

BASIC SWIM MECHANICS

This document, which has been adapted from USA Swimming rules, summarizes the basic swim mechanics of each stroke, the individual medley and relays (medley and free relays). New officials should study this document carefully. Along with the swim clinic, this narrative should provide the foundation of knowledge needed for the beginning official in the NKSL.

Butterfly

1. Start

a) Rules

After the start and after each turn, the swimmer's shoulders must be at or past vertical toward the breast. The swimmer is permitted one or more leg kicks, but only one arm pull underwater, which must bring him to the surface. It is permissible for a swimmer to be completely submerged for a distance of not more than 15 meters (16.4 yards) after the start and after each turn. By that point, the head must have broken the surface. In order to make the 15 meter mark call, an official must be assigned to that position, otherwise no call.

b) Swim Mechanics

Some swimmers kick out on the start while on their side. This position is legal as long as the swimmer remains past vertical toward the breast. When the hands begin the first pull it must bring the swimmer to the surface.

2. Swim

a) Rules

Stroke - From the beginning of the first arm pull, the body shall be kept on the breast. Both arms must be brought forward over the water and pulled back simultaneously. {NKSL Interpretation: *As long as we see some forearm skin slightly above the water, we will accept that as an over-the-water recovery.*}

Kick - All up and down movements of the legs and feet must be simultaneous.

The position of the legs or the feet need not be on the same level, but they shall not alternate in relation to each other. One foot may be higher than the other as long as the feet do not alternate position in a stroke cycle. A scissors or breaststroke kicking movement is not permitted.

b) Swim Mechanics

- 1) The stroke requires over the water recovery of the arms {see NKSL Interpretation above}.
- 2) The swimmer shall use a butterfly kick with no scissors or breaststroke kicking movements. {NKSL Interpretation: *Rounding motion of the feet is allowed as long as the toes are pointed backward or inward.*}

3. Turn/Finish

a) Rules

Turns - At each turn the body shall be on the breast. The touch shall be made with both hands simultaneously at, above, or below the water surface. *Effective 2014, the rule requires the hands to be separated at the touch. Separated means that the hands cannot be stacked one on top of the other. It is not necessary to see between the hands.* Once a touch has been made, the swimmer may turn in any manner desired. The shoulders must be at or past the vertical toward the breast when the swimmer's feet leave the wall.

Finish - At the finish, the body shall be on the breast and the touch shall be made with both hands simultaneously at, above, or below the water surface.

Backstroke

1. Start

a) Rules

The swimmers shall line up in the water facing the starting end, with both hands placed on the gutter or on the starting grips. Prior to the command “take your mark” and until the feet leave the wall at the starting signal, the swimmer’s feet, including the toes, shall not be curled in the gutter. Standing in or on the gutter or curling the toes over the lip of the gutter is not permitted at any time before or immediately after the start. The position of the hands and the toes before the start are the responsibility of the Starter.

b) Swim Mechanics

Some swimmers will kick out from the start while on their side. This is legal but the swimmer must remain past vertical toward the back during this portion of the race.

2. Swim

a) Rules

The swimmer shall push off on his back and continue swimming on the back throughout the race. Some part of the swimmer must break the surface of the water throughout the race, except it shall be permissible for the swimmer to be completely submerged during the turn and for a distance of not more than 15 meters (16.4 yards) after the start and each turn. By that point, the head must have broken the surface of the water. In order to make the 15 meter mark call, an official must be assigned to that position, otherwise no call should be made.

b) Swim Mechanics

Backstroke is essentially “freestyle on the back.” The judge shall observe that the swimmer remains on the back. There is no definition of a kick or arm pull. *{NKSL Interpretation: As long as the swimmer is on his or her back, it is legal.}*

3. Turn/Finish

a) Rules

Turns - At the turn, the swimmer has two options:

- 1) The swimmer touches the wall while on their back. They may turn in any manner they want as long as they are past vertical towards the back when their feet leave the wall.
- 2) The swimmer may turn the shoulders past the vertical toward the breast after which a single arm pull or a simultaneous double arm pull may be used to execute the turn. *{NKSL Adapted: After the initiation of the turning action, no additional arm pulls may be started after taking the one single arm pull or simultaneous double arm pull; however, kicking and gliding actions are permitted into the wall if the swimmer needs to make up the distance.}* The swimmer must have returned to a position on the back upon the feet leaving the wall.

Finish - Upon the finish of the race, the swimmer must touch the wall while on the back. The body may be submerged at the touch but not before.

Breaststroke

1. Start

a) Rules

From the beginning of the first arm stroke after the start and after each turn the body shall be kept on the breast. The arms shall move simultaneously and in the same horizontal plane without any alternating movement. The hands shall be pushed forward together from the breast, on, under, or over the water. At the start (and at each turn) the swimmer may take one arm stroke completely back to the legs and they may (but not required to) take one butterfly kick, but if they elect to do a butterfly kick it must be followed by one breaststroke kick while submerged. The head must break the surface of the water before the hands turn inward at the widest part of the second stroke. The swimmer may also elect to immediately begin swimming at the start (and at each turn).

2. Swim

a) Rules

Stroke - The arms shall move simultaneously and in the same horizontal plane without any alternating movement. The hands shall be pushed forward together from the breast. The elbows shall be under the water except for the final stroke before the turn, during the turn, and the last stroke at the finish. The hands shall not be brought beyond the hipline, except during the first stroke cycle after the start and each turn. Some part of the swimmer's head shall break the surface of the water at least once during each complete cycle of one arm stroke and one leg kick, in that order. Breaststroke is a cycle stroke; one pull must be followed by one kick in that order.

Kick – The toes shall be pointed outward during the propulsive part of the kick. The legs shall move simultaneously and in the same horizontal plan. A downward butterfly kick (except after the start and at each turn), an alternating kick or scissors kick is not permitted. It is important to remember that some swimmers will have an undulating motion as they race through the water. This may result in their feet breaking the surface of the water. *{This is NOT, however, a DQ unless accompanied by a distinctive downward butterfly kick.}*

3. Turns/Finish

a) Rules

Turns - At the turn, the touch shall be made with both hands simultaneously at, above, or below the water surface. The head may be submerged after the last arm pull prior to the touch, provided it breaks the surface of the water at some point during any part of the last cycle preceding the touch. Once a touch has been made, the swimmer may turn in any manner desired. The shoulders must be at or past the vertical toward the breast when the swimmer's feet leave the wall and the form prescribed above must be attained from the beginning of the first arm stroke.

Finish - At the finish, the body shall be on the breast and the touch shall be made with both hands simultaneously at, above, or below the water surface. The head may be submerged after the last arm pull prior to the touch, provided it breaks the surface of the water at some point during any part of the last complete or incomplete stroke cycle preceding the touch.

“Hand-over-hand” touch is no longer legal (touch rule is the same as for butterfly). *{Be very aware of the “swipe” touch where one hand clearly touches the wall but the second hand quickly (but simultaneously) just barely swipes at the wall and begins the turning action. Only call what you see, not what you don't see.}*

Freestyle

1. Start

a) Rules

In an event designated freestyle the swimmer may swim any style, except that in a medley relay or an individual medley event, freestyle means any style other than butterfly, breaststroke or backstroke. Some part of the swimmer must break the surface of the water throughout the race, except it shall be permissible for the swimmer to be completely submerged during the turn and for a distance of not more than 15 meters (16.4 yards) after the start and each turn. By that point the head must have broken the surface.

b) Swim Mechanics

Any stroke or combination of strokes (*including "dog paddle"*) may be used.

Freestyle is freestyle; i.e., anything goes, including changing strokes in the middle of the race. A swimmer can stand on the bottom of the pool or rest on the lane lines, however, they may not propel off the bottom or pull forward on the lane lines *{Note: Freestyle is the only stroke where it is legal to rest on the lane line.}*

2. Swim

a) Rules

Stroke and Kick - In an event designated freestyle the swimmer may swim any style, except that in a medley relay or an individual medley event, freestyle means any style other than butterfly, breaststroke or backstroke. Some part of the swimmer must break the surface of the water throughout the race, except it shall be permissible for the swimmer to be completely submerged during the turn and for a distance of not more than 15 meters (16.4 yards) after the start and each turn. By that point the head must have broken the surface.

3. Turn/Finish

a) Rules

Turns - Upon completion of each length the swimmer must touch the wall in any manner.

Finish - The swimmer must touch the wall in any manner.

Individual Medley

1. Start

a) Rules

The start of the Individual Medley is the same as the butterfly start.

2. Swim

a) Rules

Stroke - The swimmer shall swim the prescribed distance in the following order: the first one-fourth, butterfly; the second one-fourth, backstroke; the third one-fourth, breaststroke; and the last one-fourth freestyle. The stroke for each one-fourth of the designated distance shall follow the prescribed rules for that stroke.

3. Turn/Finish

a) Rules

Turns - Changing from one stroke to another shall conform to the finish rules for the stroke just completed, and shall be as follows:

Butterfly to backstroke- The touch shall be made with both hands simultaneously at, above, or below the water surface (see Butterfly finish rules).

Backstroke to breaststroke- The swimmer must touch the wall while on the back (see Backstroke finish rules).

Breaststroke to freestyle - The touch shall be made with both hands simultaneously at, above, or below the water surface (see Breaststroke finish rules).

Finish – The swimmer shall have finished the race when any part of his/her person touches the wall after the prescribed distance.

Medley Relay

1. Start

a) Rules

The rules governing the start of the medley relay are the same as the backstroke start.

b) Swim Mechanics

The swim mechanics for the start are the same as for the backstroke.

2. Swim/Turn/Finish

a) Rules

Four swimmers on each team, each to swim one-fourth of the prescribed distance in the following order: first backstroke; second, breaststroke; third, butterfly; fourth, freestyle. Rules pertaining to each stroke used shall govern where applicable: At the end of each leg, the finish rule for each stroke applies in each case. As in the IM, freestyle is defined as any stroke other than the previous three.

3. Relay take-offs

a) Rules

The key to relay take-offs is to watch the feet of the swimmer on the blocks. When the feet of the swimmer on the blocks leaves the starting block, look down to the pool level to see if the incoming swimmer has touched the wall yet.

Most relay take-offs are judged with “double confirmation” from two (2) different vantage points. *{NKSL adapted: If, however, there are not enough officials for dual confirmation (particularly true in the Medley Relay where you need stroke/turn judges as well as relay take-off judges), then a single relay take-off judge (the starter can do this) may be used.}*

Freestyle Relay

1: Start

a) Rules

The rules governing the start of the freestyle relay are the same as the freestyle start.

b) Swim Mechanics

The swim mechanics for the freestyle relay are the same as outlined for freestyle above.

2. Swim/Turn/Finish

a) Rules

There are no rules regarding the stroke and kick except a touch is required at each turn and the finish (the same as for the individual freestyle). Each relay swimmer shall swim a fourth of the distance and no swimmer may swim more than one leg of the race.

3. Relay take-offs

The key to relay take-offs is to watch the feet of the swimmer on the blocks. When the feet of the swimmer on the blocks leaves the starting block, look down to the pool level to see if the incoming swimmer has touched the wall yet.

Most relay take-offs are judged with “double confirmation” from two (2) different vantage points. *{NKSL adapted: If, however, there are not enough officials for dual confirmation, then a single relay take-off judge (the starter can do this) may be used.}*