

**COMPETITION SAFETY FREEDIVER**  
**2007 by Sebastian Näslund**  
**Used as F.BIZ additions to the AIDA course**



**Theory (summary):**

- Know certain aspects of the rules. At ropeviolations, athlete behaviour e t c, you can be a reliable witness for the judges).
- Know the main aspects of handling oxygendevices. The theory of CPR.
- The antiballast set up, the design of a safe bottomplate, risks of a AB in motion.
- Thermoclines, currents, visibility evaluation.
- Signs communication within the team, surveillance and preparation.
- When to start, double safety, grab and holding positions, personal safety, self rescue
- Hydration, Packing BO, LMC signs, laryngospasm, the mind of a BO victim.

**Giving Oxygen**

In case of a blackout and/or squeeze oxygen will speed up recovery and reduce damage, specially in the case of lungsqueeze and/or deep blackouts where the victim has been unconcious for a long time. Oxygen will reduce bloodflow and diminish effects of squeeze and bleeding. The victim should not lie down, but sit with the back supported (half lying down). Legs should if possible be slightly higher than the floor.

**F.BIZ Advanced safety freediver (criteria):**

1) Safety dived 5 deep comps, done BTT in reality.

Exercises:

2) 25 sec hang at 30 meters.

3) One easy 35 meter dive.

4) Retrieve BO victim from 20 meters (BTT at surface). Twice.

**F.BIZ Expert safety freediver (criteria):**

1) Safetydived 10 deep comps, done BTT in reality.

Exercises:

2) 20 sec hang at 40 meters.

3) One easy 45 meter dive.

4) Retrieve BO victim from 30 meters. Twice.



### **Checklist** (supervisor or head safety diver):

- Is the O2 set up and working? Is the nearest hospital/chamber alerted?
- Are there communication possibilities with a hospital?
- Is there a evacuation vehicle on standby?
- Is there something that can be used as a stretcher?
- Has the medic arrived?
- Does the medic understand apnea?
- Is there first aid material present (cuts and wounds)?
- Is the bottomplate constructed to minimize possibility of entanglement?
- Do you have extra string, ducttape e t c.
- Has a weather forecast been checked?
  
- Is the warm-up area supervised by at least one safetydiver from 45 minutes before top?
- Has all safetydivers got a schedule?
- Does the safetydivers at the line have a working order?
- Is anyone carrying an extra lanyard?
- Have you repeated hand and verbal signals and working procedure with the judge?
- Is there any scuba/trimix on standby?
- Has the antiballast been set up and tried?
- Can it be pulled up by hand?
  
- Who will pull up the line by hand if needed?
- Are there any currents? Will they change? How will this affect the diveoperations?
- Who will release anti ballast at whos command?
- Check for thermoclines - inform judges and atheletes.
- Check for scubabubbles, possibility of deep trimix, check for midwater floating debris.

### **Selfsafety**

Keep an eye on each other (within the SD team), if in doubt about your performace speak to your safetybuddy, always hookbreath, if stressed: come up on your back, if stressed: remove mask on ascent, maybe even hood. Remove snorkel away from mouth on long dives. Stay close to the line if in trouble, use the line if in trouble.

Do not overbreath - contractions makes a safer dive. If in doubt of your capabilities or health status: tell your SD partner about this.

Drink a lot starting the night before, drink every hour. Have some carbohydrates in your stomach. Drink energy drinks or eat powerbars during long shifts.



## **Signals & Terminology**

Coming, turn, definite pull, unsure pull, touch, grab (but no pull) carabiner moving, line is silent (no carabiner can be heard), possible fin touch, Trouble, Blackout, losing air. Double safety. AB ready, AB release.

### **Signals at depth to surface.**

A stretched out arm = athlete is observed, looks ok.

A waving arm = athlete is observed, possible trouble (or I need to be replaced).

Frantically waving arm = Athlete observed, big trouble, send down more assistance.

## **General**

Be calm on the divesite, do not shout (if not needed to), do not splash with fins, do not send snorkle fountains. Do not stress or drop the organisations equipment.

Do not coach athletes, treat all athletes the same. **DO NOT TOUCH AN ATHLETE UNTIL HE HAS DISQUALIFIED HIMSELF** (or before judge shouts "take" or "grab").

- Check lanyard while attaching, see if the comp depth gauge is there.
- Observe the divers weights before the dive and check if they are all there after surfacing.
- Be observant of packing-BO 's after start (or during training).
- Be observant to everything happening: boats, floating ropes, audience, athletes behaving erratic, cameramen e t c.
- Do not expect athletes to behave sensibly either before or after their dive - they are at times under a lot of stress or are deeply focused.
- After breathing O<sub>2</sub> the athlete should not dive and should leave the water and rest.
- Encourage divers to use lanyards on warm-up lines.
- Wear the same kind of t-shirt within the safety crew.

## **Positioning**

- Normal meeting depths: 20 meters.
- Shallow divers and low risk divers: 10-15 meters is enough.
- Lower visibility demands deeper meeting points.
- Deep divers and special circumstances: 30 meters.
- Dont push yourself over your own apnea limits.
- In CWT/CNF do not pull on the line or hang on it in a way that "pulls" can be felt.
- When following up: 1.5 meter away, about half a meter below. Only one SD needs to be this close (if there are two diving).
- Check the divers facial expressions. Only grab a diver that either: stops moving, has LMC spasm, involontarily loses air , blacks out.



## **Retrieval**

Basically any grip that will do the job under the current circumstance. Preferably one hand at the back of the head and one over mouth pushing up jaw. Extend your arms and the diver upwards so that you get free room for your own finning.

- If AB is deployed: Check for warming up divers under the weights about to go down.
- Be ready to divert the rope going down, so it goes away from the other line coming up with the diver.
- Be ready to speed up the AB with your hands.
- Be ready to slow it down when diver approaches.
- Send one SD down to meet.

## **BTT**

- 1) Turn diver unto his back. If you retrieved, then leave the BTT to the surface safety.
- 2) Urge him to breath, talk close to his ear (he can hear you even during blackout).
- 3) Pat his cheek gently. Squeeze arm e t c
- 4) If breathing does not start - Lift mask to forehead and blow over face.
- 5) If breathing does not start - Blow more.
- 6) If breathing does not start BLOW MORE over face.
- 7) After some 15-20 secs\* without breathing preferably move athlete to low plattform and start with one "CPR blow", which might open up a cramping epiglottis. Preferably with diver out of water. Make sure the head is way out of water and tilted far back. If wavy get victim to land or plattform first.

*Remember:* no stress, an unconcious diver will not die because you loose a few seconds while being calm and deliberate in your actions.

Understand that a BO victim has a subconscious that can percieve. This "consiousness" has taken over and is trying to save the person. This consiousness still believes the person is under water - and if he opens the epiglottis (or whatever seizure there is in throat) water will enter and he will die, he believes. The BTT is about "talking" to the subconsciousness - by touch, words and air (blow). If this is done determined enough - BTT works.

If there is a feeling of panic around the BO victim - the victim feels this emergency and stays longer in "BO mode".

*As a SD: don't be a spectator. If you are not needed with the actual rescue you can: keep people away from the diving area, take and hold victims equipment, prepare the next diver.*

\* To directly (or too early) go for a so called rescue breath without using the benefit of a forceful blow in the face, might cause water in the victims mouth which might get into the lungs when the laryngospasm releases. Scientists has argued that you can not open a freediver laryngospasm by forcing air against it.