LETTER FROM THE LEAGUE COACH
November 1st, 2009

The following is a copy of a letter emailed for coaches who asked for assistance in preparation of the LONG DISTANCE CHAMPIONSHIP.

The races are on – you are in competition – design and deliver fun, progressive and most of all beneficial work outs to your eager swimmers who will perform according to your professional input. The recommendations should be a useful guide especially for those who attended the coaches' clinic.

"Since the beginning of the season, I am sure, you have achieved by now with your swimmers the objectives of the General Endurance Period (6-8 weeks-the foundation of your season) which were condition, strength, flexibility, stroke mechanics and the mechanics of turns and starts (diving phase).
As you already had some competition, you already mixed your work outs with controlled and limited sprint trainings, like
- Spr 1-Lactate Production (high intensity, fastest possible 4-6 x 50's with 3-5 min. activie rest between the 50's),
- or Spr-2-Lactate Tolerance (2-3 sets of 6-10 x 50's at race pace of f.e. 100's with 30-45 sec rest interval and 3-5 min active rest between sets),
- and Spr-3 Power Sprints (8-12 x 12 1/2 on 45 sec from racing start dive and turns plus 12 1/2 m sprint.)

The main focus now should be on the final preparation of the Long Distance Championship. Structure the weekly plan to alternate Freestyle training days with IM training days and change the training objective every day. So you would begin with Freestyle in basic endurance (End-1), followed by an IM day, then a Freestyle day in threshold endurance (End-2) followed by an IM day, and last again a Freestyle day in overload endurance (End-3). Motivate your swimmers in that you explain to them that they can only fully benefit from this type of training plan if they attend ALL sessions.

For basic endurance (End-1), have your swimmers swim long distances of Freestyle of up to 1500 or 2000 m at aerobic - 60 to 65 % effort - holding steady pace, or slightly increasing speed for the second half of the distance, maintaining best possible technique, regular breathing rhythm (*) and above all perfect or near perfect turns followed by long streamlined under water recovery or, as we term it, the diving phase, through the entire distance. See to that the swimmers do not start out too fast and fall technically apart and swim a slower second half of the distance. All turns must be maintained smooth with no breathing when emerging from the water. To have your swimmers swim these longer than race distances also contribute to confidence psychologically.

Basic endurance days can also comprise a substantial amount of kicking. Kicking is the backbone of any good Freestyle. Swimmers must have a good kick regardless to the length of the race, from 50 to 1500 m. Ankle flexibility will increase through a substantial amount of kicking exercise and also benefits the other strokes.

Kicking sets can be done with and without boards. Other variations include the vertical kick (don't sit in the water!) The 10/3 - 10/3 (10 kicks on the side, 3 long Freestyle strokes to end up on the other side, 10 kicks on that side and so on...) is fun because the swimmer gains good speed in the 3 full strokes. it is also good to bring short distances of faster/power kick into the program.

Following are some basic training samples. It should be easy for you to alter for specificity for your swimmers.
An example for threshold endurance training (End-2) would be the following:

Swim 10 - 15 x 100 or up to 150 m repeats with 20 to 30 sec rest (depending upon the distance). Swim each repeat at 70-75 % effort.
Or Race Pace training f.e. 15 x 100 m with 15-20 sec rest, or 8 x 200 m with 40-50 sec rest. Swimmers must be close to their 1500 m best time per 100 m. (Divide 1500 m time by 15).

An overload endurance (End-3) i.e. maximum VO2 training sample could be:
2 or 3 sets of 3 - 4 x 250 to 300 m with 45 to 60 sec rest between distances and up to 5 min active rest between sets, at the fastest possible average speed for the entire set distance. This method of training needs close supervision and control and should not be practiced more than once a week with experienced swimmers who do not miss any training.

400 m Individual Medley:
Transition IM's are fun and offer the possibility of plenty turn practice - stroke and transition turns.
3 – 4 x 200 m Butterfly/Backstroke (100 m each)
3 – 4 x 200 m Backstroke/Breaststroke (100 m each)
3 – 4 x 200 m Breaststroke/Freestyle (100 m each)
The sets should be swum at 70-75 % effort with about 25 to 30 sec rest. This would be considered threshold endurance (End-2).

Another suggestion would be the following, scripting the set in accordance with the energy metabolism taking place during the race:
Butterfly at the beginning of the race to obtain easy, but strong speed, should be trainined as lactate production (Spr-2). Swim 4 - 5 x 50 m Butterfly with 3 - 5 min active rest between each repetition. Each 50 should be swum as fast as possible. The active rest is always done ideally in kick/drill /swim combinations in the same stroke at 40 -45 % effort to truly recuperate. This is followed by
Back- and Breaststroke in the middle of the race and requires top endurance and can be trained at basic, threshold or overload endurance. A basic endurance example would be to swim 400 - 800 m Backstroke and 4 - 6 x 100 m Breaststroke with 15 sec rest interval at 75 % effort. Then Freestyle as the strong finish at the end of the IM race can be trained in lactate tolerance (Spr-1), or sometimes overload endurance the following way:
If you choose lactate tolerance, swim 8 x 50 or 75 m with 30 - 40 sec rest, or preferably 4 - 6 x 100 m with 45 - 60 sec rest intervals at race pace, or slightly faster than race pace of the Freestyle leg of the 400 IM. It is very interesting and highly beneficial to request your swimmers to kick extra strong in the second 50 or the last 25 m.

The above is a limited variety, but helpful. You can think in these terms and plan and compose other sets. Swimmers like changes and their concentration is challenged by presenting different programs. I firmly believe in taking off pool time to explain the program, the objectives, the effort, rest intervals/active rest intervals, etc. The swimmers must know what they are doing and why they are doing it. Results will be better. The variety of programs you present, building one upon the other, might also achieve that swimmers will make an effort to attend all training sessions which is an important purpose.

(*) Correct breathing technique - which is one of the basic five mechanics of the biomechanical stroke - is indispensable in all strokes and distances. Failure in proper breathing mechanism leads to anatomic and mechanical deficiency in training and especially competition.
- Emphasize regular breathing rhythm, either alternate breathing or conventional one side breathing. Irregular breathing pattern "irritates" pulmonary and cardiac functions.
- Avoid deficiency in exhaling, i.e. holding breath partially and breathing out too late either when lifting or turning the head whilst swimming, or at "breaking out" after the turn which reduces fresh oxygen supply. Also the opposite would be wrong, i.e. breathing out from the mouth under water (too fast). Both incorrect methods are causing THORAIC PRESSURE signaling to the brain oxygen debt and leading to hectic strokes, premature fatigue, entailing deceleration - all working against the swimmers well being and budgetary strength.

- Proper breathing at turns, i.e. in the approach to the wall, but especially after the turn taking a breath at the critical phase when "breaking out" adding to resistance and causing a very noticeable deceleration. This has a particular bad effect in the long distances of 800 and 1500 m Freestyle events.

How to breathe correctly? - Whilst swimming - regardless to the stroke - there should be a REGULAR rhythm. Exhaling begins as the face returns into the water and should be done slowly and controlled completely from the nose, lasting the exact amount of time until the face prepares again to be lifted or rolled to the side, to take a deep breath through the mouth before returning to the water. This rhythm, at regular intervals, is to be changed gradually as the swimmer approaches the wall, in that the exhalation/breathing takes place more profoundly so that the swimmer can last long enough for the turn AND the proper underwater work from the wall to the break out.

The regular breathing pattern also changes in the beginning and especially in the end of a race. A swimmer then omits to breathe to gain speed. However, this is an individual achievement and should be trained so that the swimmer is "solid" in performance."

Best of luck and see you in Lignano!

Peter

LONG DISTANCE = FUN – FOCUS – DISCIPLINE