

Explanation of Tides and Starting Times

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Hi Rob & Pedro

A little late with the reply but here goes. With reference to starting points and the Channel swims. Just a quick answer for now (there is more information on our personal web site www.channelswimming.com and in the e-mail archives on the chat site - see Nick Olomos' e-mails at beginning of the 2003 year I think).

The Channel should really be looked at as a river - all be it a wide river - that is hour glass shaped at the Dover Straits. To this you add the tides that flow up and down the Channel.- they flow from the SSW (approx) for 6.5 hours towards Holland and the North Sea (Flood Tide) - then turn through 180° and flow back down Channel for 6 hours towards the Atlantic (Ebb tide).

To confuse things a little more the moon affects the height of the tide giving SPRING tides & NEAP tides.

SPRING TIDES are when the sun and moon are in line with each other and the earth - New Moon & Full Moon. Spring tides produce a lot of water movement and faster tidal flows. (A 6.8 metre high spring tide will move you up channel about 13 /14 nautical miles then turn and bring you back 12 /13 nm)

NEAP TIDES are when the moon is at 90° to the earth and the sun's axis. The Neap tide causes less water movement and less tidal flow. (A 5.2 metre tide will move you up Channel about 8/9 nm and then back 7/8 nm, approximately)

To make it a bit more confusing there is a different height and time for high water every day and this travels within the 28 day cycle of the moon (2 slightly different 14 day periods of the spring and neap cycle).

The narrowest point of the Channel is between Dover and Cap Gris Nez - just under 19 nautical miles (21 land miles) - but - as the Channel widens quickly each side of this point you get variations in the tidal directions when near the coasts and, due to the shape of the sea bed and the underwater banks in the Channel you get different tidal patterns at different stages on the way across.

Got the pictures so far?

Now we add the weather - very confusing and a subject by it's self when you are talking about the Dover Straits area. When the wind and tide are travelling in the same direction the sea is calmer and the wave length longer. Unfortunately the tide changes direction every 6 hours approximately and wind against tide gives a shorter steeper sea. When the wind travels across the tide it can assist (NW winds can create a surfing effect) or obstruct (SE winds are usually into your face). the wind will also possibly change direction as the day goes on and the weather fronts move through. Add to this the swimmer with a variation of speed between 1 knot and 2.4 knots.

1 knot = 1 nautical mile = 2000 yards = 1.85 kilo-meters - 1852 metres

All these factors mean the pilot needs to calculate the start time and place for each tide and each swimmer on each day.

For most of the neap tides the swimmers ability and weather patterns dictate the start place is Shakespeare beach to the West of Dover harbour with a start time between 1 hour before to 1 hour after.

For spring tide starts the best place to start is Abbots Cliff - halfway between Dover and Folkestone, again the start time varies from 1 hour before to one hour after HW.

Some very slow or multi crossing swims have different start times to fit in the turn round or landing in the right place and at the right time on the French side. We have in the past (and still do occasionally), start to the East of Dover towards St Margaret's Bay at 3 to 5 hours after HW, although this is usually for slow or specialist swims.

Folkestone starts are really to far down channel for the landing at a good place on the French coast and there is a problem with the flood tides sweeping into the bay between Folkestone and Dover. The other reason for not starting at Folkestone is you have both the Varne bank and the Colbert bank that give you choppy water and negative tide runs and you can end a long way up to the South of Cap Gris Nez - it can put 5 to 6 hours on the average swim time.

Any pilot can point you towards France and you will get there in the end - as long as you can stay in the water and do not get too cold. A good pilot will save you a lot of time and plan the swim to fit into what they think you will do. Unfortunately he/she only has about 3 hours at the beginning of the swim to work out how well you will swim and what speed you will swim at - (something that very really matches the swimmers estimation of their abilities). If you can be honest and accurate you make the job much easier. Working as a team is very important when swimming the Channel but very unusual in a lot of open water swims. Bi-lateral breathing is also very important - it allows you to change sides on the escort boat to get a little protection from the weather among other things.

Remember this is an "Extreme Sport" with fast changing conditions and - quite often - unpredictable tides and weather patterns. It is "The Everest" of open water swimming and one of the worlds top swims if not the number 1 swim.

As pilots we can only do our best for you and the more you know about our job the more you will understand what is happening. The final choice on when to go rests with the swimmer and their support team, they should know the swimmers ability and be able to realistically reason with the elements presented.. Your pilot will advise on what HE/SHE thinks and when and where and tell you why. You have the job of saying YES or NO.

Guess this answer is not much use to you though as the pilots job is usually "hands on" on the day and will be continually changing as the swim progresses. I did try to put it into writing though and I will try to expand it more when I get more time.

Regards
Mike