

A Stress Strategy For Coaches and Judges

By Duke Zielinski

A 5 Step Calming Process

The 5 Step Calming Process can be learned quickly and used to neutralize negative stress in real world situations. Stress can tighten muscles and unleash negative emotions so quickly that it immediately begins to affect performance and mental processes. Once these effects have begun it is more difficult and time consuming to reverse them into positive influences. The key is to catch the first sign or signal of stress and trigger an immediate control response.

The 5 Step Calming Process takes time to master. Like any new skill, at first it must be practiced consciously, until it becomes automatic. With practice, you will be able to notice the first signs of stress and prevent the negative effects. You will begin to welcome the positive changes to your physical, mental and emotional well-being.

The 5 Step Calming Process can be used at the key performance point of any kind whether it is in sports, school, business, social situations, driving, etc. Instead of reacting to challenging situations in a negative manner you choose a positive response.

The key to the power of a calm and clear mind is applying the process precisely at the beginning of each stress situation. With practice, you will master the mental control to form positive responses and seek solutions to challenges in your life.

BENEFITS

- Gain control of thoughts, feelings, and actions
- Instantly stop negative effects of stress
- Buffer between worry and guilt
- Gain inner control of your mind, body and emotions whenever peak stress situations occur

- Preserve your best physical and mental capabilities in the present moment
- Respond positively to challenging situations

The 5 Step Calming Process

1. Breathing
2. Positive Facial Expressions
3. Balanced/Centered
4. Scan
5. Mental Control

You must use all 5 steps as they all work together. The goal is to be skilled enough to think clear honest thoughts instead of distorted ones.

Practice going through The 5 Step Calming Process slowly. Visualize or picture yourself going through the process slowly. Once you feel comfortable visualizing the process, visualize yourself going through the 5 step process as you face different challenging situations.

Steady breathing, smiling, balanced, good posture, controlled emotions, clear mind, and looking for solutions, you are more prepared to meet the challenges and uncertainty of the future.

Good Luck!!

Flexibility Training

by
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Flexibility in synchronized swimming
(Russian Synchronized Swimming Federation)

The level of flexibility is delimited by *anatomical* flexibility of the joints.
Active flexibility is the ability to perform movements with the large amplitude due to the muscle activity.

Passive flexibility is the ability to be flexible due to the action of external forces.

That's why we basically begin the development of the flexibility with the exercises aimed at the development of the *passive* flexibility in the gym, i.e. the exercises that use the weight of the athlete's body, momentum, actions of coach or partner, weights, etc.

The best period for development of the flexibility is up to 11 years of age. In that period good results in flexibility could be obtained spending 2 to 3 fold time less than otherwise. It's important to check the level of flexibility permanently. Flexibility tests should be carried at least once in a quarter. The tests should be simple, informative, not requiring any special equipment. Each coach should select to his own choice the flexibility tests for the back, shoulder joint, coxa joint, ankle joint, and should keep records of flexibility changes for all athletes. Every athlete should keep their own training logs, put down all the test results and follow the progress dynamics.

The flexibility tests could be carried out in:

- *dynamics* (increasing and decreasing the amplitude while changing the exercises rhythmically),
- *static* (exercises in which the muscle is stretched to a certain extent),
- *combined* (for example a swing of a leg, after which the leg is kept in the upper point of the amplitude).

How much time a day is it necessary to practice in order to develop the flexibility?
It all depends upon the level of flexibility development. The worse the flexibility is the more hours per day! After the coach is satisfied with the flexibility of her (his) student, less practice time will be required.

How much time a week is it necessary to practice in order to develop the flexibility?

The flexibility should be exercised daily and not only during practice time (for example the athletes with bad flexibility could sit in split position while reading books or doing their school home work).

How soon is it possible to see the results of your work on flexibility?

Purposeful daily practice of 1 to 2 hours of flexibility only yields a considerable improvement of flexibility.

The results of the studies show that in order to develop coxa joint flexibility 120 are required. The flexibility in the back – 60 days, shoulder joint flexibility – 30 days, elbow joint – 25 days, ankle joint – 30 days.

Does strength practicing reduce flexibility?

Flexibility development should go simultaneously with strength build-up. Any strength developing exercise causes reduction of the flexibility in corresponding joint. That's why complex exercises are necessary. They permit cyclic practice when different muscle groups and joints are exercised in turn.

The exercises should go in the following order flexibility-strength-flexibility.

Even when practicing only strength it is necessary to fulfil flexibility exercises both in the beginning and in the end of the practice.

This sequence lets you solve the problem of *active* flexibility development.

It's important to underline that synchro particularly requires *active* flexibility in water. In order to accomplish this several exercises in water are used during warm-ups (like Rocket split, arch position, sculling and submerging in back vertical position and etc.)

It should be reminded that the coach should permanently check up the flexibility and the strength with the help of tests every quarter. And the athlete should check up her own flexibility once per month.

**FINA JUNIOR WORLD CHAMPIONSHIPS COACHES/JUDGES
INTERNATIONAL CLINIC
August 26, 2001**

**BODY AWARENESS IN SYNCHRONIZED SWIMMING:
TRAINING TOOLS FOR FAST TWITCH AND SLOW TWITCH
MUSCLE MOVEMENT**

By Linai Vaz De Negri, Ph.D. - USA

Synchronized swimming is in constant evolution. Current choreography trends coupled with dramatic rule changes, such as elimination of figures at the senior level and more, have contributed to a shift in the course of the sport. This shift has catapulted the sport into a new territory – a territory yet uncharted and different. This “new territory” is clearly changing and influencing the athlete’s training, skills, and overall demands.

The sport today demands and utilizes:

- a) greater dynamic ranges of movement qualities and skills,
- b) greater variety of choreographical devices,
- c) greater usage of music and its possibilities,
- d) greater variety of athletic skills from its athletes.

In essence the overall demands on the swimmer’s body is bigger today than once before. In addition, the quality and the amount of required skills to succeed is greater as well.

One of the biggest changes has been on movement dynamics in the water. Today’s routines utilize movement in which changes between fast twitch and slow twitch muscle fiber happen more often and more abruptly than ever.

These abrupt and frequent movement changes require:

- a) greater core muscle control,
- b) deeper understanding of the mechanics of the body in the water,
- c) greater body awareness,
- d) an accurate understanding of sculling mechanics and sculling placement.

Setting up a training regimen that is effective in face of these changes and evolution is critical. Those who keep up with the changes and not only respond to it but push themselves beyond their current consequences are going to be ahead of the game. To be “ahead of the game” one must clearly understand three important concepts:

- a) understand the overall and underlying biomechanical concepts that affect synchronized swimming,

- b) understand the importance of body awareness, "feel-for-the-water," and precise kinesthetic sense for synchro swimmers.
- c) Develop a sound methodology of training that respects and incorporates the above concepts into the training regimen

The Biomechanical Concepts Affecting Synchronized Swimming and its Importance:

The most important biomechanical concept related to synchronized swimming and movement through the water is the concept related to "floating" and its relationship between *buoyancy* and *specific gravity*. These two elements surrounding the concept of floating govern all of the responses of the synchronized swimmer's body while performing movements in the water. In addition, there are three other concepts that influence synchro movements in the water: water pressure, water density and water flow. These concepts are related to the characteristics of water.

Floating -- As we all know, a body cannot be supported by water and it will sink either partially or totally until the weight of the displaced water equals the weight of the body. To float or to sustain a body in the water one must understand the relationship between "buoyancy" and "specific gravity" in the water.

Buoyancy -- Recognized first by Archimedes (287-212 B.C.) who stated its **Archimedes' principle** as "a body immersed in a fluid is buoyed up by a force equal to the weight of the displaced fluid." The upward force, that counterbalances the weight of the body, is called *buoyant force*.

Specific Gravity -- A term that describes the ratio of a swimmer's body weight to the weight of the volume of water she/he displaces. A lower specific gravity aids the floatability of the individual. The specific gravity of a human body is determined by its physical makeup. A body with greater fat content has lower specific gravity because fat has more volume for its weight than muscle tissue. However, the question of body density is more complex than simple fat content and it is primarily dictated by the swimmer's body composition. Body density is result of the relationship between lean body mass, muscle mass and fat content. Atwater and Roby (1984) had study the effects of Bone Mineral Content (BMC) in synchronized swimming. Their findings indicate that synchro swimmers tend to exhibit lower BMC and therefore have lower body density as well. However, their study could not point to a cause and effect response to such finding.

For the synchronized swimmer a balance between "*floatability*" and "*stability*" must be sought. It is here that the understanding of the concept of Center of Buoyancy and Center of Gravity must be mastered. An athlete will be most efficient when economically able to sustain the body in perfect balance. The understanding of the workings of the biomechanical relationship of floating and center of buoyancy and center of gravity is critical especially during switches between fast twitch and slow twitch movements.

Center of Buoyancy -- It refers to the point that represents the center of the body's volume. When submersed or partially submersed in fluid that point is generally located in the chest area

Center of Gravity -- The point where the weight of the body is distributed evenly or simply the point of balance in the human body. It is lower than the center of buoyancy and generally located in the hips area. The distinction is that the center of gravity will move according to the body's shape, position, change of position and angle.

The Balance Sought Between C.B. and C.G. -- The key to master figures, body positions and other skills in synchronized swimming is the understanding of how *dynamic equilibrium* ("floating") is achieved in the water. The manipulation of the body in the many different synchro positions and ultimately the anticipation of the body's response to abrupt movement and movement between fast twitch and slow twitch is crucial. This understanding is achieved by grasping the concept of *dynamic equilibrium* inherited in the relationship between CB and CG.

Adrian and Cooper (1994) state that "a swimmer will float in a position in which the center of gravity and the center of buoyancy coincide or are in vertical alignment" (p. 449). The body tends to rotate or somersault into this alignment until it finds balance in the water. Therefore, it will always be the natural tendency of the body to seek this position unless other forces are applied and acted upon.

These "other forces" are the tools for synchronized swimmers who seek to find effectiveness and accuracy in movements in the water. The important aspect to understand is that these two points of reference are highly susceptible to manipulation. The CB and CG are changeable and controllable. It will depend on the athlete's body awareness and skill to control and most importantly to anticipate what the responses and manipulations should be to achieve mastery of body positions and movements in the water. There are only two major ways in which to manipulate the body to find balance:

- a) manipulation of the center of gravity and/or center of buoyancy
- b) placement of the sculling

Although this information is not new what I present here is a new method and a new view. This new method is designed to help achieve the desirable control in synchronized swimming more easily.

Manipulation of the center of gravity is **CRITICAL** in synchronized swimming. It is the ultimate key in better stability, floatability and accuracy in all movements in the water, especially highly intricate and dynamic movements, such as in quick transitions between fast twitch and slow twitch movements.

The concept of "Anchoring"

This concept is a new tool to easily control and manipulate the dynamic equilibrium of the body in the water. To find dynamic equilibrium in the water is arguably the most challenging aspect of synchronized swimming. It could be argued that all maladies and difficulties in the way of any synchronized swimmer (of any level from beginner to elite) is to find ways in which to challenge gravity and achieve balance in the water.

Unlike competitive swimming the challenge of physiological greatness is not as crucial in synchronized swimming. Unlike gymnastics, the challenge of defying gravity in synchronized swimming is coupled with being immersed in a highly unstable medium where stability is never present. And unlike figure skating the challenge to find stability in a unstable medium is done and supported by the arms and not legs only.

All of these elements combined make synchronized swimming a very special and unique sport where coaches and athletes have to find specific answers in unlikely places. I contend that the answer to the synchronized swimming challenge lies in the question of achieving *dynamic equilibrium*. The quest is to find ways in which to challenge gravity and achieve balance in the water.

The concept of "anchoring" achieves that and is designed to help athletes and coaches alike in this quest.

ANCHOR-ING -- The concept of anchoring is important because it enables athletes to become in control of their figures and technique work in the water. It allows for the response and prevention to "weight shifting" in vertical positions. Learning to minimize and/or prevent unnecessary weight shifts in movements in the water is crucial. Anchoring is the engagement of the pelvis and the "sending in" of the center of gravity, approximating the CG to the CB. The "shortening" of the torso (core body) "anchors" the body and counterattacks the forces of instability. The anchoring exercise utilizes the crane position as its measure. In its simple form it entails teaching the athletes how to keep the weight of the body evenly distributed in the stable part of the movement (be fast or slow twitch).

Body Awareness, "Feel-for-the-water" and Precise Kinesthetic Sense:

Synchronized swimmers more than any other athlete depends on body awareness to develop its skills. Synchro skills are elaborate and are highly dependable on accurate "messages" and precise body signals. To achieve perfection in the water one must have a highly developed kinesthetic sense and awareness of the body. Swimmers are asked to perform detailed skills and precise angle of movements while upside-down, in perfect alignment, and immersed in water. Greater body awareness or "feel-for-the-water" will make it possible for the athlete to "manipulate" the body and its balance while immerse in the unstable medium of water.

Body awareness is the ability to precisely rely on body signals such as: kinesthetic sense, tactile sense, sense of energy, and proprioceptive sense. It is the ability of being mindful and conscious of one's body.

Proprioception refers to the awareness of movement through specific receptors located in the muscles, tendons, joints, and vestibular apparatus. It is the body's general inner sensory communication system.

The kinesthetic sense (kinesis= motion, and aesthesia= to perceive) is also referred to a "kinesthesia" and as "movement sense." It includes the sensations of tension, weight, quality, and position of the body in movement.

Synchro skills depends on this kind of feedback in order to aid the quest for excellence. Body awareness will increase accuracy, efficiency, and control in figures and all technique work in synchro.

A Training Method that combines key biomechanical concepts and body awareness:

To successfully achieve the points already discussed one must plan a training regimen that encompasses the key elements of biomechanics as well as include daily activities which seek to develop greater body awareness. The key to that planned regimen is the inclusion of methodical work to develop "anchoring" mechanisms in the athlete's bodies. The main area of concern is to develop *core-body strength* and specific drills/technique work in the water. Here, it is critical to understand the real role of the trunk in synchronized swimming.

The role of the trunk in synchronized swimming is two fold: a) stability, and b) power generation. The trunk is the most massive segment of the body. Because of the location of the center of gravity it is of great importance in almost any physical activity. Effective training of the trunk (core-body) is important because not only the center of gravity is located there but also because of its relationship with the center of buoyancy and how vital that area of the body is to synchronized swimming. Almost all movement in synchronized swimming is initiated by this segment. All power and explosive action in synchronized swimming is generated by the trunk.

The core (trunk) is also critical in all fast twitch and slow twitch muscle movements in synchronized swimming. It is the core (trunk) that creates the desirable stability to these fast and dynamic movement trends of the sport.

In synchronized swimming under the current reality and trends it is critical to develop a training regimen that incorporates the specific biomechanical principles related to the sport as well as to include the development of the ever important concept of body awareness. The goals for a specific training regimen in synchronized swimming should:

- a) develop pure strength of core and trunk
- b) develop body awareness aspects that will enhance the "feel" for water and efficiency in utilizing trunk and core, i.e. manipulation of CB and CG
- c) enhance the understanding of underlying biomechanical concepts that affect synchro
- d) increase time devoted to technique and "skill" in synchro
- e) develop exercises that are specific to the sport and respect specificity of training
- f) develop a system that enhances responses to fast twitch and slow twitch movements.

A training regimen and program that seeks to incorporate these elements will succeed in its pursuit of excellence in synchronized swimming. The very first step in that direction, however, must be to understand the importance of the role of the biomechanical concepts related to the sport as well as the importance of developing body awareness to impact overall skill and technique.

Debriefing Judges After The Competition
by
Sofeya Sarwat, Egypt

We all know our problems with judges in general are:

1. Limited knowledge and experience
2. Short concentration span and lack of focus
3. Biasness
4. Pre-judging

In the beginning mothers and friends were our only judges in Egypt. Despite their hard work and willingness to learn problems 1 and 2 persisted for two decades. Problems 3 and 4, on the other hand were non existent. To address problems 1 and 2 it is now a pre- requisite to be an ex – synchronised swimmer to qualify as a judge .This decision taken some twenty years ago proved to be extremely successful.

Another area of concern that is receiving little emphasis worldwide is that of **“Difficulty”** This compulsory aspect of judging is being stressed upon with the more advanced judges in Egypt. Discussions with judges prior to the event is a must. Every judge is required to take up a sheet of paper where she is expected to trace a pool pattern, take note of difficulty, execution, highlights, etc.... When they come off their chairs, the judges get together with this “paper” and discuss their categorization. This is healthy and becomes a habit, and is very beneficial.

“Score Range” was my next area of focus. The three cardinals of judging are impressed on our judges **“Look”**; **“Analyse and Score”** and above all **“Remember”**..

We now come to the point of **“Observation”**. As you all know the FINA TSSC established a system that we use till today, to monitor and evaluate the judges.

In Egypt, the FINA evaluation system, Mary Black’s evaluation sheets and computer evaluations are being used. Beginner judges are monitored closely for five years, with observation in every competition. This, plus the fact that they were ex-swimmers, allowed these judges to improve rapidly. The judges are able to identify their weaknesses and therefore develop. At first these judges had a tendency to judge only from a swimmers point of view. Later as a result of the observations and discussions with them, a judges’ “view” emerged.

For Intermediate judges, judging takes on a different concept. Through observation, the judge is guided or channelled to think more in favour of the sport, than in just the technical aspect, hence preparing the judge for the next step, International judging.

Today we are in the process of establishing a '**promotion and demotion system**' through personal observations, not the computer evaluation. This, we believe, will encourage the judges to avoid the problems referred to in the beginning, to work hard and avoid getting 'rusty'.

I am certain that observations have aided judges to become more focused and curbed any inclinations to be biased, or to prejudge, but we all know there are exceptions to the rule. Some judges give in to certain pressures. Some judges are clever and calculating, while others just want to get a good observation report so keep to the happy medium!

Let us all put our hands together to abolish any actions that may harm this beautiful sport of ours – the champagne of aquatic sports.

Routine competition

Technical Merit (artistic impr.)

1($\bar{1}$) - vertical (double vertical)

{(ξ) - twist (double) [{ } bend twist]

{(ξ^2) }(ξ^2) - spin, spin up

{.} - twist different side

+{.}{.} - level of water

↓(↓ 2) - descends

V - Rockett $\sqrt{\text{Split}}$, \downarrow , ξ - Rockett split (vert)

^(\otimes) - jump

→ - move, transitions

{V - speed

{T - tempo

R - rhythm

S, r. - short rest

r - rest (for example on the back)

S - no synchronization

A - asynchronous movements (team, duet)

p - pattern change (team)

X - open (close) rotation

E - eggbeater (hands above water)

↑ ↓ - lifts, throw...

B - ballet leg

∩ - split

W - wait music

☺ - cover pool

example

compare!

①

$$\downarrow, \mathbb{R}, \underbrace{11+^2 11}_{\rightarrow} \xi, E, \underbrace{1^2 1^2}_{\leftarrow} +^2 X, \uparrow, E, S, E, \wedge$$

$$\underbrace{1^2 +^2 1^2 \xi^2 1 \xi^2}_{\leftarrow}, \mathbb{R}, E, S.$$

②

$$\underbrace{11}, v, v, \rightarrow \underbrace{1^2 11}, X, \underbrace{1^2 \xi^2}_{\leftarrow} S$$

How do we debrief judges after an event in your federation ?

Miwako HOMMA, Japan

In Japan, although we sometimes receive judges' opinion individually after the competition, we don't have a particular system to get information from judges after each event. I believe that the debriefing system is very important to improve judge's ability and to develop our sport. For that, we need the chance to communicate with judges on their marks and general surroundings in the competition.

The following is just my suggestion how we should debrief judges in the future.

How do we debrief judges? / How do we communicate with judges?

a. A meeting for reviewing after each event

In Figure Skating, they have an event review meeting at the conclusion of each event. We also may have a short meeting to give general suggestion to all judges after each event in synchronised swimming.

b. A meeting for reviewing after the competition

This meeting will be held right after conclusion of the competition.

c. Short Questionnaire after the competition

If we don't have time to have a meeting, a short questionnaire may be helpful.

d. To ask individual judge's opinion after an event or a competition

We also can get information orally from each judge.

What do we communicate and discuss with judges?

a. After an event

1. Each judge should review individually referred to her notes or information sheet from computer. Each Judge considers her marking: a use of score range or a use of appropriate scoring categories to swimmers' performance, compared to the other judges of the panel. A point to notice is that a judge might have been correct in having marked differently from the other judges.

2. Referee/Commission/Observer give general suggestion to all judges. During a competition, we should refrain from any comment with respect to the competitors, which could have an influence on the judging of the present competition.
3. Referee/Commission/Observer give some advice to any judge who has shown bias or prejudice in her marking privately.
4. If required, a judge who finds her marks have varied from those of the panel, may explain to the Referee/ Commission/Observer the reason for her marking.
5. Well-trained judge may give some suggestion to any judge who has proved herself to be incompetent or unsatisfactory.

b. After the competition

1. Individual Judge's marks and Overall Judges' marks

Judges discuss their marks, a use of score range and a use of appropriate scoring categories to swimmers' performance in the present competition.

2. Competition surroundings for judges

Time schedule, Pool facilities, Pool condition,

Physical and Mental condition, Judges placement of each panel, etc.

Communication with judges and coaches after the competition

How & What?

a. A meeting for reviewing with judges and coaches after the competition

1. Judges give their general comments to all coaches concerning swimmers' performance in the present competition.
2. Competition surroundings : Time schedule, Pool facilities, Pool condition

b. Short Questionnaire after the competition

A coach makes a questionnaire to judges, and gets information what a coach wants to have.

c. To ask individual judge's opinion after the competition

If there is not a review meeting for coaches, each coach contacts a judge individually and gets advice from judges. A coach may ask a judge the reason for her marking as a feedback.