

Adolph and Tex: Backstroke Flip Turn*

> **H**e won his first world record at 15, and by the time he was 18, he was an Olympic champion. He's swum all over the world and lost only one backstroke race his entire life. Even at 90, he still swims every day and is an active owner of Adolph Kiefer & Associates, the company responsible for inventing the first nylon swimsuit. It's no surprise that an innovator like Adolph Kiefer is the mastermind

behind the backstroke flip turn. "I am the inventor," Kiefer affirms. As a high school student in Chicago, Kiefer was the first to complete a 100-yard backstroke in less than a minute – a record that stood for 15 years. His success in part is due to his ability to inject the flip turn into his already impressive backstroke. He says the idea to combine the two was born soon after good friend and legendary

in the backstroke – now let's see you break them all in the freestyle," Kiefer says. During his time as a freestyle swimmer, Kiefer saw how swimmers in this category used the flip turn to their advantage, and then he says a light popped on for him.

"I said if they did that [flip turn] in the freestyle, I'll just do the same thing in the backstroke," Kiefer says. "So, I worked on it." After perfecting the technique Kiefer began traveling the world teaching other backstroke swimmers the technique and its benefits.

Kiefer says he used the flip turn with the backstroke for the first time in competition in 1935. The very next year, in Berlin, Kiefer was the first backstroke swimmer to use the flip turn in Olympic competition.

"Tex liked it and helped me with it," Kiefer says, referring to Robertson as his "co-assistant" in inventing the process.

Kiefer says during the Olympics, his flip turn was accepted, but with caution. "Swimming was much more formal than it is today," he explains. "Officials wanted to make sure you touched the wall on your back," he says. "So, the secret was being not completely on your stomach."

Kiefer says executing the move was important, but the hard work paid off with efficiency. "If you do it correctly, it should give you a stronger push off and there is less resistance," Kiefer says. And his Olympic gold medal is shining proof.

"Tex was a leader," Kiefer says, "very humanistic and friendly, and was an inspiration to me." The two worked together at the lakefront Baby Ruth Swimming Pool in Chicago, where Adolph made a whopping \$3 a week picking up

FLIP TURN FACTS

>>> *Adolph Kiefer's backstroke flip turn is not the same as today's backstroke flip turn. Kiefer was required to touch the wall with his hand while still on his back, and then he threw his legs over his head to flip over. Today, backstrokers come in to the wall swimming on their backs, roll over on their stomachs, flip, and push off on their backs. The newer backstroke flip turn has been allowed since around 1991 – but if Kiefer had tried the newer technique in the 1930s, then he probably would have been disqualified.

>>> Stroke resumption is a key factor in the efficiency of flip turns, according to a 2007 study by Bethany Larsen and Richard Hinrichs of Arizona State University. The two researchers timed 38 men and women freestylers who used three different techniques. Group 1 pushed off on their sides and resumed swimming with their shallow arms; Group 2 pushed off on their sides and initiated with their deep arms; and Group 3 returned to a prone position before starting to swim again. Their conclusion: "The prone transition may be superior to the deep and shallow transitions due to a suspected decrease in drag generation as the participant rotates and rises from push-off to free-swimming depth."

>>> Matt Luebbbers, a U.S. Marine Corps swim coach in Japan, suggests looking at your knees if you get nauseous when you practice flip turn. He says the knees don't move as much as the rest of the body ... sort of like looking at the horizon to prevent seasickness.



Top: University of Texas coach **JULIAN "TEX" ROBERTSON** talks to UT swimmers. Bottom left: **ADOLPH KIEFER** at the 1936 Berlin Olympics. Above left: **ROBERTSON**, above right: **KIEFER**.

University of Texas swim coach Julian "Tex" Robertson challenged him to switch it up a bit, and test his talent at freestyle swimming.

"He [Robertson] said, 'Adolph, you broke all the world records

bathing suits and towels. He says at the time Tex was the national collegiate champion.

The two stayed close, and after Robertson began coaching at the University of Texas in the swimming program he had convinced UT to establish, Kiefer followed. Robertson coached the Longhorns until 1950, and passed away in 2007 at 98. <<<