



## METADATA

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**Other Titles:** The essential reference on technique, training and program design

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## Abstract

Ernest Maglischo reveals the science behind the training principles that led his teams to 13 NCAA national championships at the Division II level and 19 conference championships. This book is the definitive reference on stroke technique and training methods for swimming. It shows you how to apply scientific information to the training process so that you can swim stronger and faster. Swimming Fastest addresses not only the how but also the why of training. It's the one source that you can turn to for reliable information about hydrodynamics and exercise physiology, giving you all the information you need to evaluate present and future concepts of training and stroke mechanics. Swimming Fastest covers every aspect of competitive swimming. The book is heavily illustrated, with more than 500 illustrations and photos featuring world-class swimmers. Sequences of photos taken from the front, side, and underneath views show you exactly how to perform competitive strokes, starts, and turns. This book is a source that coaches and athletes will pull down from their shelves again and again for reference. In part I Maglischo masterfully explains the mechanics of competitive swimming. He presents detailed technique analysis of the four

primary strokes: freestyle, backstroke, breaststroke, and butterfly. He also explores the roles of stroke rate, stroke length, and drag reduction and reevaluates the role of lift forces and the Bernoulli principle in swimming propulsion. He explains the complex relationship between stroke length and stroke rate and swimming speed, and he reviews recent findings on the physical basis of swimming propulsion and the techniques that swimmers use to apply propulsive force. Part II explains the physiology behind the most effective training methods and provides detailed sample workouts and training programs for each event. Maglischo provides critical information to help you train more accurately and monitor your training more effectively. He evaluates current training theory, explaining why the anaerobic threshold theory of training needs revision and why muscle fiber types are important to swim training. Maglischo also presents important new studies that define the relationship between endurance and sprint training, and he suggests their implications for training. Part III addresses topics that pertain specifically to competition and racing. Maglischo shares his insights and recommendations for pre-race tapering, establishi