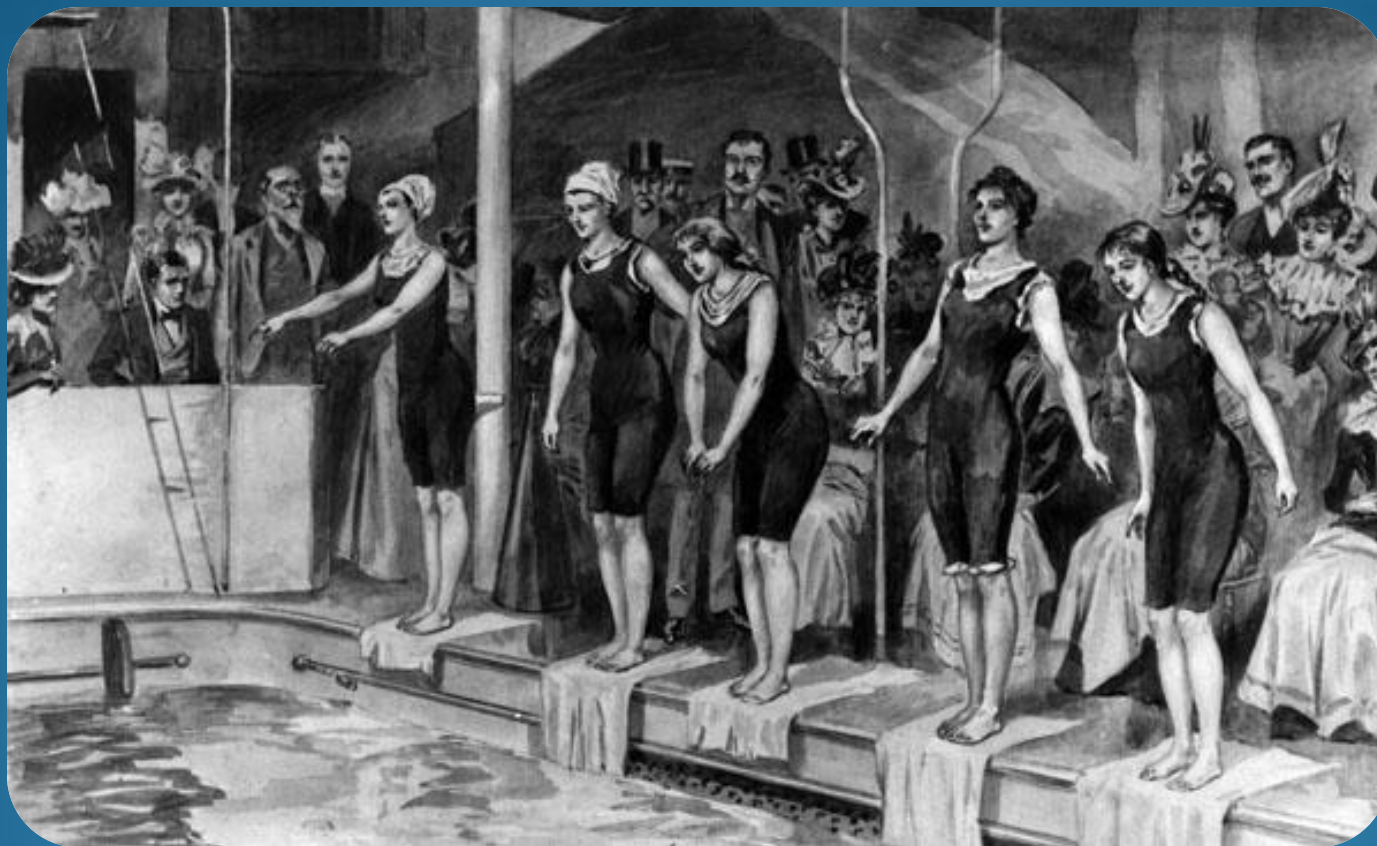


Evolution of Swimming Strokes according to the Rules



Swimming Ancients.Origins

Origins

Babylonian bas-reliefs and Assyrian wall drawings point to very early swimming skills among humans. The most ancient and famous of drawings depicting men swimming are to be found in the Kebir desert. They are estimated to be about 6,000 years old. The Nagoda bas-relief also has paintings of swimmers that date back some 5,000 years.



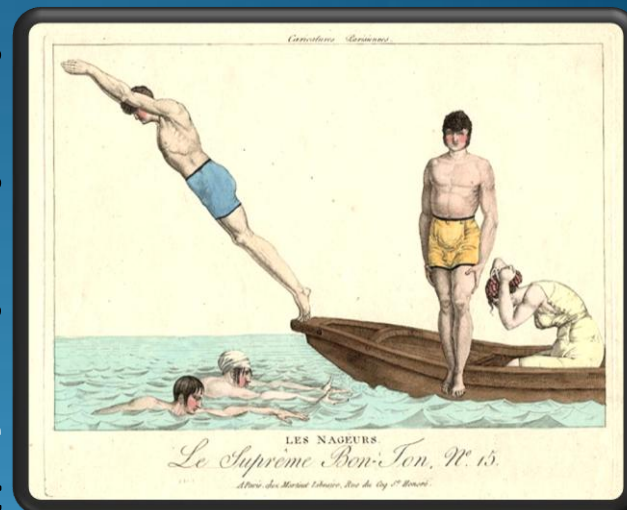
"Swimming drawing 6.000 years old."



Swimming strokes.Origins

Early swimming strokes

The archive of "The Times" of England contains reports of an 1844 race between Englishman Harold Kenworthy and two Native Americans named Flying Gull and Tobacco. The visitors from North America swam in a way that the anonymous "Times" writer described as "totally un-European," according to FINA.org. The stroke seems to have resembled modern freestyle. The Englishman lost the race swimming the breaststroke. In the 1840s, the sidestroke surpassed the breaststroke as the most popular racing stroke in England, according to FINA.org. In 1873, John Trugeon combined a freestyle-like arm motion with the breaststroke kick. This stroke became popular for short races.



"The stroke seems to have modern freestyle."

Swimming strokes.Origins

1896-1900

The Olympic Games were held in 1896 in Athens, a male-only competition.

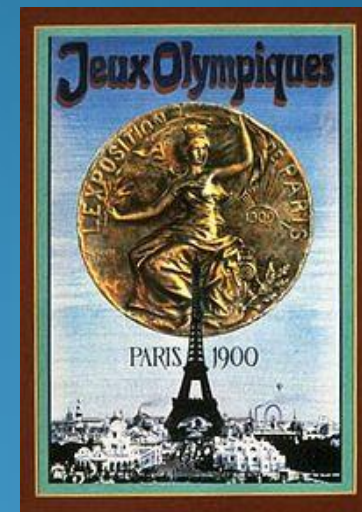
Six events were planned for the swimming competition but only four events were actually contested:

100m, 500m and 1200m freestyle and 100m for sailors, starting from a rowing boat.

The second Olympic games in Paris in 1900 featured 200m, 1000m and 4000m freestyle, 200m backstroke and 200m team race. There were two additional unusual swimming event: obstacle swimming course (River Seine) and an underwater swimming race.



"Athens 1896 "



"Paris 1900"

Swimming strokes.Origins

1904

The Olympic Games in 1904 in St.Louis included races over 50 yards(46m), 100 yards, 220 yards(200m), 440 yards, 880 yards (800m) and one mile (1,6Km)freestyle: 100 yards backstroke, 440 yards breaststroke and the 4x50 yards freestyle relay.

These Games differentiated between breaststroke and freestyle, so there are no two defines styles (breaststroke and backstroke and freestyle were more swimmers swam Trudgen.

A new flutter kick instead breaststroke or scissor became known Australian crawl, technically front crawl.

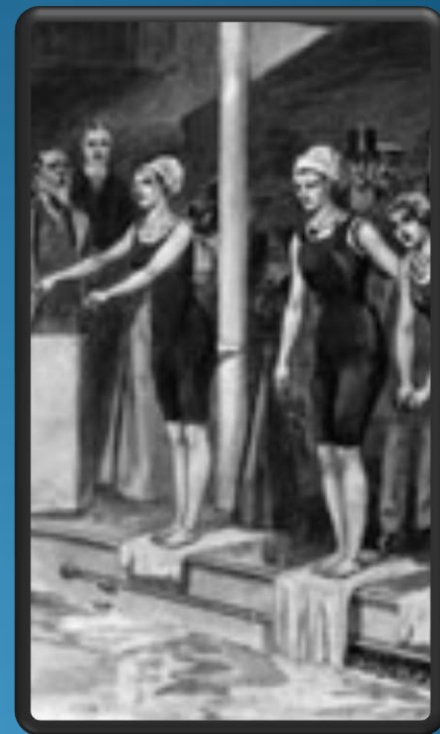


*"100 yards
St Luis 1904 "*

FINA Ancients. Origins

Origins

Swimming has come a long way in 100 years of official FINA history. When the founding fathers of the federation gathered in London, 1908, there was no global standardisation of rules, structures, distances and general conditions under which race competitions could be held and records set. Swimming distances were often “guesstimates”, while most events took place in open water in which no two venues offered the same conditions, some racing taking place against the tide, others with the tide, some in choppy sea, others in millpond conditions....



“FINA was founded in 1908”

Swimming strokes . Origins

1908-1956

For the first 65 years of FINA history, the Olympic Games was the only global competition open to swimmers.

London 1908 was the last male-only Games.

Mens programme from 1908 to 1956 were:
100m, 400m 1.500m freestyle, 100m backstroke, 200m breaststroke and 4x200m freestyle

Women programme were only 100m, 400m and 4x100m freestyle until 1924, when the 100m backstroke and 200m breaststroke were added to their schedule.



"London 1908"

Swimming strokes . Origins

1908

Six swimming events were contested in the Olympic Games in 1908 in London.

The men's competitions were 100m, 400m and 1500m freestyle; 100m backstroke, 200m breaststroke and 4x200m freestyle relay.

This was the first Olympic Games in which a **100m pool** had been specially constructed inside the main stadium's track and field oval.



*"200m breaststroke
final
London 1908"*

Swimming strokes . Origins



"London 1908"

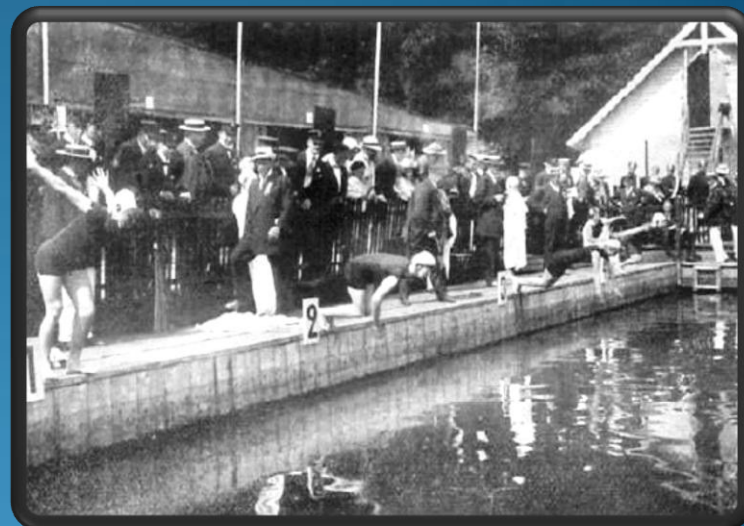
Swimming strokes . Origins

1912

For the first time women were allowed to swim competing in freestyle races in the Olympic Games in 1912 in Stockholm. Nine swimming events were held in the 100m course built in Stockholm harbour.

The men's competitions were 100m, 400m and 1500m freestyle; 100m backstroke, 200m and 400m breaststroke and 4x200m freestyle relay.

The women's competitions were 100m freestyle and 4x100m freestyle relay.



*"Women 4x100 m
Stokolm 1912 "*

Swimming strokes . Origins



"Amberes 1920"

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes . Origins

1924

Eleven swimming events, six for men and five for women, were held in the Olympic Games in 1924 in Paris. **Were the first to use standard 50m pool with marked lines and lane ropes.**

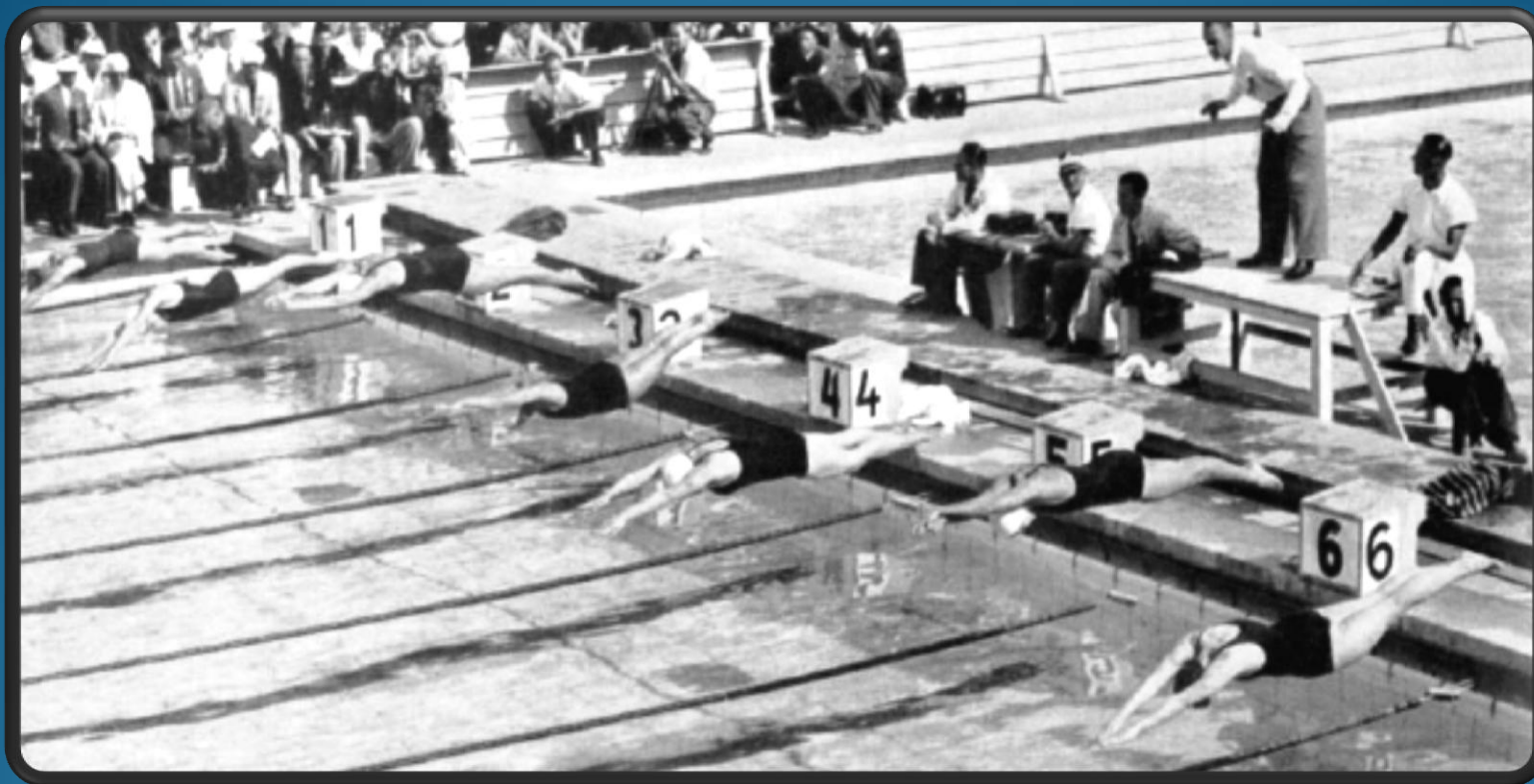
The men's competitions were 100m, 400m and 1500m freestyle; 100m backstroke, 200m breaststroke and 4x200m freestyle relay.

The women's competitions were 100m , 400m freestyle; 100m backstroke, 200m breaststroke and 4x100m freestyle relay.



*“ First 50m pool with marked lines and lane ropes
Paris 1924 ”*

Swimming strokes . Origins



"Berlin 1936"

Swimming strokes . Origins

1936

Therefore, the butterfly arms with a breaststroke kick were used by a few swimmers in the 1936 Summer Olympics in Berlin for the breaststroke competitions.

In 1938, almost every breaststroke swimmer was using this butterfly style, yet this stroke was considered a variant of the breaststroke until 1952, when it was accepted as a separate style with a set of rules.



*" 100 breaststroke
Berlin 1936"*

Swimming strokes . Origins

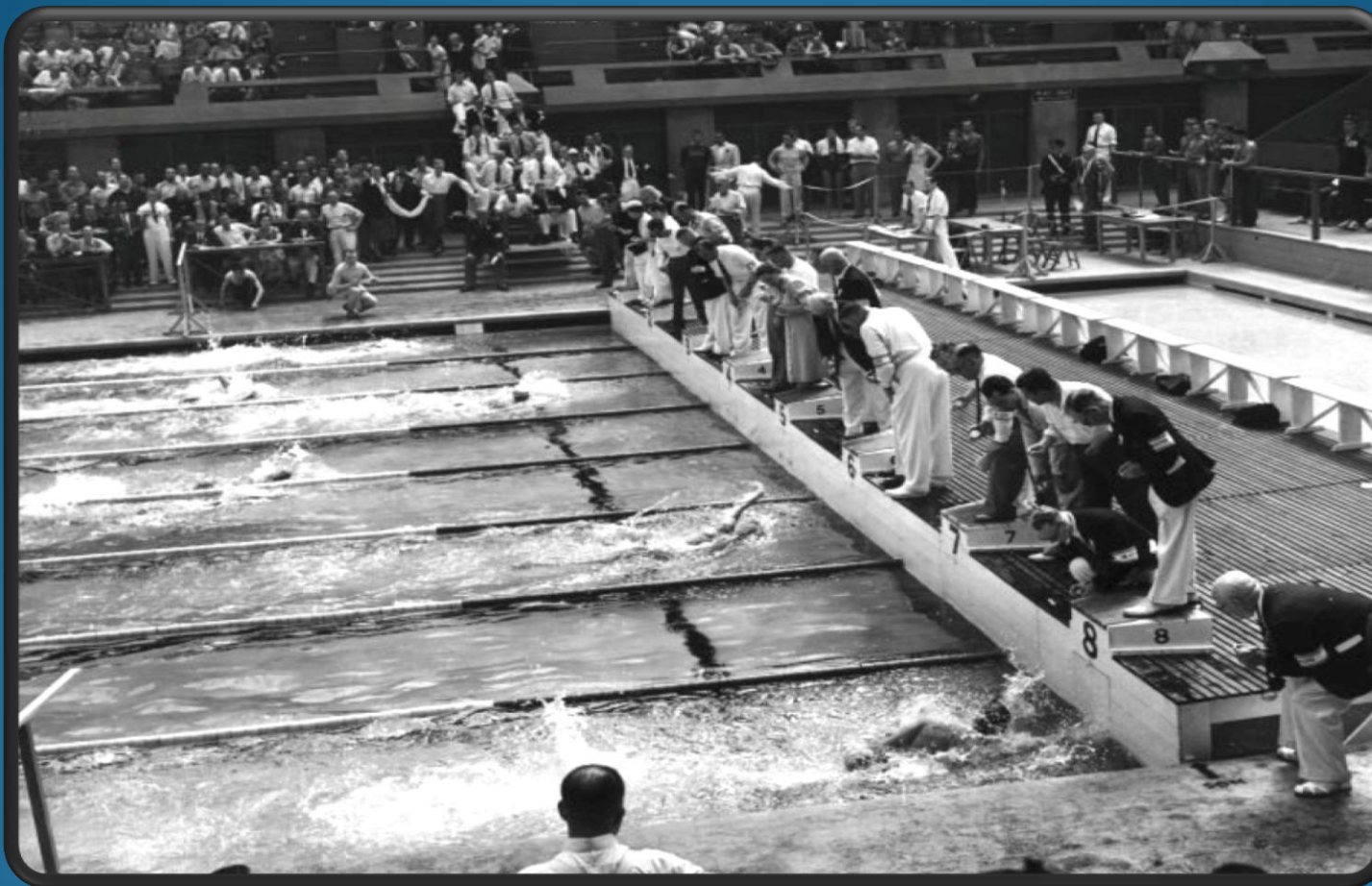
1936-1945

Around that time another modification to the **backstroke** became popular. Previously, the arms were held straight during the underwater push phase, for example by the top backstroke swimmer. **Adolph Kiefer**. However, Australian swimmers developed a technique where the arms are bent under water, increasing the horizontal push and the resulting speed and reducing the wasted force upward and sideways. This style is now generally used worldwide. In 1935 **Topless swimsuits for men** were worn for the first time during an official competition.



*“ 100 backstroke
London 1948”*

Swimming strokes . Origins



"London 1948"

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes . Origins

1952

Another modification was developed for breaststroke. In breaststroke, breaking the water surface increases the friction, reducing the speed of the swimmer. Therefore, swimming underwater increases the speed. This led to a controversy at the 1956 Summer Olympics in Melbourne, and six swimmers were disqualified, as they repeatedly swam long distances underwater.



*“ 200 breaststroke
Helsinki 1952”*

Swimming strokes . Origins

1956

Thirteen swimming events, seven for men and six for women, were held in the Olympic Games in 1956 in Melbourne.

The men's competitions were 100m, 400m and 1500m freestyle; 100m backstroke, 200m breaststroke, **200m butterfly** and 4x200m freestyle relay.

The women's competitions were 100m , 400m freestyle; 100m backstroke, 200m breaststroke, **100m butterfly** and 4x100m freestyle relay.



*" 200 butterfly
Melbourne 1936"*

Swimming strokes . Origins

1956

However, one Japanese swimmer, Masaru Furukawa, circumvented the rule by not surfacing at all after the start, but swimming as much of the lane under water as possible before breaking the surface. He swam all but 5m under water for the first three 50m laps, and also swam half under water for the last lap, winning the gold medal. The adoption of this technique led to many swimmers suffering from oxygen starvation or even some swimmers passing out during the race due to a lack of air, and a new rule was introduced by the FINA, limiting the distance that can be swum under water after the start and every turn, and requiring the head to break the surface every cycle.



*" 200 breaststroke
Melbourne 1956"*

Swimming strokes . Origins

1956

The 1956 games in Melbourne also saw the introduction of the **body roll**, a sort of tumble turn to faster change directions at the end of the lane.



*“ 100 Freestyle
Melbourne 1956”*

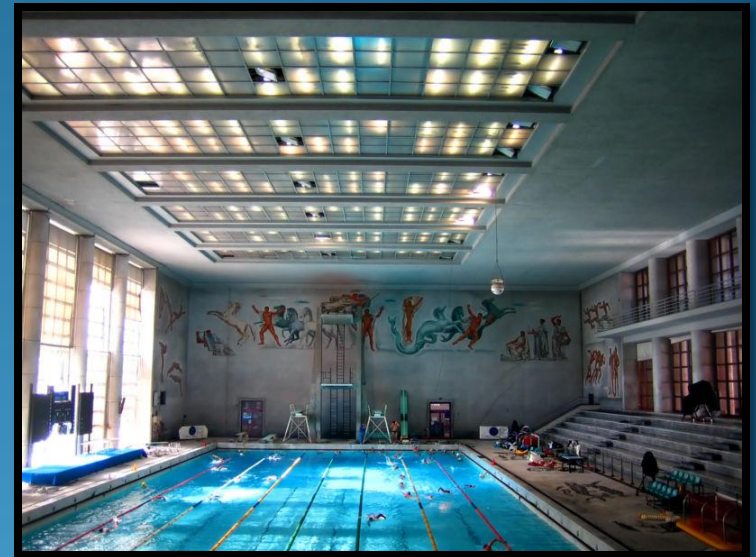
Swimming strokes . Origins

1960

Fifteen swimming events were contested, eight for men and seven for women, were held in the Olympic Games in 1960 in Rome.

The men's competitions were 100m, 400m and 1500m freestyle; 100m backstroke, 200m breaststroke, 200m butterfly, **4x100m ind. medley** and 4x200m freestyle relay.

The women's competitions were 100m , 400m freestyle; 100m backstroke, 200m breaststroke, 100m butterfly, **4x100m ind. medley** and 4x100m freestyle relay.



"Swimming pool Rome 1960"

Swimming strokes . Origins

1964

Eighteen swimming events were contested, ten for men and eight for women, were held in the Olympic Games in 1964 in Tokyo.

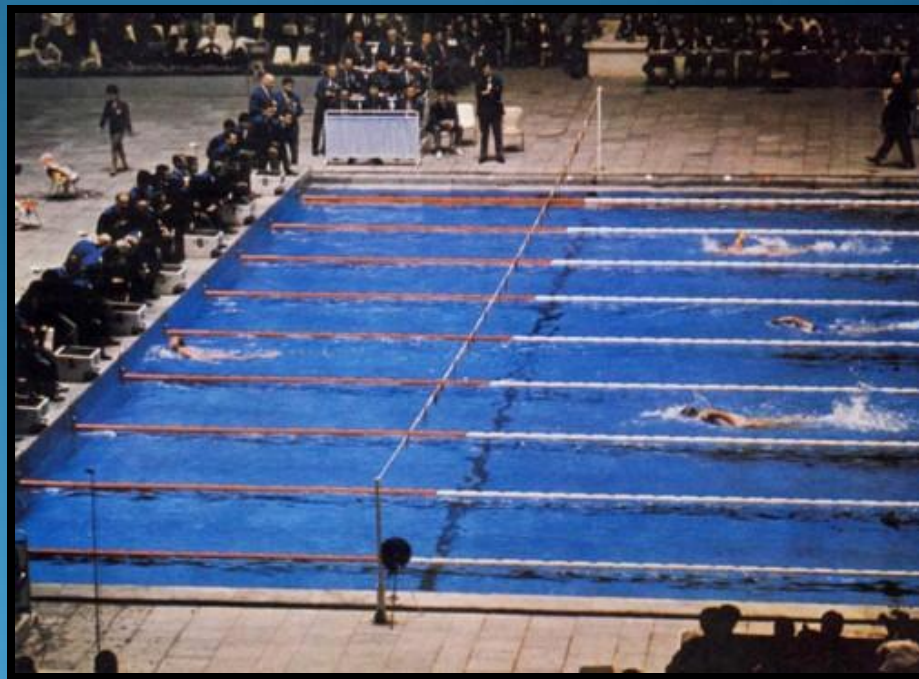
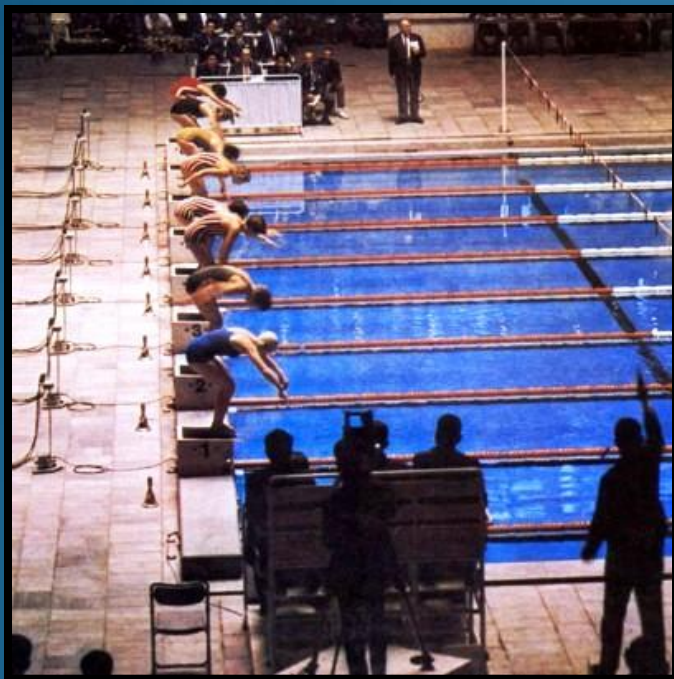
The men's competitions were 100m, 400m and 1500m freestyle; 200m backstroke, 200m breaststroke, 200m butterfly, 400m ind. Medley, 4x100m ind. Medley, 4x100m freestyle and 4x200m freestyle relay.

The women's competitions were 100m and 400m freestyle; 100m backstroke, 200m breaststroke, 100m butterfly, 400m ind.medley, 4x100m ind. medley and 4x100m freestyle relay.



"Swimming pool Tokyo 1964"

Swimming strokes . Origins



"Tokio 1964"

Swimming strokes . Origins

1972

In 1972, another famous swimmer, Mark Spitz, was at the height of his career. During the 1972 Summer Olympics in Munich, Germany, he won seven gold medals, more than any other Olympic athlete has ever won. Shortly thereafter in 1973, the first swimming world cup was held in Belgrade, Yugoslavia by the FINA.

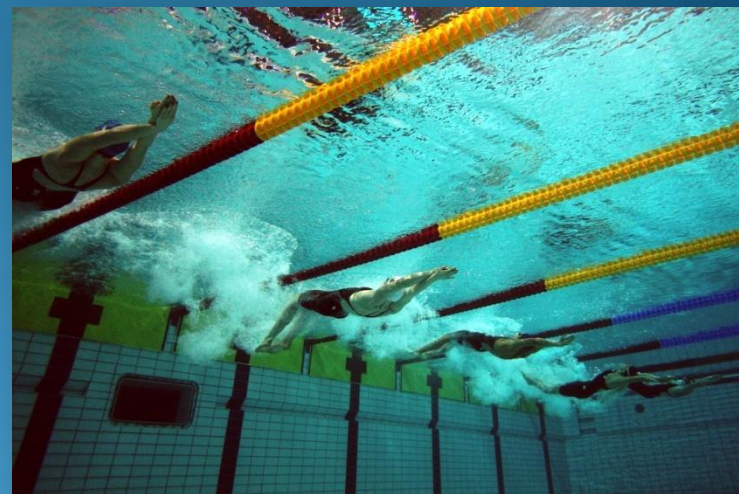


"Swimming pool Munich 1972"

Swimming strokes . Origins

1988 .Underwater backstroke

Breaking the water surface reduces the speed in swimming; this is true not only for breaststroke, but also for backstroke. The swimmers Daichi Suzuki (Japan) and David Berkoff (America) used this for the 100m backstroke at the 1988 Summer Olympics in Seoul. Berkoff swam 33m of the first lane completely underwater using only a dolphin kick, surfacing just before the turn, far ahead of his competition. The rules were quickly changed in the same year by the FINA to ensure the health and safety of the swimmers, limiting the underwater phase after the start to 10 meters, which was expanded to 15m in 1991.



“underwater dolphin kicking”

Swimming strokes. Backstroke



Underwater backstroke. Seoul 1988



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Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes. Freestyle



"Last 20 years period"

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes. Freestyle

1991-1994	1994-2000	2000-2005	2005-2009	2009-2013
SW 5.1 Freestyle means that in an event so designated the swimmer may swim any style, except that in individual medley or medley relay events, freestyle means any style other than backstroke, breaststroke or butterfly.	SW 5.1 Freestyle means that in an event so designated the swimmer may swim any style, except that in individual medley or medley relay events, freestyle means any style other than backstroke, breaststroke or butterfly.	SW 5.1 Freestyle means that in an event so designated the swimmer may swim any style, except that in individual medley or medley relay events, freestyle means any style other than backstroke, breaststroke or butterfly.	SW 5.1 Freestyle means that in an event so designated the swimmer may swim any style, except that in individual medley or medley relay events, freestyle means any style other than backstroke, breaststroke or butterfly.	SW 5.1 Freestyle means that in an event so designated the swimmer may swim any style, except that in individual medley or medley relay events, freestyle means any style other than backstroke, breaststroke or butterfly.
SW 5.2 Some part of the swimmer must touch the wall upon completion of each length and at the finish.	SW 5.2 Some part of the swimmer must touch the wall upon completion of each length and at the finish.	SW 5.2 Some part of the swimmer must touch the wall upon completion of each length and at the finish.	SW 5.2 Some part of the swimmer must touch the wall upon completion of each length and at the finish.	SW 5.2 Some part of the swimmer must touch the wall upon completion of each length and at the finish.
	SW 5.3* <u>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 after the start and each turn. By that point, the head must have broken the surface.*</u>	SW 5.3 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 after the start and each turn. By that point, the head must have broken the surface.	SW 5.3 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 after the start and each turn. By that point, the head must have broken the surface.	SW 5.3 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 after the start and each turn. By that point, the head must have broken the surface.
	*Rule changed in 1998			

Swimming strokes . Freestyle

**Relevant changing rules in this period
(1.998)**

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 after the start and each turn. By that point, the head must have broken the surface.



"15m submerged"

Swimming strokes . Backstroke



"Last 20 years period"

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes. Backstroke

1991-1994	1994-2000	2000-2005	2005-2009	2009-2013
SW 6.1 The swimmers shall line up in the water facing the starting end, with both hands holding the starting grips. The feet , including the toes, shall be under the surface of the water. Standing in or on the gutter or bending the toes over the lip of the gutter is prohibited.	SW 6.1 <u>Prior to the starting signal</u> *The swimmers shall line up in the water facing the starting end, with both hands holding the starting grips. The feet , including the toes, shall be under the surface of the water. Standing in or on the gutter or bending the toes over the lip of the gutter is prohibited.	SW 6.1 Prior the starting signal, the swimmers shall line up in the water facing the starting end, with both hands holding the starting grips. The feet , including the toes, shall be under the surface of the water. Standing in or on the gutter or bending the toes over the lip of the gutter is prohibited.	SW 6.1 Prior to the starting signal, the swimmers shall line up in the water facing the starting end, with both hands holding the starting grips. The feet , including the toes, shall be under the surface of the water. Standing in or on the gutter or bending the toes over the lip of the gutter is prohibited.	SW 6.1 Prior to the starting signal, the swimmers shall line up in the water facing the starting end, with both hands holding the starting grips. Standing in or on the gutter or bending the toes over the lip of the gutter is prohibited.
	*Rule changed in 1998			

Swimming strokes. Backstroke

Relevant changing rules in this period
(1998)

Prior starting signal...

(2005)

~~The feet, including the toes, shall
be under the surface of the water.~~



*“Feet over the surface of
the water”*

Swimming strokes. Backstroke

1991-1994	1994-2000	2000-2005	2005-2009	2009-2013
<p>SW 6.2 At the signal for starting and after turning the swimmer shall push off and swim upon his back throughout the race. He must be on his back at all times except when executing a turn. The normal position on the back can include a roll movement of the body up to, but not including 90 degrees from horizontal. The position of the head is not relevant.</p> <p>Bureau Interpretation. “Except when executing a turn” means any deviation from the normal backstroke position in order to execute a continuous turning action.</p>	<p>SW 6.2 At the signal for starting and after turning the swimmer shall push off and swim upon his back throughout the race except when executing a turn as set forth in SW.6.4. He must be on his back at all times except when executing a turn. The normal position on the back can include a roll movement of the body up to, but not including 90 degrees from horizontal. The position of the head is not relevant.</p> <p>Bureau Interpretation. “Except when executing a turn” means any deviation from the normal backstroke position in order to execute a continuous turning action.</p>	<p>SW 6.2 At the signal for starting and after turning the swimmer shall push off and swim upon his back throughout the race except when executing a turn as set forth in SW.6.4. The normal position on the back can include a roll movement of the body up to, but not including 90 degrees from horizontal. The position of the head is not relevant.</p>	<p>SW 6.2 At the signal for starting and after turning the swimmer shall push off and swim upon his back throughout the race except when executing a turn as set forth in SW 6.4. The normal position on the back can include a roll movement of the body up to, but not including 90 degrees from horizontal. The position of the head is not relevant.</p>	<p>SW 6.2 At the signal for starting and after turning the swimmer shall push off and swim upon his back throughout the race except when executing a turn as set forth in SW 6.4. The normal position on the back can include a roll movement of the body up to, but not including 90 degrees from horizontal. The position of the head is not relevant.</p>

Swimming strokes . Backstroke

Relevant changing rules in this period
(1994)

As set forth in sw.6.4

~~He must be on his back at all time
except when executing a turn.~~

Bureau Interpretation.

~~Except when executing a turn means
“any deviation from the normal
backstroke position in order to execute
a continuous turning action.”~~



*“On his back at all time except
when executing a turn”*

Swimming strokes. Backstroke

1991-1994	1994-2000	2000-2005	2005-2009	2009-2013
<p>SW 6.3* 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 after the start and each turn. By that point the head must have broken the surface.</p>	<p>SW 6.3 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 metres after the start and each turn. By that point the head must have broken the surface.</p>	<p>SW 6.3 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, at the finish and for a distance of not more than 15 metres after the start and each turn. By that point the head must have broken the surface.</p>	<p>SW 6.3 Some part of the swimmer must break the surface of the water throughout the race. It is permissible for the swimmer to be completely submerged during the turn, at the finish and for a distance of not more than 15 metres after the start and each turn. By that point the head must have broken the surface.</p>	<p>SW 6.3 Some part of the swimmer must break the surface of the water throughout the race. It is permissible for the swimmer to be completely submerged during the turn, at the finish and for a distance of not more than after the start and each turn. By that point the head must have broken the surface.</p>
<p>*Rule changed in 1991</p>				

Swimming strokes. Backstroke

Relevant changing rules in this period (1991)

...to be completely submerged during the turn and for a distance of not more than 15 meters after the start and each Turn.



“ to be completely submerged during the turn and for a distance of not more than 15mts”

Swimming strokes. Backstroke

1991-1994	1994-2000	2000-2005	2005-2009	2009-2013
<p>SW 6.4 During the turn the shoulders may be turned over the vertical to the breast but the swimmer must have returned to a position on the back upon leaving the wall. When executing the turn there must be a touch of the wall with some part of the swimmer's body.</p>	<p>SW 6.4 During the turn the shoulders may be turned over the vertical to the breast <u>after which a continuous single arm pull or a continuous simultaneous double arm pull may be used for initiate the turn. Once the body has left the position on the back, there will be not kick or arm pull that is independent of the continuous turning action.</u> The swimmer must have returned to a position on the back upon leaving the wall. When executing the turn there must be a touch of the wall with some part of the swimmer's body.</p>	<p>SW 6.4 During the turn the shoulders may be turned over the vertical to the breast after which a continuous single arm pull or a continuous simultaneous double arm pull may be used for initiate the turn. Once the body has left the position on the back, any kick or arm pull must be part of the continuous turning action. The swimmer must have returned to a position on the back upon leaving the wall. When executing the turn there must be a touch of the wall with some part of the swimmer's body.</p>	<p>SW 6.4 When executing the turn there must be a touch of the wall with some part of the swimmer's body. During the turn the shoulders may be turned over the vertical to the breast after which a continuous single arm pull or a continuous simultaneous double arm pull may be used to initiate the turn. Once the body has left the position on the back, any kick or arm pull must be part of the continuous turning action. The swimmer must have returned to the position on the back upon leaving the wall.</p>	<p>SW 6.4 When executing the turn there must be a touch of the wall with some part of the swimmer's body <u>in his/her respective lane.</u> During the turn the shoulders may be turned over the vertical to the breast after which a continuous single arm pull or a continuous simultaneous double arm pull may be used to initiate the turn. The swimmer must have returned to the position on the back upon leaving the wall.</p>
<p>SW 6.5 Upon the finish of the race the swimmer must touch the wall while on the back</p>	<p>SW 6.5 Upon the finish of the race the swimmer must touch the wall while on the back</p>	<p>SW 6.5 Upon the finish of the race the swimmer must touch the wall while on the back. The body may be submerged on the touch.</p>	<p>SW 6.5 Upon the finish of the race the swimmer must touch the wall while on the back. The body may be submerged on the touch.</p>	<p>SW 6.5 Upon the finish of the race the swimmer must touch the wall while on the back in his/her respective lane.</p>

Swimming strokes. Backstroke

Relevant rules in this period

(1994)

...after which a continuous single arm pull or a continuous simultaneous double arm pull may be used for initiate the turn. Once the body has left the position on the back, there will be not kick or arm pull that is independent of the continuous turning action

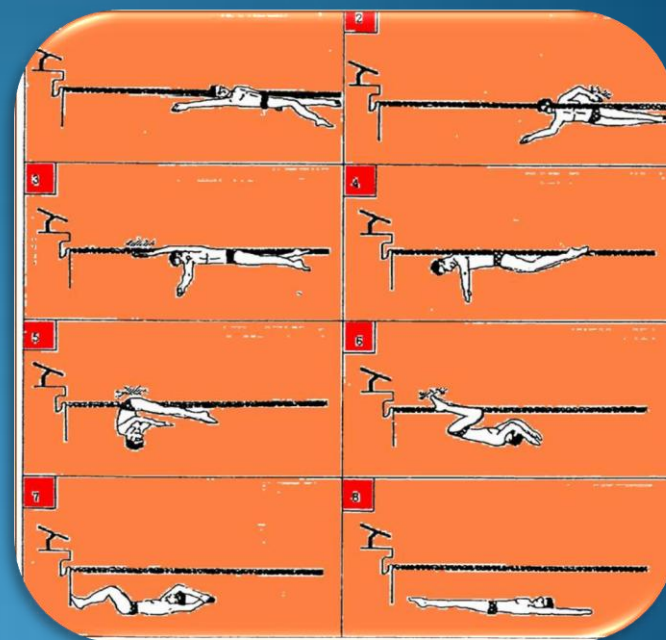
(2005)

~~Once the body has left the position, any or arm pull, must be part of the continuous turning action~~

~~The body may be submerged on the touch.~~

(2009)

....in his/her respective line.



“backstroke turn”



Peirsd-turn.mpeg

Swimming strokes. Breaststroke



"Last 20 years period"

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes . Breaststroke

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 7.1 From the beginning of the first arm stroke after the start and after each turn, the body shall be kept on the breast and both shoulders shall be in line with the normal water surface	SW 7.1 From the beginning of the first arm stroke after the start and after each turn, the body shall be kept on the breast and both shoulders shall be in line with the normal water surface *. Is not permitted to roll on to the back at any time*	SW 7.1 From the beginning of the first arm stroke after the start and after each turn, the body shall be kept on the breast. Is not permitted to roll on to the back at any time.	SW 7.1 From the beginning of the first arm stroke after the start and after each turn, the body shall be kept on the breast. It is not permitted to roll onto the back at any time. <u>Throughout the race the stroke cycle must be one arm stroke and one leg kick in that order.</u>	SW 7.1 After the start and after each turn, the swimmer may take one arm stroke completely back to the legs during which the swimmer may be submerged. <u>A single butterfly kick is permitted during the first arm stroke, followed by a breaststroke kick.</u>
SW 7.2 All movement of the arms shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.2 All movement of the arms shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.2 All movement of the arms shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.2 All movement of the arms shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.2 From the beginning of the first arm stroke after the start and after each turn, the body shall be on the breast. It is not permitted to roll onto the back at any time. From the start and throughout the race the stroke cycle must be one arm stroke and one leg kick in that order. All movements of the arms shall be simultaneous and on the same horizontal plane without alternating movement.
	*Rule changed in 1998			

Swimming strokes. Breaststroke

Relevant rules

(1994)

Is not permitted to roll on to the back at any time

(1998)

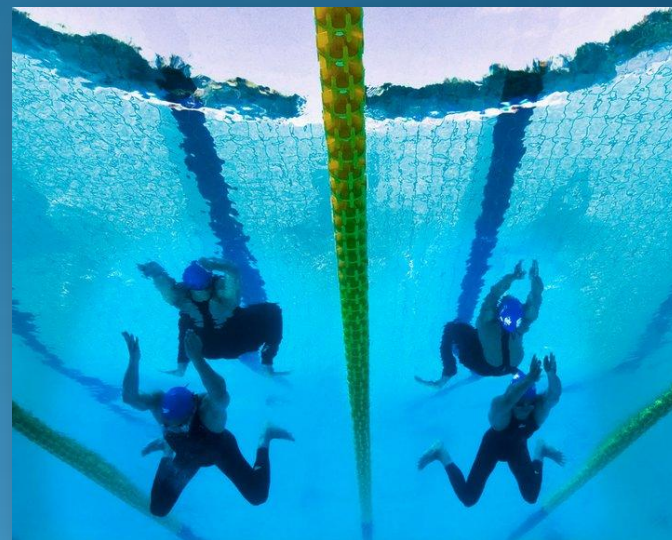
~~...and both shoulders shall be in line with the normal water surface.~~

(2005)

Throughout the race the stroke cycle must be one arm stroke and one leg kick in that order

(2009)

A single butterfly kick is permitted during the first arm stroke, followed by a breaststroke kick.



"Not permitted roll on to the back at any time"



kevinunderwater.wmv.AVI_mpeg2video.mpg

Swimming strokes. Breaststroke

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 7.3 The hands shall be pushed forward together from the breast on, under, or over the water and shall be brought back on or under the surface of the water. The hands shall not be brought back beyond the hip line, except during the first stroke after the start and each turn.	SW 7.3 The hands shall be pushed forward together from the breast on, under, or over the water. <u>The elbows shall be under the water except from the last stroke *at the finish*</u> . The hands shall be brought back on or under the surface of the water. The hands shall not be brought back beyond the hip line, except during the first stroke after the start and each turn.	SW 7.3 The hands shall be pushed forward together from the breast on, under, or over the water. The elbows shall be under the water except from the last stroke at the finish. The hands shall be brought back on or under the surface of the water. The hands shall not be brought back beyond the hip line, except during the first stroke after the start and each turn.	SW 7.3 The hands shall be pushed forward together from the breast on, under, or over the water. The elbows shall be under water except for the final stroke <u>before the turn, during the turn and for the final stroke at the finish.</u> The hands shall be brought back on or under the surface of the water. The hands shall not be brought back beyond the hip line, except during the first stroke after the start and each turn.	SW 7.3 The hands shall be pushed forward together from the breast on, under, or over the water. The elbows shall be under water except for the final stroke before the turn, during the turn and for the final stroke at the finish. The hands shall be brought back on or under the surface of the water. The hands shall not be brought back beyond the hip line, except during the first stroke after the start and each turn.
	Rule changed in 1998			

Swimming strokes. Breaststroke

Relevant rules

(1994)

The elbows shall be under the water except from the last stroke.

(1998)

at the finish

(2005)

...except for the final stroke before the turn, during the turn and for the final stroke at the finish.



"The elbows shall be under the water"



AmandaBeard-front-arms-recovery.mpg



AmandaBeard-elbows-out-recovery-before-finish.mpg

Swimming strokes. Breaststroke

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 7.4 All movements of the legs shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.4 All movements of the legs shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.4 All movements of the legs shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.4 During each complete cycle, some part of the swimmer's head shall break the surface of the water. After the start and after each turn, the swimmer may take one arm stroke completely back to the legs. The head must break the surface of the water before the hands turn inward at the widest part of the second stroke. <u>A single downward dolphin kick followed by a breaststroke kick is permitted while wholly submerged.</u> Following which, all movements of the legs shall be simultaneous and in the same horizontal plane without alternating movement.	SW 7.4 During each complete cycle, some part of the swimmer's head must break the surface of the water. The head must break the surface of the water before the hands turn inward at the widest part of the second stroke. All movements of the legs shall be simultaneous and on the same horizontal plane without alternating movement.



side-doublePatadalegal.mpg

During each complete cycle, some part of the swimmer's head must break the surface of the water...

Swimming strokes. Breaststroke

Relevant rules

(2005)

A single downward dolphin kick is permitted while wholly submerged. Following which, all movements of the legs shall be simultaneous and in the same horizontal plane without alternating movement.



*"Single downward
dolphin kick"*



salidabraza.flv

Swimming strokes. Breaststroke

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 7.5 The feet must be turned outwards during the propulsive part of the kick. A scissors, flutter or downward dolphin kick is not permitted. Breaking the surface of the water with the feet is allowed unless followed by a downward dolphin kick.	SW 7.5 The feet must be turned outwards during the propulsive part of the kick. A scissors, flutter or downward dolphin kick is not permitted. Breaking the surface of the water with the feet is allowed unless followed by a downward dolphin kick.	SW 7.5 The feet must be turned outwards during the propulsive part of the kick. A scissors, flutter or downward dolphin kick is not permitted. Breaking the surface of the water with the feet is allowed unless followed by a downward dolphin kick.	SW 7.5 The feet must be turned outwards during the propulsive part of the kick. A scissors, flutter or downward dolphin kick is not permitted <u>except as in SW 7.4</u> . Breaking the surface of the water with the feet is allowed unless followed by a downward dolphin kick.	SW 7.5 The feet must be turned outwards during the propulsive part of the kick. A scissors, flutter or downward butterfly kick is not permitted <u>except as in SW 7.1</u> . Breaking the surface of the water with the feet is allowed unless followed by a downward <u>butterfly</u> kick.

Swimming strokes. Breaststroke

Relevant rules

(2005)

...except as in SW 7.4

(2009)

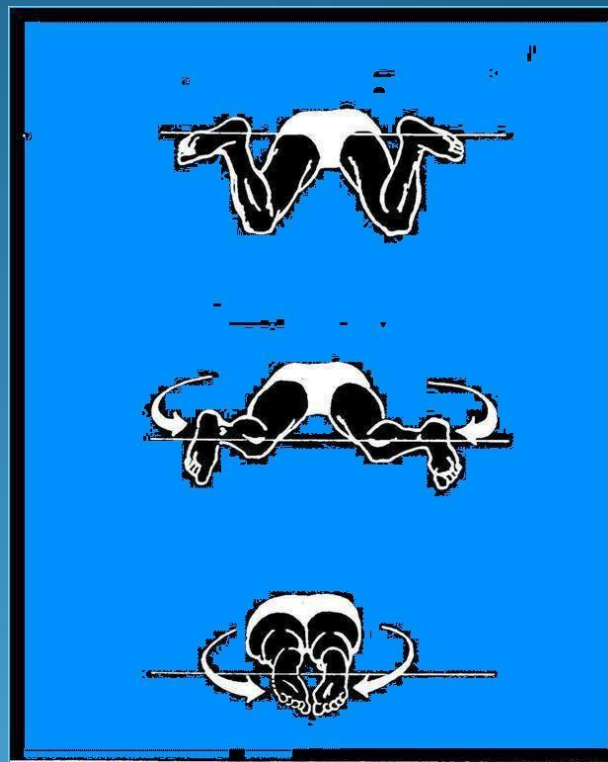
...except as in SW 7.1

...downward butterfly kick.



Romanos Alyfantis.mp4

*"feet don't turned
outward"*



"feet turned outward"

Swimming strokes. Breaststroke

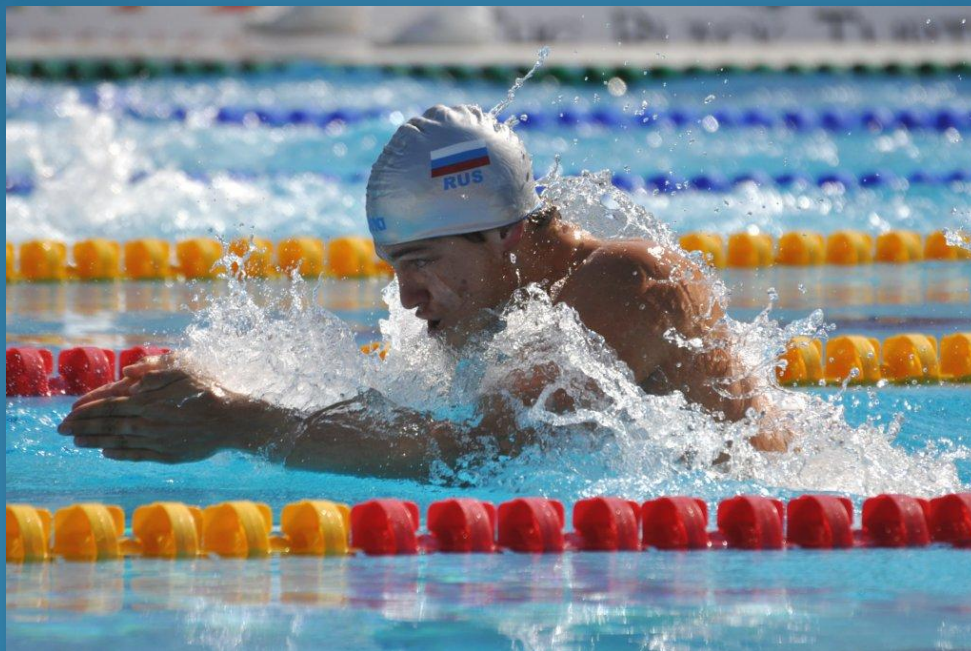
1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
<p>SW 7.6 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously at, above, or below the water level. The shoulders shall in the horizontal plane until the touch has been made. The head may be submerged after the last arm pull prior to the touch, provided it breaks the surface of the water at some point during the last complete or incomplete cycle preceding the touch.</p>	<p>SW 7.6 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously at, above, or below the water level. The shoulders shall remain in the horizontal plane until the touch has been made. 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 the last complete or incomplete cycle preceding the touch.</p>	<p>SW 7.6 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously at, above, or below the water level. 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 the last complete or incomplete cycle preceding the touch.</p>	<p>SW 7.6 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously at, above, or below the water level. 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 the last complete or incomplete cycle preceding the touch.</p>	<p>SW 7.6 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously at, above, or below the water level. 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 the last complete or incomplete cycle preceding the touch.</p>

Swimming strokes . Breaststroke

Relevant rules in this period

(1994)

~~The shoulders shall remain in the horizontal plane until the touch has been made.~~



*“breaststroke
shoulders”*

Swimming strokes. Breaststroke

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 7.7 During each complete cycle, of one arm stroke and one leg kick in that order, some part of the swimmer's head shall break the surface of the water except that after the start and after each turn, the swimmer may take one arm stroke completely back to the legs and one leg kick while wholly submerged. The head must break the surface of the water before the hands turn inward at the widest part of the second stroke	SW 7.7 During each complete cycle, of one arm stroke and one leg kick in that order, some part of the swimmer's head shall break the surface of the water except that after the start and after each turn, the swimmer may take one arm stroke completely back to the legs and one leg kick while wholly submerged. The head must break the surface of the water before the hands turn inward at the widest part of the second stroke	SW 7.7 During each complete cycle, of one arm stroke and one leg kick in that order, some part of the swimmer's head shall break the surface of the water except that after the start and after each turn, the swimmer may take one arm stroke completely back to the legs and one leg kick while wholly submerged. The head must break the surface of the water before the hands turn inward at the widest part of the second stroke	-	-



kirk2004a.mpg

...one arm stroke completely back to the legs and one leg kick while wholly submerged....

Swimming strokes . Breaststroke

Relevant rules in this period
(2005)

Delete the rule

* This rule has been move over
others rules



"Breaststroke"

Swimming strokes . Butterfly



© Gian Mattia D'Alberto/LaPresse

"Last 20 years period"

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes . Butterfly

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
<p>SW 8.1 The body shall be kept on the breast, except when executing a turn. The shoulders shall be in line with the water surface from the beginning of the first armstroke, after the start and after each turn and shall remain in that position until the next turn or finish. It is not permitted to roll onto the back at any time.</p>	<p>SW 8.1 <u>From the beginning of the first armstroke after the start and after each turn</u>, the body shall be kept on the breast and both , except when executing a turn shoulders shall be in line with the water surface from the beginning of the first armstroke, after the start and after each turn and shall remain in that position until the next turn or finish. <u>Under water kicking on the side is allowed.</u> It is not permitted to roll onto the back at any time.</p>	<p>SW 8.1 From the beginning of the first arm stroke after the start and each turn, the body shall be kept on the breast and both shoulders shall be in line with the water surface. Under water kicking on the side is allowed. It is not permitted to roll onto the back at any time.</p>	<p>SW 8.1 From the beginning of the first arm stroke after the start and each turn, the body shall be kept on the breast . Under water kicking on the side is allowed. It is not permitted to roll onto the back at any time.</p>	<p>SW 8.1 From the beginning of the first arm stroke after the start and each turn, the body shall be kept on the breast. Under water kicking on the side is allowed. It is not permitted to roll onto the back at any time.</p>
<p>SW 8.2 Both arms shall be brought forward together over the water and brought backward simultaneously.</p>	<p>SW 8.2 Both arms shall be brought forward together over the water and brought backward simultaneously.</p>	<p>SW 8.2 Both arms shall be brought forward together over the water and brought backward simultaneously <u>throughout the race, subject to SW 8.5.</u></p>	<p>SW 8.2 Both arms shall be brought forward together over the water and brought backward simultaneously throughout the race, subject to SW 8.5.</p>	<p>SW 8.2 Both arms shall be brought forward together over the water and brought backward simultaneously throughout the race, subject to SW 8.5.</p>

Swimming strokes . Butterfly

Relevant rules

(1994)

From the beginning of the first armstroke after the start and after each turn..

...except when executing a turn.

...both shoulders shall be in line with the water surface...~~after the start and after each turn and shall remain in that position until the next turn or finish.~~

..underwater kicking on the side is allowed.

(2000)

~~both shoulders shall be in line with the water surface.~~

...throughout the race, subject to SW.8.5



michael_phelps_turn.avi



“Misty Hyman, kicking on the side”

Swimming strokes . Butterfly

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 8.3 All movements of the feet must be executed in a simultaneous manner. The legs or feet need not be at the same level, but no alternating movement are permitted.	SW 8.3 All movements of the feet must be executed in a simultaneous manner. <u>Simultaneous up and down movements of the legs and feet in the vertical plane are permitted.</u> The legs or feet need not be at the same level, but no alternating movement are permitted.	SW 8.3 <u>All</u> up and down movements of the legs must be simultaneous. The legs or the feet need not be on the same level, but they shall <u>not alternate in relation to each other.</u> <u>A breaststroke kicking movement is not permitted.</u>	SW 8.3 All up and down movements of the legs must be simultaneous. The legs or the feet need not be on the same level, but they shall not alternate in relation to each other. A breaststroke kicking movement is not permitted.	SW 8.3 All up and down movements of the legs must be simultaneous. The legs or the feet need not be on the same level, but they shall not alternate in relation to each other. A breaststroke kicking movement is not permitted.
SW 8.4 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously, at, above or below the water surface.	SW 8.4 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously, at, above or below the water surface. The shoulders shall remain in the horizontal plane until the touch is made.*	SW 8.4 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously, at, above or below the water surface.	SW 8.4 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously, at, above or below the water surface.	SW 8.4 At each turn and at the finish of the race, the touch shall be made with both hands simultaneously, at, above or below the water surface.
	* Add 1994 /delete 1998.			

Swimming strokes . Butterfly

Relevant rules

(1994)

Simultaneous up and down movement of the legs and feet in the vertical plane are permitted.

The shoulders shall remain in the horizontal plane until the touch is made.

(2000)

...no alternate in relation each other.

...a breaststroke kicking movement is not permitted.



"From the beginning of the first armstroke"

Swimming strokes . Butterfly

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 8.5 At the start and at turns, a swimmer is permitted one or more leg kicks and one arm pull under the water, which must bring him to the surface.	SW 8.5 At the start and at turns, a swimmer is permitted one or more leg kicks and one arm pull under the water, which must bring him to the surface. <u>It shall be permissible for a swimmer to be completely submerged for a distance of not more than 15 meters after the start and after each turn. By that point, the head must have broken the surface. The swimmer must remain on the surface until the next turn or finish.</u>	SW 8.5 At the start and at turns, a swimmer is permitted one or more leg kicks and one arm pull under the water, which must bring him to the surface. It shall be permissible for a swimmer to be completely submerged for a distance of not more than 15 meters after the start and after each turn. By that point, the head must have broken the surface. The swimmer must remain on the surface until the next turn or finish.	SW 8.5 At the start and at turns, a swimmer is permitted one or more leg kicks and one arm pull under the water, which must bring him to the surface. It shall be permissible for a swimmer to be completely submerged for a distance of not more than 15 meters after the start and after each turn. By that point, the head must have broken the surface. The swimmer must remain on the surface until the next turn or finish.	SW 8.5 At the start and at turns, a swimmer is permitted one or more leg kicks and one arm pull under the water, which must bring him to the surface. It shall be permissible for a swimmer to be completely submerged for a distance of not more than 15 meters after the start and after each turn. By that point, the head must have broken the surface. The swimmer must remain on the surface until the next turn or finish.
	Rule changed in 1998			

Swimming strokes . Butterfly

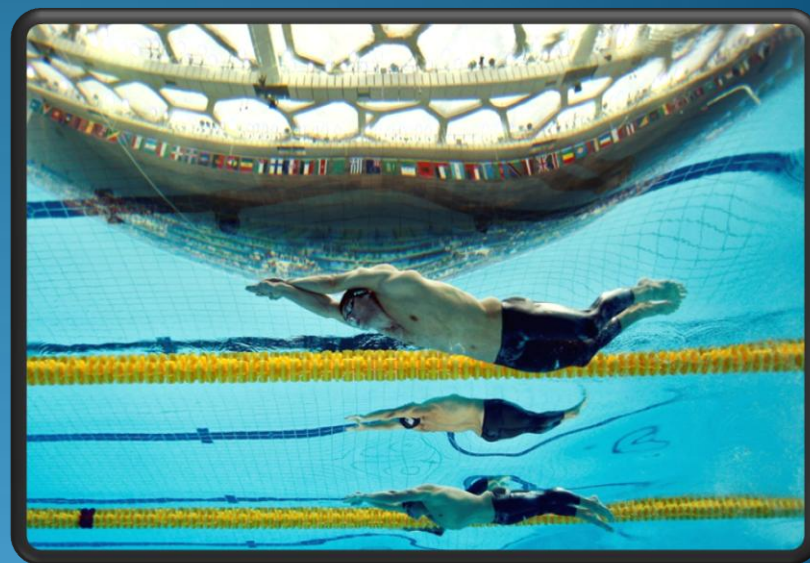
Relevant rules

(1998)

It shall be permissible for a swimmer to be completely submerged for a distance of not more than 15 meters after the start and after each turn. By that point, the head must have broken the surface. The swimmer must remain on the surface until the next turn or finish.



salidamariposa.flv



"15 meters submerged"

Swimming strokes . Ind. medley



"Last 20 years period"

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member

Swimming strokes . Ind.Medley

1991-1994	1994-2000	2000-2004	2005-2009	2009-2013
SW 9.1 In individual medley events, the swimmer covers the four swimming styles in the following order: Butterfly, Backstroke, Breaststroke, and Freestyle.	SW 9.1 In individual medley events, the swimmer covers the four swimming styles in the following order: Butterfly, Backstroke, Breaststroke, and Freestyle.	SW 9.1 In individual medley events, the swimmer covers the four swimming styles in the following order: Butterfly, Backstroke, Breaststroke, and Freestyle.	SW 9.1 In individual medley events, the swimmer covers the four swimming styles in the following order ; Butterfly, Backstroke, Breaststroke, and Freestyle.	SW individual medley events, the swimmer covers the four swimming strokes in the following order: Butterfly, Backstroke, Breaststroke and Freestyle. <u>Each of the strokes must cover one quarter (1/4) of the distance.</u>
SW 9.2 In medley events, swimmers will cover the four swimming styles in the following order: Backstroke, Breaststroke, Butterfly and Freestyle.	SW 9.2 In medley events, swimmers will cover the four swimming styles in the following order: Backstroke, Breaststroke, Butterfly and Freestyle.	SW 9.2 In medley events, swimmers will cover the four swimming styles in the following order: Backstroke, Breaststroke, Butterfly and Freestyle.	SW 9.2 In medley events, swimmers will cover the four swimming styles in the following order ;Backstroke, Breaststroke, Butterfly and Freestyle.	SW medley relay events, swimmers will cover the four swimming strokes in the following order: Backstroke, Breaststroke, Butterfly and Freestyle.
SW 9.3 Each section must be finished in accordance with the rule which applies to the style concerned.	SW 9.3 Each section must be finished in accordance with the rule which applies to the style concerned.	SW 9.3 Each section must be finished in accordance with the rule which applies to the style concerned.	SW 9.3 Each section must be finished in accordance with the rule which applies to the style concerned.	SW 9.3 Each section must be finished in accordance with the rule which applies to the stroke concerned.



cambioEspalda Braza.flv



phelps2004c.mpeg

Swimming strokes . Ind.Medley

Relevant rules

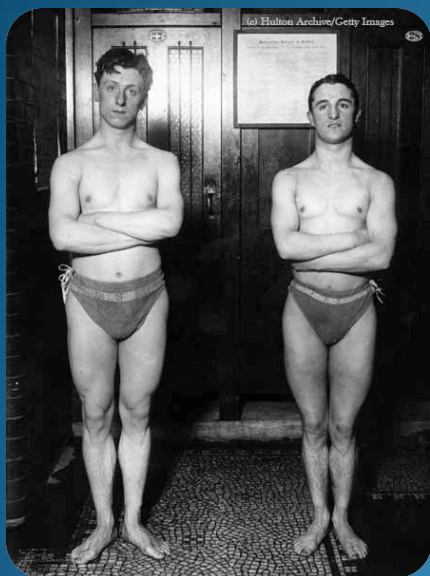
(2009)

Each of the strokes must cover one quarter (1/4) of the distance.



*"Each of the strokes
must cover
¼ of the distance"*

Swimwears. Origins



"Swimwears 1912-2009"

Bibliography

- ✓ FINA rules.
- ✓ FINA ancient origins.
- ✓ History of swimming. Wikipedia
- ✓



Evolution of the Swimming strokes according to the rules



THANKS FOR YOUR ATTENTION

Evolution of the swimming strokes according to the rules. Alfonso Wucherpennig LEN TSC member