

## BUTTERFLY – BODY UNDULATION

A common flaw amongst Masters swimmers is insufficient undulation when swimming butterfly. This could be related to age, gender, injuries, inexperience or other factors. As butterfly is a short axis stroke (across the axis of the spine, not in line with it as in freestyle) body undulation adds to forward propulsion by enabling your body to slip through the water rather than pushing against it. The undulation also enhances your dolphin kick, making it more powerful. With butterfly, undulation is an integral part of the entire stroke as it links upper body, core and lower body movement in a seamless manner.

The key is to allow your entire body to undulate like a sound wave  Watch this video for a great example of full-body undulation.

<https://www.youtube.com/watch?v=YdJl19MKugk&t=4s>

One of the ways to achieve this is to completely dip your head under the surface of the water just after taking a breath and as your arms thrust forward to the catch position, whilst at the same time arching your back and initiating a kick. By initiating the stroke cycle this way your body will follow a wave path through the water. Your head should be completely submerged at this stage in the stroke cycle.

### Drills

There are three drills that help you develop and practice this aspect of butterfly:

- Two dolphin kick with one breaststroke arm movement. Focus on totally submerging your head as you thrust your arms forward. This is a great drill for refining your stroke timing without expending a lot of energy.
- One arm butterfly drill. Once again, focus on submerging your head. Practice with one arm stroking, then switch to the other arm stroking.
- Slow motion butterfly. Practise swimming the full stroke, but focus on ensuring you totally submerge your head.

Once you have mastered these drills, practise swimming butterfly at speed whilst continuing to totally submerge your head as you swing your arms forward to the catch position. Try switching from slow motion stroke to faster tempo stroke and back again (for example, 6 slow/6 fast/6 slow/6 fast) whilst maintaining strong body undulation throughout.

**Safety note.** Butterfly places a lot of stress on your body, and full body undulation requires flexibility in your back. Be prepared to start small and build up very gradually. Do not persist if you experience discomfort, especially in your back.