Chapter 4

Training Principles

However the paddler constructs his yearly plan, the following general principles should be taken into account:

- A high volume of training without sufficient intensity fails to produce improvement, just as the converse is true.
- The closer the duration and intensity of a workout approach an optimum level relative to the paddler's capacity at the time of the workout, the faster his/her improvement will be.
- If the workout is too hard, or doesn't stress the right item, the paddler's improvement will be retarded and maybe even reversed.
- The relationship between work and rest is crucial. They always should be treated together. Furthermore, they are unique to each individual and thus the proper personal formula must be found.
- While overcompensation quickly results in improvements in performance among younger athletes, the process takes much longer for more experienced ones. For the highly experienced athlete, each optimum workout will cause a slight overcompensation, but it is only after the cumulative effect of a lot of this training that large improvements come. Furthermore, the improvements do not always come at predictable intervals. There typically will be plateaus of performance followed by a sudden, noticeable improvement.
- The amount and intensity of work must be constantly increased if performance improvement is sought. Without that increase, the athlete will simply maintain at a certain level.
- The rate at which an athlete regresses following the cessation or reduction in training depends on how recent his adaptation to the high workload is. The more recent, the quicker will be his reversability.

Thus, one can see the necessity for long periods of training as opposed to "crash" programs.

Training Log

I am acutely aware that many world champions do not keep training logs. They know intuitively how they need to train and they do not need detailed records to help them. Furthermore, they simply may not have the time to fill out the log every day.

Nevertheless, I believe that keeping a good, thoughtful log is a particularly useful device for forcing the athlete or coach to think about his training. Thinking about ways to make training better, to improve areas of weakness, and fortify areas of strength is key to success in any sport.

I also believe that there are two other psychological benefits in keeping a detailed training log. The first is it gives a sense of professionalism to your work. If you are willing to write it down and force yourself to think about it, you inevitably become more serious about what you are doing. Secondly, the training log is a priceless treasure of all the work, planning, and evaluation that have gone into your training. In our sport, the greatest reward is self-satisfaction. One way of achieving that is reviewing a log from a successful year. When you read through it, you often find events were somewhat different than you remembered them. Sometimes you find that you had forgotten important conclusions you came to a year or two ago. Having in your hands the true record of the way things were gives you a tangible way of dealing with the welter of memories, thoughts, schemes, and hard work you have put in over the years.

Barton is like many top paddlers who believe that keeping a good, thoughtful log is a useful device for forcing them to think about their training.

Here is how he began keeping a log:

I think I started in 1976 or 1977 keeping an occasional training log. Part of the reason was just to remember what workouts I had done. I remember I would make up a workout that was really good, but I would forget the details a month later when I wanted to do it again. But I wasn't very religious about it. Then, in 1980, I started doing more, but it wasn't until the fall of 1983 that I wrote a really detailed log.

Purpose of the Log

The essential purpose of the training log is to help establish more quickly the precise formula which creates the best performances when they are needed. By having a historical record of training, patterns can be detected over time which can actually determine the formula. A champion who keeps no log has learned these things through years of trial and error. He may well have made the same mistake many times before finally learning the correct way. A log will allow the younger, less experienced paddler to gain the same knowledge in less time.

What Goes into the Log

The following are items that usually go in most logs. Barton records only some of them.

The Barton Mold

I. Personal Data

• **Hours of sleep.** The object is to spot the pattern which produces the best performances. It is possible to get too much sleep as well as too little sleep. Seven to eight hours is the norm for most athletes. You may find that you need X hours of sleep over Y days before you can have an optimum performance in a big race. Quality of sleep is important, too. A useful method for keeping track of this is to use a scale from one to 10, with one being very poor quality sleep and 10 being very high quality.

• **Body weight.** It is not necessary to track body weight every day, but it should be done on a fairly regular basis (a couple of times a week) and particularly before and after important sessions or races. A loss of body weight in a highly trained athlete may leave him physically below par on the big day. In this author's experience, weight loss is a common occurrence when traveling and food is not good or is too expensive. The athlete tends to not eat well. Noting a slight drop in weight may make it possible to nip the problem in the bud. By the same token, it also is possible that a paddler may find that his optimum performances occur when he weighs somewhat less than what he considers "comfortable."

• **Rested pulse.** This should be taken at the same time each day, probably when you wake up in the morning. If it is higher than normal, it may mean recovery from the previous workout is not complete, calling for an easier workout for the coming day. An elevated pulse rate also might a symptom of an impending cold or that something is bothering you emotionally. The remedy is the same, however: more rest.

II. WORKOUT DESCRIPTION

• **Plan Ahead.** Some of the best logs plan ahead what type of work needs to be done, then list the work that actually was done so it is easy to see how close the athlete came to meeting his original goals. Looking ahead helps ensure that the training will have a specific purpose and each session will be integrated into a well-thought-out program.

• **Workout Description.** First, record the date and time of the workout, then state the purpose of the session. Again, the object is to cut down on aimless playing by setting a definite target for each session. Then write down what was actually done. Finally, leave room for an evaluation. Some examples from Barton's log:

Saturday, January 17, 8.5 hours sleep
8 a.m. K-1 83 minutes. 14 km steady cruise then 1x2000 steady pace. Try not to bend right arm too much or drop left arm on push. Keep right wrist straight and open hand. 20% speed.

Wednesday, March 4, 7.75 hours sleep
6:45 a.m. K-1 63 minutes. 12 km cruise steady technique. Use the legs to twist low for good rotation — hip muscles getting tired — need to stretch hips. 20% speed.

Tuesday, May 5, 7.5 hours sleep
5:15 p.m. K-1 56 minutes. 9 km 2 sets 3x60 seconds on, 60 seconds off, rest 9 minutes. With other paddlers I can really gain on them if I put the paddle in and pull hard on each stroke — not sprinting, but make each stroke count. 80% speed.

Tuesday, August 23, 7.75 hours sleep
7 a.m. K-1 82 minutes. 12 km 10x100m, 4x250m, 1x500m. All rolling starts. Very calm. Dying on first 250m piece so tried to pace other 250's and 500m more evenly. Rates: 120's — 130's on 100's, 120 — 110 250's, 115 — 105 500, good solid strokes. Putting paddle in solidly and pulling hard on it on 100's — works better than revving it. Using rotation and technique on 250's and 500 because too tired to go nuts — good. Better speed than I thought I had at this time. Just keep working hard and concentrating on it. 90% speed.

III. Summaries
• Short summaries at the end of each regular period of work, say each week, make it easier to review what has been done. A Barton example:

Total for the week

K-1: 66 km		6.4 hrs.
K-2: 33 km		3.1 hrs.
Paddling:	99 km	9.5 hrs.
Run:	3.2 mi	.5 hrs.
Weights:	3 times	2.2 hrs.
Total Training Time:		12.2 hrs.

• A running summary of the year's work to date also is useful:

1988 Totals Through August

K-1:	2824 km	282.7 hrs.
K-2:	243 km	23.3 hrs.
K-4:	67 km	6.0 hrs.
Paddling:	3134 km	312.0 hrs.
Run:	163 mi	24.3 hrs.
Weights:	80 times	80.9 hrs.
Bicycle:	167 mi	9.4 hrs.
Mt. Bike:	7 mi	1.2 hrs.
Swim:	3300 m	1.6 hrs.
Hike:	12.6 mi	3.9 hrs.

Total Training Time: 433.3 hrs.

IV. Evaluation

• When you write up an important workout, always ask yourself the question "What did you learn from this workout?" Simply trying to answer that question in writing forces you to think carefully about what has happened.

V. Visual Appearance of the Log

• Remember, the log is not much use to you if you don't read it. Therefore, the information should be presented in an attractive way that invites and facilitates your browsing through it. In this author's experience, the most effective mode of presentation is simply to use 8.5 x 11 inch lined paper, with one sheet for each day, if possible.

Sometimes log books are issued to athletes by a sports federation or some other central committee, but they are usually not as good as simply using lined paper. For one thing, these kinds of log books usually are too cluttered; lots of little boxes all over the place that you are supposed to fill in. Most of the boxes don't even relate to paddling, but to some other sport, such as running. Secondly, such log books usually do not leave enough space for a narrative text. The detailed, subjective commentary is probably the most important thing about a log and whatever format you choose, it should facilitate the writing and reading of the commentary.