

# World's Longest List of Ways to Create Drag for Swimming Training

Drag creates resistance and is a valuable tool for swimmers looking to enhance their performance by increasing strength, endurance, and refining technique. When used appropriately and in conjunction with a well-rounded training program, it can contribute significantly to overall swimming improvement.

When swimming, the forward movement of your body mass generates momentum, facilitating the stroke. However, drag & resistance training disrupts this momentum, providing added challenges. Weak points in stroke technique become evident under this added strain.

## **Other Advantages:**

For individuals with limited time, incorporating drag training into their workout regimen offers an efficient means to achieve a comprehensive workout in less time.

Integrating resistance & drag training into swim sessions not only introduces an element of fun but also can elevate the overall engagement of the swimmers.

It can serve as a valuable simulation of the challenges swimmers face when contending with currents or waves in open water.

Research on competitive swimmers supports its effectiveness, with 10 out of 12 studies of the value of in-pool resistance training found positive effects in speed for swimmers for distances of 25 to 200 metres ( average 2 to 3% increase with some as high as 7.5% ) ( Ref 1 ).

## **Full Swimming Drag**

**Parachutes:** these are attached to your waist and you drag them through the pool. They come in various sizes.

**Drag Shorts & Drag Suits:** are specially designed clothes that create drag as you swim through the water.

**Partner Resistance:** a partner holding onto the ankles or a cord attached to the waist of the front swimmer creates a high level of drag.

**Grudge Belt:** two swimmers are connected by a cord attached at the waists, and by swimming in opposite directions, they create a two-person swimming tug-of-war.

**Towing Objects:** attaching a cord around the swimmer's waist allows any object that will float to be dragged behind the swimmer. An empty gear bag works well.

**Backpack / Vests:** a special swimmer's weighted vest or even a simple backpack ( with or without extra weight ) is a simple way to add drag.

**Street Clothes:** a long-sleeve shirt, baggy trousers or a skirt are simple ways to create drag.

**Single Arm Swimming:** hold a bag or other object in the outstretched non-swimming hand in such a way it creates drag.

## Kicking Drag

**Drag Socks:** are special socks for your feet, calves or forearms that create drag for your kick and stroke.

**Kick Fight:** two swimmers face each other, each gripping a kickboard between them, as they endeavour to push the other backward solely through kicking.

**Kickboard Drag:** during kicking drills, hold the kickboard in the tombstone position.

**Arm Drag:** crossing the arms over the head or holding the arms in any non-streamline position create drag.

**Ankle Resistance Cuffs:** these are weighted or finned cuffs for the ankles.

## Pull Resistance & Drag

**Hand paddles & Gloves:** create resistance for the pull.

**Pull Buoy:** increases resistance for the arms, shoulders, and core muscles.

**Pull Buoy with Clenched Fists:** a small increase in resistance but helps with technique.

**Swim Fins:** using a pull buoy, swim without kicking, with fins pointing to the bottom of the pool.

**Ankle Strap:** with the ankles held together, the legs sink to varying degrees creating more drag.

**Dry Feet Sculling:** keeping the feet out of the water on the poolside, maintain a steady sculling motion in a stationary streamline position in the water.

**Underwater Sculling:** while submerged, perform sculling movements without a wall push-off or kicking.



## Resistance Methods

Although not considered drag there are a number of ways to create resistance what work in a similar way to drag.

**Resistance Bands:** are elastic bands attached around your waist and to the end of the pool. As the band stretches, the resistance gets higher.

**Fixed Tethered Swimming:** is a non-stretchy cord attached to your waist and to an anchor point in the pool.

**Resistance Lines:** this is a cord stretching the length of the pool with a resistance device that connects to the line and the swimmer.

**Swim Fins:** while they make swimming easier for many, they also create resistance for the kick.

**Endless Pool:** a compact swimming pool with a current generator. It creates resistance by generating a continuous flow of water against which the swimmer must exert effort to avoid being pushed backwards.

**Power Towers and various pulley/bucket systems:** mechanical devices at the end of the pool designed to create resistance. Very effective, but rarely available to swimmers.

## Equipment Free Ways to Create Drag or Resistance

**Stationary Starts:** float in a stationary position and then start swimming, stop and repeat. An alternative to stopping is to somersault and swim back the opposite way.

**Vertical kicking:** swimmers stay upright in the water and kick vigorously.

**Vertical Sculling:** maintain a stationary vertical position in the water and scull with your hands and forearms without kicking.

**Underwater Strokes:** swim the different strokes submerged under the water. The resistance occurs in the recovery part of the stroke which usually occurs out of the water.

**Stationary Kicking:** kicking, holding onto the side of the pool with both hands. An advanced version of this is to push backwards from the wall and then kick back to the wall, then repeat. One minute of this drill equals many minutes of doing laps with a kickboard.

**Head Out of the Water Swimming:** the legs sink, causing more body drag.

**Foot Drag:** a surprising amount of drag can be created by pointing the toes towards the bottom of the pool rather than to the back of the pool.

## Things to be aware of:

Resistance/drag training can increase the risk of overuse injuries if not used properly or if the resistance is too high. Start with low resistance and gradually increase it as the swimmer becomes more proficient.

Resistance/drag training should not make up more than 50% of a swim session.

Swimmers may experience increased fatigue during the workout session due to the extra load on the body.

There can be a reduced focus on technique if there is more emphasis on power over technique.

It is an effective training aid for most adults from weak swimmers right through to elite swimmers. Resistance training is generally not considered suitable for young children ( under 8 ). Children should have mastered basic swimming techniques, have developed sufficient strength, coordination, and muscle control before using resistance.

Resistance/drag training should be practiced in a safe environment under the watchful eye of an experienced coach or lifeguard.

## Final thought

Drag training in the pool is where swimmers go from gracefully gliding through the water to looking like they're in an epic struggle with the invisible pool creature *Hydro-Drag* who is determined to sink them.

Reference:

1. <https://sportsmedicine-open.springeropen.com/articles/10.1186/s40798-022-00410-5>

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