

## The Age at Which Children Improve the Most in the 50 yard Freestyle

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### ABSTRACT

As of late there are no studies looking at what age swimmers have the greatest improvements. The early teenage years do see a significant increase in aerobic performances when exercise is introduced properly. The purpose of this study is to determine at what age swimmers improve the most. The USA Swimming website was accessed using <http://www.usaswimming.org> and the section of the website titled "Swimmers," was selected, then "Times/Time Standards" was selected on the left hand side of the screen to search through swimmer results for any time period and any age. Data was copied into an Excel file, the ordered first by name, then by age, and then by time. The fastest time for each year was selected and all other times deleted. Improvements were then calculated by subtracting the times from the older year from the younger year, resulting in positive scores that indicate improvements. Five categories were created: 13-14 years, 14-15, 15-16, 16-17, and 17-18 years. Swimmers were selected if they had time results for two or more consecutive years. The result showed that the greatest improvements were in the 13-14 years old age group, however, this group had a significantly lower number of cases compared to the other groups. The 15-16 year-old group had the next greatest improvements, and there was a steady decline in improvements for every consecutive age group after that (Figure 1). Although it is not exactly clear what is causing greater improvements in specific age-groups, there were greater improvements at a younger age followed by a slight decline as the years went on.

**Swimming Improvements Among Five Age Groups**

