming each stroke into a seamless blend of power and elegance. With a solid leg kick and a trusty kickboard for drills, I maximize my training and watch as the seconds tick off the clock. Now, it’s your turn to amp up your game!When I think about excelling in swimming, I focus not only on the time I spend slicing through the water but also on the vital role of strength and conditioning. It’s the powerhouse driving each stroke, propelling me forward with more speed and less fatigue. Let’s jump into the workouts that amplify leg power and enhance in-pool performance!Squats with Dumbbells:Target: Quads, hamstrings, glutesHow: Stand with feet shoulder-width, holding dumbbells at your sides. Squat while keeping your chest up and back straight. Power through your heels to rise.Romanian Deadlift:Target: Hamstrings, lower backHow: Hold dumbbells in front of you, hinge at hips, keeping legs straight. Lower the weights close to your legs, then squeeze your glutes to return to standing.Lateral Lunge:Target: Glutes, quads, inner thighHow: From standing, step right into a deep side lunge, dumbbells in hand. Push back to center and repeat on the other side.Flutter Kick Drill:Focus: Ankle flexibility, leg powerHow: Grab a kickboard and perform flutter kicks. Ensure your kicks are small and rapid, originating from the hips with straight yet relaxed ankles.Dolphin Kick Drill:Focus: Core, glutes, ankle flexibilityHow: Without a board, practice dolphin kicks. Your legs should work as one unit, driven by your core and glute muscles, moving in a wave-like motion.Adopting these exercises into my routine is a game-changer. They keep my legs conditioned, ensuring I am competition-ready. Each drill translates directly into stronger, more precise kicks in the pool—totally exhilarating!I always say that refining your technique can transform a good swimmer into a great one! We’re going to talk about breath control and body coordination, the two components I find most crucial in the pursuit of swimming efficiency. Let’s dive into how these aspects can sharpen your performance in the water.Breath control is the keystone of my swim sessions. It’s not just about the frequency of your breathing, but also the technique. I begin with a focus on breath timing. It’s essential to exhale steadily underwater so you’re ready to inhale quickly during the turn of your head. Here’s a tip: practice exhalation in a relaxed manner to avoid a build-up of carbon dioxide, which often leads to panic and premature exhaustion. Imagine your lungs as balloons; even distribution of air release is key.ComponentsTipsInhalationQuick and sharp at the head turnExhalationSteady and continuous underwaterRhythmDevelop a consistent breathing tempoOn to my next point: body coordination. This means syncing your leg kicks with the movements of your upper body to maintain a streamlined position. It’s about the integration of your arms’ catch phase with the body movement and balance. A well-coordinated stroke starts with a strong core, ensuring that your body moves as one fluid entity. Remember not to let your legs just drag; they need to be active contributors to your forward momentum. It might be helpful to visualize your body moving through the water like a powerful but graceful fish.Body Rotation: Engage your core to rotate smoothly from side to side.Arm and Leg Coordination: Time your kicks with the arm strokes for optimal propulsion.Technique Tips: Use drills to isolate and then integrate each movement for more effective coordination.When I hit the water, everything shifts — power, agility, and technique fuse in an intricate dance of speed. Crafting a perfect stroke hinges on mastering each phase of the swim, from the initial catch to the explosive push-offs. Let me guide you through the nuances of advanced swimming strategies that can shave seconds off your time and make every kick count.I’ve learned that the catch phase is crucial for a stroke’s efficiency. It’s the part where my hand first enters the water and starts pulling back. To maximize efficiency, I focus on keeping my elbow high and hand pitched at just the right angle to catch as much water as possible. This sets up a strong propulsive kick, ensuring each stroke propels me forward with power.Keep elbow highAngle hand for maximum water catchCoordinate with propulsive kickThe transformative power of underwater dolphin kicking never ceases to amaze me. It’s that undulating move that comes into play after the push-offs and starts, right before I break the surface. I maintain a tight streamline position to minimize dr