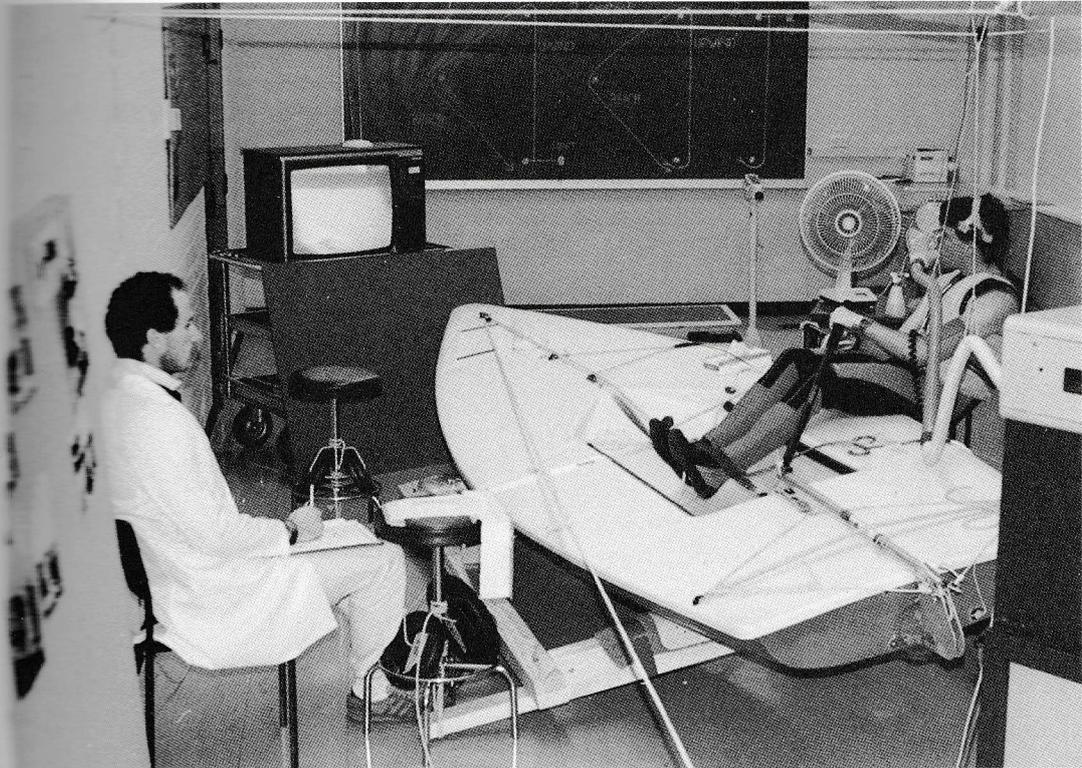


Small Boat Hiking Research

A small number of scientific studies on the demands of small boat sailing have been conducted to examine the toll of sailing on the body. For my scientific study on the physical demands of sailing I selected the Laser class because Laser sailors require excellent hiking endurance to perform well and very little previous research had been done on the subject.

To summarise the procedures, a profile of typical activity in a race (length of legs, frequency of tacking) was developed from analysing video of good Laser class sailors competing in windy (over 12 knots) national level races. A dinghy sailing ergometer was specially designed and constructed for use with the 90 minute race which involved a two-triangle format with upwind legs, tacking and reaching. (A dinghy sailing ergometer is a dry-land device designed to mimic the physical demands of small boat sailing without having to get wet!)



A subject's oxygen consumption and blood pressure measured while sailing a simulated dinghy.

Subjects watched a video of a Laser skipper sailing according to the protocol (on-water) while hiking from the Laser ergometer in a laboratory and performed their normal on-water movements in tandem with the video. This set-up was used to find out exactly what is going on in the body when small boat sailing and what makes one person able to hike harder than another.