

## Starting The Season Right

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With the new season just around the corner you've probably already begun your usual pre-season routine – preparing your team roster, making schedules and, hopefully, planning your season. The goal of this article is to identify challenges and offer some tips that will help make designing and executing your new season more efficient, more productive, and more rewarding for both you and your athletes.

A quality season plan requires careful preparation and balance in the selection of appropriate training strategies during different phases of the season. With high school season lengths as short as they are (11-14 weeks) there is barely enough time to cover all necessary elements leading to a successful development of athletes' abilities and really very little room for error if you truly desire to assist your athletes to achieve their athletic goals.

Creation and execution of an optimum season plan requires a lot of discipline and knowledge, which is not readily available to coaches due to a simple fact that longitudinal studies related to a change of athletic performance under different training strategies are very difficult to stage. Super Sport Systems is arguably the leader in that field of science and its tools are among the best available to coaches today.

Defining your goals and making them clear to your team is the first step you need to make to have a successful season. If you and your team are in this for the long haul, you want to monitor the progress and performance of your athletes from season to season. If you push your athletes too hard and too fast, or not hard and fast enough, you will prevent them from ever having any future wins. It is vital to understand and appreciate the final results achieved by season's end, and see a steady progression in your athletes' performance from season to season. Also, exposing your athletes to a regular regimen of structured training will build an invaluable habit in them, enabling them to continue to develop as a swimmer well past their high school years. These are important goals, easily attainable, and well worth pursuing. Unfortunately, they are easily overlooked, if not totally ignored.

Once you've defined your goals, check your team roster and inventory of your talent according to their previous achievements, abilities, and potential. It is a good idea to list previous individual best results for each athlete and goals for current season. You may further supplement this list with tests results of different components of athlete's preparedness, such as strength and endurance tests and physiological reaction to exercises of different intensity, starting with working Heart Rates. Result analyses alone will immediately tell you about speed and endurance reserves in relation to best distance (check Super Sport Systems Result Evaluation page). Then, based on the knowledge about the initial (expected) conditioning of the athlete and the length of your season, you will need to determine:

1. Initial levels of training intensity (paces for each energy zones) **See table 1.**
2. Volume progression (where to start, what will be your peak volume and when)
3. Training exercises (selection of effective sets used for development of specific qualities and functions. Please note that the sets by itself are not really useful

unless they are connected with specific time in season and particular speed and rest intervals which should be defined on individual level).

4. Training strategies (combination of training volumes in each energy zone each week and within a week).

### **Where to start / present athlete's abilities**

Proper evaluation of an athlete, however, especially at the beginning of a season, is not an easy task. Several methods for defining an athlete's initial condition are commonly used, including a "test swim". However, "test swim" results may not be truly indicative of an athlete's actual abilities, especially if he was not trained properly between seasons (which is typical).

A good way to determine initial training intensity for your swimmers is to base it on a fixed percentage of the maximum speed achieved at the end of the previous season (assuming that the athlete supported reasonable form and was free from major illnesses). From our studies and experience we recommend starting your athletes at a ten percent reduction from their best result for their best distance in their last season. Using this approach to determine target speed for the first training week is perfectly safe, and typically gives enough time to roll into a season with appropriate starting speeds equal to "adaptation threshold" (the training load - exact combination of speed and volume - which would cause optimum positive shift in athlete's condition).

### **Determine appropriate training volumes**

When determining training volumes, you need to consider an athlete's ability as well as what will be needed to develop his performance. There are quite a lot of generic recommendations related to swimming volumes for each age group. By definition such recommendations are made on a "group approach" when you apply one volume to a group of athletes. Yet another approach – is to connect the individual present and goal results with training volumes necessary to achieve such results. This method a bit more complex but it produces more precise definitions of training volumes.

### **Sets and Intensity selection**

Sets (training exercises) should be selected according to which part of the season you are in, and which aspect of training you are trying to develop. Choosing these appropriately will determine whether you will succeed or fail in your season objectives.

- Distance Sets (first phase) develop aerobic capacity
- Interval Training (second phase) enhances VO2 max
- Repetitive Sets (last phase) develop maximum speed

**Distance Exercises.** The main portion of work in any training process usually involves aerobic activity (up to 60-70% of overall training volume). Since aerobic exercises have many combinations, it is wise to divide them into two major groups. The first group consists of exercises executed at the aerobic threshold level and requires a minimum of approximately 30 minutes of continuous work. The second group takes place at the level of lipid exchange and requires a 45-90 minutes or continuous effort.

Example ( Energy Zone 1a): 1500 X 2 @ <140 BPM\* HR (Heart Rate requirements will vary depending on number of factors between athletes and even in one athlete in different periods of preparation).

**Interval Exercises:** Work is usually performed with 15 to 30 seconds of rest between repetitions. Such exercises are executed at a relatively high level of intensity and stimulate additional positive physiological reactions. There are four major types of Interval Exercises:

- Slow Interval Training; typically executed in Energy Zone II or III
- Interval Training for the achievement of maximum oxygen consumption
- Interval Training with the phenomenon of "debt tolerance".

**Example (Energy Zone III a-b):** 200 X 5, 15-30 seconds of rest ~ 90% from **current** maximum speed.

**Repetitive exercises.** Workouts are usually executed with a high rate of intensity (greater than 90% of maximum speed at each distance), with rest periods selected to allow a maximum number of repetitions at the desired level of intensity. These exercises have limited application since adaptation to high rates of intensity has several limiting factors.

**Example (Energy Zone IV):** 100 X 6, 4 min of active rest, relative intensity > 90%.

You can reach most training effect when training exercises (sets) are close to individual "adaptation threshold". According to this approach every set, regardless which energy zone it is – should be administered at individual threshold level (not to be confused with anaerobic threshold). If you give a dose, which is too high – this may lead to inadequate recovery and, as a result – over training. If the dosage is too low – you are not utilizing the adaptation potential of your athletes and thus preventing them from achieving their personal best. The process of proper training load selection may be difficult without proper tools and testing. Once again, 3S tools are designed to address this issue with very high level of precision.

## **Selection of Training Strategy**

The main problem observed in youth sports year after a year – is a lack of attention to aerobic component development. This situation is partially caused by a very short duration of high school season. Coaches are pressed by time and hurry to introduce high intensity sets without building proper foundation. While some progression in results is still observed, the cost and damage such approach inflicting in athletes is often irreparable. Proper attention to aerobic component is hard to overestimate.

An essential element of season planning is to define the progression of relative or "partial" training loads for each intensity level / energy zone during the different phases of the season. The following phases are typically present in each season:

1. **Pull-In:** This phase generally lasts 1-3 three weeks, depending on the length of your season. During this time the intensity of training and the general training volume remain low. It is designed to prepare your athletes to accept upcoming training loads in a regular, structured training format. Longer low intensity swims (Energy Zones Ib and Ia exclusively) with accent on technical drills and dry land. In fact this time in the season is one of the best for building different components of strength prior to its transition into water.
2. **Accumulation:** During this phase training volumes and intensity increase constantly. You must define starting volumes for each energy zone as well as the peak for each zone (peaking may not and should not happen at the same time).

Some competitive activity is allowed during this period, but it must count against training in the appropriate energy zone.

NOTE: Meets during this period should be treated as preparatory and focused on solving particular tasks (such as swimming second quarter / half of the distance faster than the first one, etc.). It is important to realize that you are still in a “building” mode. Your athletes will not be ready to perform at their maximum capacity at this point.

3. **Realization:** This phase puts theory into practice. During this part of the season

- Training volumes decrease
- Intensity of exercises continues to grow
- Working distances in special key sets remain constant

4. **Taper:** This is typically the last week of the season. Interpretation of taper differs dramatically, depending on which training strategy is applied. Generally, low training volumes and recovery type of sets are used with the hope that reduction of training volume will produce a “miracle” and the athletes will continue to perform at their season’s best.

As you well know, preparing a quality season plan is no simple task. And getting your athletes to follow it is no picnic either. We hope some of these tips will prove to be as useful to you as they have been to other successful coaches. At 3S we’ve worked long and hard to make season planning easy for you. To find out more about our tools and how it can help you and your team enjoy a successful season, please visit our website <http://www.SwimmingTraining4Life.com> or call a 3S experts at 804-519-1201. And don’t forget to ask about your special NISCA discount.