

# Sessions examples for TiP canoeing Training Intensity Zones

## (Part 1: simplified session setup)

Following are examples of sprint canoeing sessions divided in categories according to our Training Intensity Zones table. To keep things simple and to help those of you with less experience we will list only sessions done in one or no more than two different zones. When you use training intensity zones it is not so simple to stay in one zone and respect fully what defines this zone (including the goal you are trying to achieve by training in this zone). In the next blog we will discuss more complex sessions where you might be training in different zones on the same session<sup>1</sup>.

### Zone A0

#### 4km easy glide

*A short & easy session immediately after the last race of the day to calm the body and head; long smooth strokes; trying to find back the calm and efficient stroke you lost during the rush of a long racing day; at or slightly over the aerobic threshold to clean your system from all the metabolites.*

#### 4x 9min @A0 + 1min @Tech Drill /1min

*A 9min easy pace with focus on glide and technique + 1 minute of one of the Technique Drills, followed by 1 min rest. An easy recovery session between two hard days (for a youth or a recreational paddler), perhaps an easy warm up before a hard gym session on a Monday morning in early offseason (for a professional kayaker) or simply a refreshing paddle after work for a busy dad.*

### Zone A1

#### 12km steady paddle

*According to the goal we have this session can be:*

- *A hard paddle at a constant SR<sup>2</sup> (66-68 str/min) and HR<sup>3</sup>, LA<sup>4</sup> levels should be still under 4 mmol, %WT<sup>5</sup> possibly over 60% (this is technically difficult at this pace and SR, but using %WT above 60 is crucial for competitive success), RPE 15-16; the goal is development of aerobic systems and technique stabilization*
- *A medium hard steady paddle at a constant SR (64-66) and HR, LA levels should be 2-3 mmol, %WT possibly over 60%, RPE 14-15; the goal is maintenance of aerobic systems and technique stabilization*
- *An easier steady paddle at a constant SR (approx. 62) and HR, LA levels should be 2-2.5 mmol, %WT possibly over 60%, RPE 12-13; the goal is active recovery and technique stabilization*

#### 8-10x 1000m

*This is a high intensity endurance session.*

*The goal is to stay in the A1 zone (SR 68, LA up to 4mmol, RPE 15-16, HR up to anaerobic threshold), the athlete should try to make constant times and instead of growing the intensity into A2 rather try and attempt more sets in the same zone (lengthening the time in the zone). In order to keep the work in the A1 zone the rest period between sets shall be around 1' (making it approx. 5min30 the cycle for elite male paddlers). Youth paddlers could use 5-6 sets, juniors 6-8, elite athletes 8-10 sets.*

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<sup>1</sup> As we will already wrote being able to understand and respect particular zones (stay in the planed zone) is an important quality – especially it proves you understand your body and can listen to it also under stress and fatigue. But we will show you in our further articles that training at constant paces, SR or HR is rarely the best possible solution when training for canoeing distances from 200-1000m (see H-graph).

<sup>2</sup> SR – stroke rate

<sup>3</sup> HR – heart rate

<sup>4</sup> LA – blood lactate levels

<sup>5</sup> %WT – percentage of the stroke cycle the paddle is in contact with water

## Zone A2

### 4-5x 1500m/6min

The goal is to stay in the A2 zone (SR 78-82, LA 5-6 mmol, RPE 16-17), the athlete should try to make constant times and instead of growing the intensity into A3 rather try and attempt more sets in the same zone. Rest period is 6min, so the athlete doesn't carry over too much fatigue from one set to the next. 2-3 sets for youth, 3-4 for juniors and 4-5 sets for elite paddlers. Physiologically the intensity is close or at  $VO_2max$ . Suitable for offseason or preseason sessions.

### 4-6x 500m/6min

The goal is to stay in the A2 zone (SR 84-85, LA 6-7 mmol, RPE 16-17), the athlete should try to make constant times and instead of growing the intensity into A3 rather try and attempt more sets in the same zone. Rest period is 6min, so the athlete doesn't carry over too much fatigue from one set to the next. 3-4 sets for youth, 4-5 for juniors and 5-6 or more sets for elite paddlers. Physiologically the intensity is around  $VO_2max$  and the speed is obviously higher than in example 1. Suitable for preseason sessions and maintenance work during the season.

## Zone A3

### 2x 750m/10'

Constant speed hard and fast efforts close to race pace (SR 92-96, LA 8-9, RPE 17ish). 2 sets for juniors, 2-3 sets for elite males. Intensity is above  $VO_2max$  and we are deep into the anaerobic zone already. We use such sessions in late preseason, but mostly in the competitive season.

### 3x 500m/10'

Constant speed hard and fast efforts close to race pace (SR 96-100, LA 9-10, RPE 17ish). 2-3 sets for juniors, 3 sets for elite males. Intensity is above  $VO_2max$  and we are deep into the anaerobic zone already. We use such sessions in late preseason, but mostly in the competitive season.

## Speed Endurance Zone

### 2x 250m + 2x 200m + 2x 150m + 2x 100m/8'

A very hard session all done above race pace (SR -, LA 10-12, RPE 17-18). As the fatigue accumulates, the sets get shorter in an attempt to keep the average speed as high as possible. On this level of intensity very often the athlete will start to compromise the technique in order to complete the task. The session is over as soon as the speed starts to decrease drastically or the technical execution steers away from the goal one.

### 2-3x 300m/10-15'

A very hard session all done above race pace (SR /, LA 10-12, RPE 18). The session demands absolute focus and extreme mobilisation of physical and psychological resources. Thus it is very demanding despite its short nature. On this level of intensity very often the athlete will start to compromise the technique in order to complete the task. The session is over as soon as the speed starts to decrease drastically or the technical execution steers away from the goal one.

## Speed Zone

### 3-5x (100m flying start/5' + 50m standing start/4')

A session where the athlete works on max speed and max acceleration from standing start.

The session is over as soon as times over both distances start to visibly slow down – or at the moment when the athlete is not anymore sure he/she could improve the times or technical execution in the next set. 3-4 sets for juniors, 4-5 sets for elite males.

### 8-10x 100m

A simple session where we can compare a lot of parameters through set to set and learn together with the athlete what suits him/her more, what works best technically or where improvements or changes need to be done. The session is over as soon as times over both distances start to visibly slow down – or at the moment when the athlete is not anymore sure he/she could improve the times or technical execution in the next set. Approx. 8 sets for juniors and 10 sets for elite males.

### **Race Pace Zone**

1x 1000m + 1x 500m/30'

2x 200m/30'

*It is a race simulation practice. The athlete needs to be rested and well-motivated to be able to properly focus for such an effort and mobilise all the necessary mental and physical strength. Such a session will clearly highlight all the athlete's week and strong points as well as the opportunities for future improvements. Sparing partners are a very welcome addition on such sessions. We don't usually perform such sessions more than once per week (mostly in the racing season).*

### **Stroke Energy Zone (power)**

5x 750m/6' with a medium sized external resistance on the boat

Strength endurance session performed in a similar fashion as the Zone A2 sessions. *The goal is to stay in the A2 zone (SR 82-84, LA 6-7 mmol, RPE 16-17), the athlete should try to make constant times and instead of growing the intensity into A3 rather try and attempt more sets in the same zone. Rest period is 6min, so the athlete doesn't carry over too much fatigue from one set to the next. Physiologically the intensity is around  $VO_2max$ . Suitable for high level junior paddlers and senior paddlers.*

12x 50m/every 5' with a large sized external resistance on the boat

Power endurance session performed in a similar fashion as the Speed Zone sessions. The athlete needs to be warmed up and fresh as to maximize the effect on power and technique and minimize the possible injuries that may occur at these intensities.

8x 150m following a metronome @ SR 40, 60, 80, 100, 120 or 140; trying to reach the finish line with the fewest possible strokes

This is a session where we try to maximize the DPS (distance per stroke/energy per stroke). With this in mind the paddler has to maximize most of the stroke parameters (radius, inertia, transmission, working angle, %WT). The coach has to keep in mind this is only a drill for power development and that the athlete will never race using such high DPS and maximized stroke parameters. The drill only serves to give the paddler more margins.

### **Technique drills**

Technique drills can have a positive impact on the technique and efficiency only if the paddler and coach clearly understand the goal of each drill, execute it properly and use them appropriately. During drills the paddling should always stay smooth, rhythmical, aligned and centered; keeping the posture, body connection, timing and % water time unchanged. The execution should be clean, sharp, dynamic and most of all effortless.

### **The ABC**

Stop before Catch

*Just before the blade touches the water for the next catch the paddler freezes the movement for a moment – in full rotation, at the extreme amplitude point of the stroke. We try to teach a perfect setup of the 'catch-frame' and the core control, mobility and balance for this position. Can be done every stroke (very hard), every third or every fifth stroke.*

### Stop during Setup

*The paddler stops in the middle of the setup phase when the shaft is parallel to the water at approx. eyes level. The athlete focuses on the upright trunk position; core and pelvis rotation; re-assess the press with the foot on the side of the previous stroke and the pull with the foot on the side of the next stroke – all with the purpose to rotate, pre-stretch the hips and re-align the body for the next stroke. Can be done every stroke (very hard), every third or every fifth stroke.*

### Swing

*The paddler stops before going into the next catch – swings with the paddle out of the water and arms extended to the side of the next stroke and then to the other side – after that he/she continues with the stroke on the side where he interrupted the action. The 2 swings shall originate from the legs; the whole swing being done with the legs-core-shoulders-arms as one block. The drill teaches connection of body parts, full body rotation, balance and rhythm.*

### Top hand Out and back

*The paddler stops during the setup phase just before arms falling into the catch position. The top wrist then travels outwards until the top hand is extended – and back into the starting position for the drill. The top hand excursion can be done once, twice or very dynamically. The drill is teaching the 'catch frame' position and balance in frontal plane (the movement of top hand is trying to challenge the balance).*

### Easy-Hard stroke

*2 light strokes followed by 1 powerful stroke or 4 easy strokes followed by 1 powerful stroke. The challenging part of the drill is not only the sudden powerful stroke from a relatively low speed of the boat, but also the stroke after the powerful one when the paddler has to try very hard to stay aligned and compensate correctly the inertial forces in the system. The drill represents a great game of balancing all the forces present in a stroke cycle.*

### One sided strokes

*Repeated strokes on the same side of the boat. Full pulling phase followed also by a complete exit phase with the action stopping only when the pulling hand wrist reaches the height of the eyes. Only then the paddler stops and returns back into the catch position almost following the stroke backwards (above the water). After the paddler has mastered the basic execution the game is as follows: the paddler takes speed and switches to one side strokes once the boat is gliding, he/she then tries to keep the boat gliding as long as possible – usually the boat loses the glide much before the 10<sup>th</sup> single stroke. The paddler regains some speed again and continues the game on the other side.*

### We also use the following drill groupings

**Balance drills** (balance has an often neglected huge role in technique execution)

**Playing with stroke parameters drills** (the 9 stroke parameters from the book by Andrea Pace on our Technical resource page)

**Children drills** (drills adapted for use with children and beginners)

**Imitation drills** (imitating champions, mistakes, over-emphasizing certain parts of the stroke etc.)