

KIN 856

Dr. Riewald

Developing Dynamic Warm-ups

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Exercise: Arm Circles while Standing on Balance Platform

Purpose: This exercise uses the whole body and the muscles needed for performing swimming motions both in practice and in swim meet situations. Specifically the exercise:

- engages muscles of the shoulder and rotator cuff while the arms are swinging forward and backwards in a circular motion in front of the body
- isometrically contracts the core muscles in order to stabilize the body, just like the core muscles stabilize the body in the water when the swimmer is swimming
- uses the stabilizing muscles of the legs to keep balance on the ball platform without losing control of the entire body
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meets
- works to improve coordination of the swimmer because the athlete is learning to stabilize their lower half of the body and core, while their arms are moving in a large circular motion

Exercise Description:

1. The swimmer is standing on a ball platform (flat on the top for the swimmer to stand, but round and soft on the bottom so the platform can move to any side) with the arms out to the side of their body in order to gain balance and stabilize their body.
2. While standing on the ball platform the swimmer will begin to circle their arms forward in front of the body with the elbows locked for 30-45 seconds
3. Once the swimmer has circled the arms in front of their body for 30-45 seconds the swimmer will begin to circle their arms in the opposite direction behind their head and body for another 30-45 seconds.
4. The arm circles are not a race and should be done at a medium intensity in order to prevent injury of the shoulder
5. The swimmer will go through 3 sets of 30-45 arm circles in order to fully warm-up and engage the muscles of the shoulder

Exercise: Resistant Band pulls for Internal/External Rotation

Purpose: The exercise uses the muscles of the shoulder and rotator cuff for motions in the swimming pool during practices or swim meets. Specifically the exercise:

- engages muscles of the rotator cuff and shoulder for internally/externally rotating the arms/shoulder for a freestyle swimming stroke
- isometrically contracts the core muscles in order to stabilize the body, just like the core muscles stabilize the body in the water when the swimmer is swimming
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meets
- engages both the eccentric and concentric muscles needed for internal/external rotation of the scapula and shoulder by resistant band constantly maintaining tension throughout the entire exercise

Exercise Description:

1. Swimmer should hook a resistant band to a door or some other sturdy and immovable fixture with one hand grasping one end of the resistant band with the arm that will be moving is located on one side of the body
2. Bend your elbows to 90° to assume the start position.
3. Externally rotate your arms to the end range at a comfortable pace and then return to the starting position (keep in mind that the arm will cross in front of the body and then back to the start position).
4. As you externally rotate and pull the resistant band in front of your body, pinch your shoulder blades together. Do not force the end range of motion.
5. Complete 3 sets of 15-20 repetitions alternating each arm and shoulder to provide ample rest.

Exercise: Stand and Jump Streamlines

Purpose: The exercise uses the whole body in movement patterns similar to a streamline and start for swimming both in practices and in swim meets. Specifically the exercise:

- Engages the muscles of the shoulders, rhomboids, and leg extensors that are used for the start of a race off the block or off the wall for a flip turn so the swimmer can get into the “streamline position”.
- isometrically contracts the core muscles in order to stabilize the body, just like the core muscles stabilize the body in the water when the swimmer is swimming

- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meets
- activates the neuromuscular system, which improves conduction and coordinated muscle contractions (in other words, through constant repetition the exercise forces the swimmer to get into the streamline position at a much faster rate ,which in turn, will decrease drag of the swimmer in the water).

Exercise Description

1. The swimmer will be in a half-squat position with the legs slightly bent at the knee joint while the hands are at shoulder level and to the sides of the body (looks like when a policeman says to “put your hands up”)
2. When the whistle blows from the coach, the swimmer will jump vertically from the half squat position and raise their hands as quickly as possible above their head with both palms overlapping each other with the elbows extended and the entire shoulder squeezed tightly (mimicking a streamline position).
3. On the way down from the jump when gravity begins to pull the swimmer down towards the ground, the swimmer will return to the starting position of the half squat and arms bent out at shoulder level to the sides of the body.
4. Complete 5 sets of 10 repetitions really emphasizing the explosive power of the jump and getting into the streamline position as quickly as possible.

Exercise: Resistant Band Triceps Extensions

Purpose: This exercise specifically uses the muscles of the triceps which will allow the swimmer to push down and “flush” water down by the sides of the body for effective swimming techniques both in practices and swim meets. Specifically the exercise:

- Engages and warms up muscles of the triceps
- isometrically contracts the core muscles in order to stabilize the body, just like the core muscles stabilize the body in the water when the swimmer is swimming
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meet
- Engages the triceps muscles and movement patterns that will be used during the actual sport practice or competition

Exercise Description

1. Swimmer should hook a resistant band to a door or some other sturdy and immovable fixture with the body slightly bent forward at the hips and facing the immovable fixture with elbows raised and bent behind the body and each hand grasping a handle of the resistant band. Feet should be staggered with one in front of the other in order to gain/maintain balance during the exercise
2. The swimmer will begin to extend their elbows by pulling backwards on the resistant band until the swimmer arms are straight
3. The swimmer must maintain tension of the band and bring the elbows back down to the bent position or the start position
4. Keep in mind that swimmers should try to isolate the elbow and keep it from moving during the exercise in order to properly work the triceps muscles. Also, the palms should be flat when holding onto the resistant band handles in order to transfer the skills of the freestyle flush when the swimmer enters the water.
5. The swimmer should complete 4 sets of 15-20 repetitions with each arm alternating from one side to the other, just like in a swimming freestyle stroke.

Exercise: Wall Leg Sweep

Purpose: This exercise engages muscles of hip abductors and adductors in movement patterns that are similar to swimming with the breaststroke kick. Specifically the exercise:

- Engages and warms up muscles of the hip abductor and adductor muscles
- isometrically contracts the core muscles in order to stabilize the body, just like the core muscles stabilize the body in the water when the swimmer is swimming
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meet
- engages and loosens muscles of hips for effective breast stroke kick motions both in practice settings and in swim meets

Exercise Description:

1. The swimmer will be slightly bent over at the waist with both hands out in front of the body touching the wall in front of the swimmer.
2. Once the swimmer is stable, the swimmer will begin to swing one leg at a time, in front and across the midline of the body between the wall and the swimmers back leg.

3. The swinging motion of the leg will constantly change from adduction to abduction (it looks like a pendulum swinging back and forth on a grandfather clock)
4. Remind swimmers to not go too far in front or to the sides of the body if there is pain associated with the motion
5. Switch legs after 30 seconds in order to engage muscles in both legs
6. Complete 3 sets of 30 second repetitions making sure to switch legs every 30 seconds

Exercise: Resistant Band Butterfly Pulls

Purpose: The exercise is swimming specific and engages the muscles of the upper half of the body which is specific to the sport of swimming the butterfly stroke. Specifically the exercise:

- engages and warms up the muscles of the shoulder, especially the anterior deltoid muscles of each shoulder
- isometrically contracts the core muscles in order to stabilize the body, just like the core muscles stabilize the body in the water when the swimmer is swimming
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meet
- engages the muscles of the shoulder along with the arms as well as the movement pattern for the butterfly stroke for the upper body

Exercise Description:

1. Swimmer should hook a resistant band to a door or some other sturdy and immovable fixture with the body slightly bent forward facing away from the hooked part of the resistant band(looking away from the wall) with both arms holding each handle of the resistant band and the shoulders abducting away from the body.
2. Once the swimmer is balanced and the shoulders are abducted, the swimmer should begin to horizontally adduct their shoulders out in front of them while keeping the elbows extended until the hands clap together in front of the swimmers body.
3. The swimmer will then lower the shoulders and hands down by the sides of their body until the hands are at either side of the hip.
4. The swimmer is done with the motion/exercise and then repeat starting with step 1

5. Swimmers will repeat the exercise with 4 sets of 20-25 repetitions with less than a minutes rest in between sets.

6. Keep in mind that if swimmers cannot do the entire amount of sets or repetitions make, sure to have the swimmers move closer to the wall in order to decrease the resistance.

Exercise: Leg Cradle

Purpose: This exercise engages the body in movement patterns that will help the swimmer prepare their muscles for an upcoming practice or swim meet. Specifically the exercise:

- Warm up the body
- Improve flexibility in the muscles of the groin and hips for kicking motions in swimming, in particular the breast stroke kick
- Improve dynamic balance
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meet

Exercise Description:

1. Start on one end of the pool deck looking down at the opposite end where you will finish and come back

2. While on one leg, lift the other leg and with the assistance of both hands, turn the knee outwards while lifting at the ankle.

3. Cradle the leg at the knee and at the ankle. Do not grab the foot if you can help it.

4. At the same time, contract the calf of the leg on the ground, lifting the body up.

5. Release the leg, step forward and repeat on the other leg making your way to the other side of the pool.

6. Perform this exercise by going down to one end of the pool deck and then back to the original starting spot for the exercise.

Exercise: Trunk Rotations

Purpose: This exercise engages the body in movement patterns that will help the swimmer prepare their muscles for an upcoming practice or swim meet. Specifically the exercise:

- Warm up the body
- Improve strength in the legs and core
- Improve flexibility in the core and shoulders
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meet
- warms up and prepares the abdominal muscles for activity in all of the swimming strokes

Exercise Description:

1. Swimmers should be standing in one spot, spread the feet and establish a good base of support in order to maintain balance.
2. Bring the arms up to shoulder height and gently rotate the torso to one side and then the other.
3. Gradually lower the body by bending the knees and pivoting on the balls of the feet as you rotate from side to side. The first couple of times do the exercise slowly in order to maintain balance.
4. Perform about 15-20 twists in each direction, or for about 30 seconds.
5. Keep in mind not to over-exaggerate the torso rotation as this may increase pressure on the lumbar vertebrae (lower back).

Exercise: Backwards Step Overs

Purpose: This exercise engages the body in movement patterns that will help the swimmer prepare their muscles for an upcoming practice or swim meet. Specifically the exercise:

- Warm up the body
- Improve flexibility and active range of motion in the hips
- Improve dynamic balance
- Improve strength in the muscles around the hip
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meet

Exercise Description:

1. Start on one end of the pool deck looking down at the opposite end where you will finish and come back
2. Lift a knee up. Rotate it at the hip outwards.
3. Step backwards as if you are trying to clear a hurdle, and place the foot down so it is facing forwards.

4. Repeat with the other leg and work your way across the pool deck.
5. When the swimmer has gone down and back on the pool deck the swimmer has accomplished the dynamic warm up

Butt Kick with Arm Circles

Purpose: This exercise engages the body in movement patterns that will help the swimmer prepare their muscles for an upcoming practice or swim meet. Specifically the exercise:

- Warm up the body
- Improve flexibility and active range of motion of the quadriceps muscles used for kicking motions in the sport of swimming
- Improves coordination of both the arms and the legs
- Improves the range of motion of the shoulders and rotator cuff muscles
- elevates body temperature of the swimmer and gets the heart and lungs ready for practice and/or swim meet

Exercise Description:

1. Start at one end of the pool deck facing the opposite end
2. Swing the arms forward in large circles as you jog with your heels touching your gluteus muscles.
3. Jogging pace as well as arm circle pace should be at a relaxed/light jog pace.
4. When you come to the opposite wall change direction and swing your arms backwards as you jog back to your starting position.
5. The exercise should be done 1 time with the swimmer going down to one end of the pool and then back to the start.
6. Keep in mind not to overreach or overstrain the arm circles and their motion.