

## **BREATHING AND STROKE FREQUENCY STRATEGIES FOR TOP PERFORMANCE**

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How do you optimise the stroke frequency in swimming? The answer to this question is important in the pursuit of higher performances in the pool. Selecting the right stroke frequency is detrimental for an optimal performance. It should be adjusted to each individual athlete's characteristics.

For running and cycling, we know much on energy consumption and stride frequency. In swimming though, which is a relatively new activity for humans, the optimum stroke frequency is less researched. In this lecture we will look briefly to running and cycling, and the models that explain the optimal human cadence. How these models can be transferred to swimming will be discussed. What we know from swimming studies, optimising stroke frequency for different age- and performance levels swimmers in different strokes will be reviewed. Finally, our research shows that certain stroke rate strategies seem to be ideal during a race. This lecture will examine what stroke rates strategies to choose during a race in order to win.