



DIVING CONDITIONING PROGRAM

This program was written with many important parameters in mind. First, and foremost, the phases of this program represent three stages of training: stabilization, strength and power. All three stages are crucial to creating a solid foundation of strength and power for diving. These stages should be periodized into an athlete's training year to accomplish the set goals.

In Phase 1 of the diving program, the strength exercises should be completed in succession as a circuit with no rest between each exercise. The rest period occurs for 90 seconds after the last exercise. In Phase 2, the strength exercises for the respective body parts should be completed in supersets with no rest after the first exercise and then 60 seconds rest after the second exercise. The strength exercises in Phase 3 are similar to those in Phase 1 and are completed as a circuit with no rest between the exercises and 120 seconds at the end of the circuit.

It is important to note that the programs are also built to challenge rotational strength to accommodate the nature of the sport of diving. By incorporating multi-dimensional exercises into the training programs, the diver will be able to withstand unpredictable forces from any direction. The attached exercise program emphasizes both sides of the body in order to prevent asymmetric muscle development and injury.

The ability to sustain effort without lessening the level of one's performance is crucial to competitive diving. The phases in this program encourage this type of development with stabilization training, endurance repetitions and shortened rest ratios. The programs build power and explosive capabilities necessary for the sport, in combination with reactive exercises that will increase an athlete's ability to successfully produce angular momentum prior to take off. The goal is to improve the athlete's ability to perform the diving methods of overbalancing, momentum transfer, eccentric leg thrusts and eccentric board thrusts.

Lastly, one of the most crucial components of this conditioning program is flexibility. The program design outlines flexibility exercises which target priority muscle groups for the sport. The end result will be power in the priority muscles which are not hindered by muscle tightness or imbalances.



TRAINING PROGRAM: DIVING CONDITIONING PHASE 1 of 3

Competitive Diving requires the athlete to possess rotational strength, explosive power, and the ability to efficiently transfer momentum. This 3-phase program encourages the development of stabilization and endurance to perform the necessary movements with strength and precision. This initial phase of the Diving program begins with establishing the necessary level of stabilization to progress in the later phases.



Warm-up: Foam Roll Lats

By warming up the large muscles of the back, you will increase flexibility. Hold the stretch on each side for a minimum of 45 seconds.



Warm-up: Foam Roll Adductors

This exercise will help to increase muscle length and balance to your upper leg. Hold this stretch for 45 seconds during your warm-up.



Warm-up: Foam Roll TFL

This warm up will stretch and warm up the outside of your hips prior to your workout. Hold this stretch for 45 seconds per side.



Warm-up: Foam Roll Piriformis

This stretches the upper leg and hip. Pressure from the foam roller also helps to warm up this area. Hold this stretch for 45 seconds on each hip.



Warm-up: FreeMotion Treadmill Cardio

Ten minutes of brisk walking at 3.0 - 4.0 miles per hour will increase heart rate and enhance blood flow to prepare muscles for exertion.



Warm-up: Floor Flexibility / Hamstring 90/90 Stretch

The hamstring is one of the largest and most dense muscles in your body. It is important to prepare these muscles to prevent injury when performing lower-body exercises. Each leg should be stretched for at least 30 seconds.



Warm-up: Wall or Stationary Object Flexibility / Pec Stretch

The Pec Stretch focuses on lengthening the muscles of your upper, middle and lower chest while engaging the muscles of your middle back to retract and stabilize. Stretch your Pecs for 30 seconds on each side.



Warm-up: Wall or Stationary Object Flexibility / Calf Stretch

A thorough Calf Stretch is an important part of injury prevention. Hold this stretch for at least 30 seconds per calf.



Warm-up: Floor Flexibility / Kneeling Hip Flexor

The Kneeling Hip Flexor Stretch will stretch and loosen up the hips for increased range of motion and injury prevention. Stretch each side for at least 30 seconds.



Core & Balance: Abdominal One Leg Abdominal Crunch with Rotation

The One Leg Abdominal Crunch with Rotation primarily works the obliques, but also the entire midsection. Performing them while standing will help reduce stress on the neck and back. Start with 3 sets of 12 reps.



Core & Balance: Cable Cross Multi-planar Two Arm Cable Rotations

The Cable Rotation primarily focuses on the obliques, but also incorporates the use of muscles throughout the midsection, arms and shoulders. Vary the speed of the rotation as well as the amount of weight on the stack.



Core & Balance: Stability Ball Stability Ball Crunch

This exercise primarily targets the abdominal muscles while incorporating the muscles of the trunk and spine. Perform 3 sets of 12 reps during Week 1 and increase sets and reps to match your conditioning.



Speed & Agility: Floor Sagittal Plane Hops

Hop forward from one foot to the other, and hold, or stabilize, yourself for 5 to 10 seconds before hopping back to the other foot. The Multi-Planar Hop challenges your core and stabilizing muscles. Start with 3 sets of 12 reps to begin with.



Speed & Agility: Floor Transverse Plane Hops

As you hop from one foot to the other turning 90 degrees to either side, you will be forced to stabilize. Start out with small hops for 3 sets of 12 reps, and increase the height and length of your hop as you become more comfortable with the movement.



Strength: Chest Standing Alt Arms Chest Press

The Standing Alternating Arms Chest Press strengthens the chest and shoulder muscles as well as your core. Adjust the speed of your reps as you become stronger and your coordination increases. Start with 3 sets of 12 reps.



Strength: Row Standing One Arm Row with Rotation

The Standing One Arm Row with rotation will help strengthen the large muscles in your back in addition to your shoulders, arms and core. The unsupported nature of the exercise provides additional emphasis on your stabilization muscles. Start with 3 sets of 12 reps per arm.



Strength: Shoulder Standing Alt Arms Shoulder Press

The Standing Alternating Arms Shoulder Press works the muscles of the shoulder and further incorporates core muscles. Start with 3 sets of 12 reps and alternate your speed and intensity.




Strength: Stability Ball Stability Ball Cobra

The Stability Ball Cobra requires you to utilize back extension muscles, important for good posture, also incorporates other core muscles. Start with light weights and increase as the reps and sets become easy.




TRAINING PROGRAM: DIVING CONDITIONING PHASE 2 of 3

Competitive Diving requires the athlete to possess rotational strength, explosive power, and the ability to efficiently transfer momentum. This 3-phase program encourages the development of stabilization and endurance to perform the necessary movements with strength and precision. In phase 2, the athlete will realize increased strength, to which they'll add speed for power in the last phase.




Warm-up: Stability Ball
Lat Stretch

The Lat Stretch will lengthen the muscles of the lower and middle back. This is important for building proper posture. Hold the stretch for 45 seconds.



Core & Balance: Stability Ball
Stability Ball Bridge

The Stability Ball Bridge requires you to engage your entire body in order to stabilize on the ball. The movement will work your thighs, hips, back and abs. Start with 3 sets of 12 reps and increase both as you are ready.




Warm-up: Foam Roll
IT Band

Use your body weight and a foam roller to prepare your upper leg muscles and tissue to work out. The IT band warm-up will help reduce pain and tension in your thighs. Start with a 45 second warm-up on each leg.




Speed & Agility: Deck
Jump Up with Stabilization

Begin with feet shoulder width apart and feet pointed straight ahead and the knees aligned over the mid foot. Using arms, jump up in the air and land in a balanced position on top of the box. Hold the landing and then repeat.




Warm-up: FreeMotion Treadmill
Cardio

Ten minutes of brisk walking at 3.0 - 4.0 miles per hour will increase heart rate and enhance blood flow to prepare muscles for exertion.




Strength: Chest
Stagger Stance One Arm Chest Press

This exercise not only builds up the muscles of the chest, but also works the core as you are building balance and stability. Begin with 3 sets of 12 reps and increase the weight as these become easy to complete.




Warm-up: Stability Ball
Active Seated Adductor

With both feet pointed straight ahead, place one hand above the hip of the straight leg. Draw your belly button inward toward your spine, tilt your pelvis back, and move into the adductor stretch. This active movement should be done for 5-10 repetitions for 2-4 seconds each.




Strength: Floor
Push Up with Rotation

Combine a traditional push-up with a one arm rotation, and you will work your shoulder and back muscles with the added benefit of stretching and strengthening your core. Keep your back, legs and arms as straight as possible during rotation. Perform 3 sets of 12 reps to start with and add more reps as this becomes easy.




Warm-up: Floor
Active Hamstring Track Stretch

With feet staggered and pointed straight ahead, squat down into sprinter stance. Rise up out of a squat position until forward leg is stretched. With control, move in and out of stretch 5-10 repetitions for 2-4 seconds each.




Strength: Cable Cross
Standing Two Arm Cable Row

The Two Arm Cable Row strengthens your arms, shoulders and back as you extend outward and pull the handles down and back. Begin with 3 sets of 12 reps and increase both the reps and weight as your strength improves.



Warm-up: Wall or Stationary Object
Active Gastroc

Lean against a wall, with one leg outstretched to form a neutral line. With rear foot on the ground and opposite hip flexed, slowly move through the hips to create a stretch. This active movement should be done for 5-10 repetitions, 2-4 seconds each and then switch sides.




Strength: Lat
Standing Split Stance Two Arm Pull Down

Performing a Standing Split Stance Pull Down not only works the large muscles of the back, but also incorporates core muscles for increased stability. Begin by performing 3 sets of 12 reps.




Warm-up: Floor
Active Psoas Stretch

Standing, place one leg forward and slightly bent, with rear leg in internal rotation. Squeeze buttocks and rotate pelvis into a posterior position. Stride forward into stretch. Raise the stretch side arm up and over to the opposite side. This active movement should be done for 5-10 repetitions, 2-4 seconds each and then switch sides.




Strength: Stability Ball
Ball Scaption

The Stability Ball Scaption requires you to stabilize your core as you strengthen your back and shoulders. Maintain a straight back and arms throughout the movement pattern. Begin with 3 sets of 12 reps and increase reps, sets and weight as your fitness improves.




Core & Balance: Med Ball
Walking Lunge with Med Ball with Twist

Begin with arms extended, while holding the medicine ball directly in front of your body. Step forward and bend at hips, knees and ankles. Slowly rotate at spine. As you lift your body, rotate your spine back to starting position.




Strength: Row
Standing Alt Arms Row

The Standing Alternating Arms Row will help to strengthen your large back muscles in addition to your shoulders, arms and core. Begin with 3 sets of 12 reps and progress weekly.




Core & Balance: Cable Cross
Wood Chop

The Wood Chop strengthens and tones your core and trunk muscles. Shoulders, back and hips also benefit from this dynamic movement pattern. Start with 3 sets of 12 reps on each side.




Strength: Quad
Single Leg Knee Extensions

Performed in a 'kicking' motion, this exercise works the large quadriceps muscles while strengthening the small muscles surrounding the knee. It is important to have proper posture when performing this exercise. Start with 3 sets of 12 reps.



Strength: Floor
Squat Jumps

Squat Jumps will provide you with power and increase the height on your jump. The Squat Jump will strengthen your legs and core as you extend up with your hands to achieve the maximum height. Start with 3 sets of 12 reps.




Strength: Hamstring
Hamstring Running Motion

The Hamstring Running Motion will strengthen the hamstring, quadriceps and hip muscles of the leg in motion. The balance leg and core will work to stabilize your body throughout the movement pattern. Start with 3 sets of 12 reps until your balance and movement improve.




Strength: Deck
Sagittal Power Step Ups

Begin with one foot on Deck and one foot on ground. Push off step leg and switch legs for the landing. Body weight stays on step-leg. If you push off right leg, then land on left leg. Land with feet, knees, and hips in alignment and repeat quickly.




Cool Down: FreeMotion Treadmill
Cardio

Five minutes of brisk walking at 3.5 - 4.5 miles per hour will increase blood flow to muscles to help prevent cramping and loosen tight muscles post-workout.




Cool Down: Floor
Standing Psoas Stretch

The Standing Psoas Stretch will stretch the large muscles in your back and trunk as you twist your raised arm and head backward. Hold this stretch for 30 seconds per side at the end of your workout.



Cool Down: Wall or Stationary Object
Flexibility / Pec Stretch

The Pec Stretch focuses on lengthening the muscles of your upper, middle and lower chest while engaging the muscles of your middle back to retract and stabilize. Stretch your Pecs for 30 seconds on each side.



Cool Down: Wall or Stationary Object
Flexibility / Calf Stretch

A thorough calf stretch is an important part in preventing injury. Hold this stretch for at least 30 seconds per calf.

Workout Schedule

Name: _____

Personal Trainer: _____

Program Start Date: _____

Week 1: 3 sets x 12 reps Completed

Week 2: 3 sets x 15 reps Completed

Week 3: 3 sets x 15 reps Completed

Week 4: 3 sets x 20 reps Completed

Notes



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TRAINING PROGRAM: DIVING CONDITIONING PHASE 3 of 3


Competitive Diving requires the athlete to possess rotational strength, explosive power, and the ability to efficiently transfer momentum. This 3-phase program encourages the development of stabilization and endurance to perform the necessary movements with strength and precision. The third, and final, phase of the Diving program combines the stabilization set in the first phase and adds speed to the strength gained in the second phase to create explosive power.




Warm-up: FreeMotion Treadmill Cardio
Ten minutes of brisk walking at 3.0 - 4.0 miles per hour will increase your heart rate and enhance blood flow to prepare your muscles for exertion.




Power: Floor Power Tuck Jump
Begin with both feet shoulder width apart, toes forward, knees aligned over mid-foot and arms by sides. Jump off the ground and bring knees up to the chest. Land softly on the mid point of the feet, maintaining control of the entire body. Repeat exercise as fast as can be controlled.




Warm-up: Resistance Tube Tube Walking
Place tubing around mid lower leg. Place feet hip width apart with knees slightly bent and feet straight ahead. Step sideways without allowing knees to move inward.




Power: Floor Power Squat Thrusts
Begin in a push up position with legs fully extended, glutes contracted, and abdominals drawn in. Bring knees to chest and jump forcefully up, as if performing a jump squat. Land on the mid-point of the feet and quickly return to start position. Repeat as quickly as can be controlled.




Warm-up: Medicine Ball Medicine Ball Rotations
Grasp a med ball with both hands and elbows fully extended. Place feet hip width apart with knees slightly bent and pointed straight ahead. Initiate the trunk rotation side to side, allowing the hips to pivot on the back foot as the motion nears the end range.




Strength: Cable Cross Multi-planar Front Lunge & Two Arm Press
The combination Front Lunge and Two Arm Chest Press strengthens your legs, back, chest and trunk. Your stabilizer muscles will also be activated in order to hold the lunge position as you perform an unsupported chest press. Begin with 3 sets of 10 reps.




Warm-up: Medicine Ball Extension/Flexion
Grasp a med ball with both hands and elbows slightly bent. From a squat position, squeeze glutes to start extending at the ankle, knee, hip and spine.




Strength: Lift Two Arm Squat to Row
By combining both Squat and Row exercises in one sequence, you'll be working the lower body, back, shoulders and arms. Start with 3 sets of 10 reps and progress upward over time.




Warm-up: Floor Multi-planar Deceleration Hops
Begin by balancing on one leg. Draw your belly button in without moving the spine. From a balanced position, hop forward to the opposite leg, stabilizing for 2-4 seconds. Next, hop in a reverse direction returning to the start position. Repeat directions sideways and in a turning pattern.




Strength: Cable Cross Two Arm Squat to Overhead Reach
This exercise begins in a squatting position and extends to an overhead reach to not only work the muscles of the lower body, but incorporates the upper body, specifically working the shoulders. Begin with 3 sets of 10 reps each.




Core & Balance: Stability Ball Stability Ball Push Ups
This exercise not only focuses on the upper body, but also incorporates the muscles of the lower body and core for balance. Maintain good posture. Start with 3 sets of 10 reps.




Strength: Cable Column Two Arm Cable PNF
This exercise works both the upper and lower body. It primarily targets the shoulder, but also incorporates additional arm, core and leg muscles for stability. Start with 3 sets of 10 reps and add additional weight and sets as the workout weeks progress.




Core & Balance: Cable Cross Two Arm Push Pull
The Two Arm Push Pull strengthens your arms, shoulders, back, obliques and trunk in a dynamic exercise. Your torso rotates as you push and pull, thus activating your core muscles. Start with 3 sets of 10 reps.




Strength: Deck Power Step Ups
Begin with one foot on Deck and one foot on ground. Push off step leg and switch legs for the landing. Body weight stays on step-leg. If you push off right leg, then land on left leg. Land with feet, knees, and hips in alignment and repeat quickly.




Core & Balance: Lift Single Leg One Arm Romanian Deadlift
The Single Leg Romanian Deadlift requires you to balance on one foot while you bend down and touch your toe with the opposite hand. Perform 3 sets of 10 reps during your first week and adjust your program according to your ability and level of fitness.



Strength: Squat Multi-planar Squats
The Squat uses the large muscle groups in your lower body. As you raise and lower your body, turn and squat into various planes of motion to not only challenge the core and lower body, but also gain stabilization strength. Begin with 3 sets of 10.



Speed & Agility: Deck Power Step Ups
Begin with one foot on Deck and one foot on ground. Push off step leg and switch legs for the landing. Body weight stays on step-leg. If you push off right leg, then land on left leg. Land with feet, knees, and hips in alignment and repeat quickly.



Strength: Step Turning Step Up to Balance
The Turning Step-Up to Balance stabilizes as it strengthens. The movement requires you to balance from left to right as you extend up and down from the step. The turn as you step adds intensity to this exercise and engages more of the core muscles. Raise the level of the step to increase the difficulty of the exercise. Start with 3 sets of 10 reps.

