

Daily training programme for advanced athletes

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Forewords

The aim of introducing training plans, as part of the ICF Development Programme on the ICF's homepage is to give guidance for those coaches and athletes who may not have enough experience in planning a suitable training programme.

How to use this programme

This training programme is intended to serve as a guideline for daily training for those advanced senior athletes who have the opportunity to train two times a day. Those who train once or not every day or if they are at a junior age could select a reduced number of training sessions from the weekly programme. When reduction is necessary retain the endurance or speed endurance training and give priority to the training in the boat.

The weather and training condition as well the level of the athletes varies in each country and this must be taken into account in using the programme.

Please notice that athletes who have a background of high volume and intensity training for years would gain progress from the execution of the full training. Others should reduce the volume of the daily training programme according to the ability of the athletes.

The training programme

This programme made for six months from March 1st to August 31st 2004.

The half-year has been divided into six macro cycles - the duration of each is one month.

This six months training programme should be use before the planned peak of the athletes performance of the year, either national championships or international competition. The peak competition will be at the end of August 2004, which is the date of the Canoeing competitions in the Olympic Games.

The following daily training plan is a part of a full year programme and therefore requires the athletes to have been in training in the previous period.

Please notice that warming - up and cooling - down is not included in the training programme but is necessary to do these before and after each training including paddling, strength development and running.

The volume of training:

-Time requirement:

To follow this programme fully for 6 months, you will need approximately 3 hours of effective training a day, 18-20 hours a week and 400-450 hours total.

-Training on the water:

In this programme the quality is more important than the quantity, however you should estimate approximately 25-35 km paddling a day (total in two sections), 160-200 km per week.

Terminology

To avoid misunderstandings, the following terms are found in the programme and are defined as follows:

Aerobic training: "steady state" low intensity training with oxygen balance. Energy is covered 100% -or almost- aerobically without accumulated lactic acidity.

Heart rate is maximum 150/beats/min.

Anaerobic training: high intensity -using for speed or/and speed endurance- training with oxygen debt. Energy is covered by anoxidating system (ATP -CP) with accumulated lactic acid in the blood and muscles.

Heart rate is 180 to maximum. (Could be 220/beats/min)

Stroke rate: means strokes per minutes -(strokes counted each side of the kayak)

The stroke rate is closely related to the speed of the boats and to the heart rate of the athletes.

Training intensity. The intensity of training is expressed in heart rate, boat speed or stroke rate.

Training effect: all training in the programme has a primary intended physiological effect what will be use for progress in canoeing. The physiological effects are related to the aerobic and anaerobic energy system:

HEART RATE RANGE	% OF MAXIMUM HR	PHYSIOLOGICAL EFFECT
130 to 150	65 to 75 %	Utilization mainly fats
140 to 160	70 to 80 %	Utilization mainly glycogen
160 to 170	80 to 85 %	Anaerobic threshold
170 to 190	85 to 95 %	Transportation
maximum	maximum	Anaerobic

Training methods:

- Long distance training: a relatively long duration –non stop- training (10-40km) with constant speed, which maintains the heart rate about 120-150 beats per minute. The distance and intensity may have a large-scale variation.
- Fartlek or speed play: a relatively long duration training 8-15km with improvised or planned alteration between higher and lower intensity.
- Repetition training: involves various distances repeatedly as: short: 50 –250m; medium 300-1000m and long 1200-3000m. The number of repetitions is determined by the intensity on the given distance.
- Interval training: training with periodic changes between exertion and rest. The various types of interval training can be divided into three categories; short (5 sec to 30 sec)–medium (30 sec to 120 sec) and long interval training (2 – 6 minutes) Important to determinate the working and resting phases as well intensity of each interval training.
- Time trial or model training: simulates race conditions and measure the highest actual performance of athletes.

You can create a training programme for your athlete/team yourself in using the following table

INFORMATION	INTENSITY ZONE I.	INTENSITY ZONE II.	INTENSITY ZONE III.
Developing of	Aerobic endurance	Speed endurance	Speed
Boat speed %	60-80	85-100	100
Stroke rate K1	64-82/min	84-120/min	Maximum
Stroke rate C1	32-50/min	52-68/min	Maximum
Distance of paddling	10-40 km	100 – 300m / reps	10-100 m /reps
Training time /reps	50 –180 minutes	30 sec – 45 sec	5 sec to 25 sec
Training time total	50 –180 minutes	30 minutes (Effective phase)	15 minutes (Effective phase)
Work-rest ratio	Non regulated	1:1-3	1: 3-5
Heart rate	130-150 beats/min	150-180 beats/min	180 – max beats/min
Energy sources	Aerobic glycolysis	Anaerobic glycolysis	ATP-CP
Lactic Acid in blood	2-6 mmol / ml	8-20 mmol/ ml	3-5 mmol/ ml

**Daily Training programme
March 1st to August 31st 2004**

Schematic Figure of Training Programme (six months)

