LESSON - CWI WORKSHOP TEMPLATE

All CWI workshops lead by Apnea Survival CWI trained facilitators should be conducted in accordance with the Apnea Survival CWI standards and guidelines. The ASCWISGs are located in the CWI lesson titled CWI General Standards Declaration, which appears as the second last lesson in the online courses list of contents. When you open this lesson a pdf file which can be download and that contains all the safety guidelines for facilitating CWI sessions.

In the spirit of Apnea Survival teachings all CWI sessions are conducted in a way that enables the participant to utilise pre taught breathing techniques, that can be deployed during a CWI to control stress and calmy navigate the Cold plunge.

Step One - Pre-screening

When running a CWI workshop the first priority is to ***pre-screen*** participants. No person should be permitted to participate in any component of a CWI workshop without first completing the CWI pre-screening process.

Ensure pre-screen forms are disseminated well in advance of workshops to allow participants to seek any medical advice they may need to discount any contraindicators and comply with the screening requirements.

Step two – Decide on your workshops format.

Decide upon the format you will use for the CWI workshop. All AS CWI workshops should use a system of breathing retraining that provides participants with an explanation, demonstration, and practice of how to operate their breathing mechanics and the breathing techniques workshop participants will use during the actual Cold water immersion phase to navigate their discomfort / cold, control their stress response, enter, and maintain a state of deep relaxation or calm and regain any control should it be lost during the immersion.

Step three – Starting off the workshop

1. Casual meet and greet of workshop participants as they arrive at the venue.
2. Set up the class / group so they are seated on the floor (preferably in a circle with feet pointed into the centre of the circle. Ensure participants have space to lay down once you start doing the breathing protocols.
3. Introduce yourself and conduct the session briefing.
4. While you are conducting introductions and briefings etc participants may remain seated.

Step three – Breathing Phase

Suggested template for breathing workshop.

1. Psychophysiological drill (2 minutes)
2. Full Lung breathing (retraining) drill (5-10 minutes depending on whether 1 or 2 minute rounds are used)
3. Breathing gears (5 minutes)
4. Cyclic sighing (5 minutes)
5. Nervous system reset (15 -25 minutes depending on how many rounds are performed).
6. Resonant Frequency Breathing (5 – 45 minutes pending time available)
7. Cyclic sighs x 5 (wake up) (1 minute)

It is advisable to weave in some insight and knowledge about stress and how the body responds to stress, plus some basic breathing physiology. This will help your participants contextualise and understand why they are doing the specific techniques you're asking them to perform, and also helps them to transfer and integrate the techniques into real life.

Drill scripts

1. Psychophysiological drill (2 minutes)

    a) Lay flat on your back on the floor or sit relaxed and comfortably.
    b) Breathe only through the nose using your natural breath cadence to relax.
    c) Continue for 2 minutes
    d) After 2 minutes.
    e) Purse, your lips and inhale with as much force and as hard as you can. Followed by an exhale in the same manner. Breath rate should be as fast as possible. Approximately 1 to 2 breath cycles (inhale + exhale) per second.
    f) Continue non-stop for 1 minute, focussing on what sensations you are feeling and what emotions you are experiencing.
    g) After 1 minute. Return to a naturally paced nasal only breath. Breath in and out softly and quietly and in a calm, controlled manner through the nose only. Close your eyes if you feel like closing them. Pay attention to what sensations you are feeling and what emotions you are experiencing and how this differs from the previous minute of superventilation.
    h) Continue for 1 minute.
    i) After 1 minute take a couple of natural breaths have a stretch, get up and move around.
    j) Conversation around what was going on during this drill.

2. Full lung breathing (retraining) drill (5 - 10 minutes)

Note: section times can be reduced by half to 1 minute if time is restricted.

    a) Lay flat on your back on the floor and get comfortable (use pillows or cushions if required).
    b) Breathe only through the nose using your natural breath cadence.
    c) Place your hands lightly on your stomach and breath only into your stomach (lower lung lobes). As you inhale feel your stomach and circumference of your lower torso expand. Think of your torso as a 360° cylinder. All sides need to expand when you inhale and contract during the exhale.
    d) Inhale for a count of 4-5 and exhale for a count of 10-15 (Note: when exhaling you are only releasing the same amount of air as you inhaled but slower and with more control. If you're not able to perform 5/15 try 2/6 or 3/9. Wherever you fall maintain the ratio of 1:3 for Inhale : Exhale.
    e) Continue for 2 minutes.
    f) After 2 minutes slide your hands up either side of your body to your lower ribs and breath only into your rib region. As you inhale allow your ribs to open and expand and again ensure the 360° circumference of your torso. That is, the middle back is also expanding. Your middle back should press gently into the floor as you inhale and fill with air.
    g) Exhale. Let everything go, completely relax and allow your ribs to collapse. If you're having trouble moving your ribs use your hands to lightly press them in when you exhale and release the pressure allowing them to expand when you

inhale. This will provide sensory feedback that will help get any sticky ribs moving again.

h) After 2 minutes slide your hands up to your chest and breath only into your chest. As you inhale allow your chest to expand and ensure the circumference of your torso (upper back and lats) are also expanding. Your upper back and shoulders should press gently into the floor and fan out as you inhale.
i) Continue for 2 minutes.
j) After 2 minutes. Still breathing through the nose only. Combine all 3 stomach, ribs and chest into one single movement while inhaling and exhaling. Once you've got the hang of this focus on the timing of your breath. Inhaling for 4-5 counts, slight pause then exhaling gently and controlled for 10-15 counts followed by another pause at the bottom of the exhale then inhale again. Continue for 4 minutes.

3. Breathing gears (5 minutes)

Perform 1 minute per gear

a) Gear 1 – Controlled nasal inhale, nasal exhale (e.g. 3 in 3 out) – Low aerobic output – easy lower stress activities.
b) Gear 2 – Powerful nasal inhale and controlled and relaxed nasal exhale – High aerobic – nasal superventilation – provides greater turnover of gases and is used for high aerobic output.
c) Gear 3 – Power nasal inhale and power nasal exhale – faster, nasal bellows type breath, that activates full use of primary breathing muscles – crossing over from aerobic to anaerobic (Anaerobic threshold).
d) Gear 4 – Power nasal inhale and longer but controlled and relaxed mouth exhale – superventilation – work intensity increasing – unloading accumulating CO2 – low anerobic effort.
e) Gear 5 – Mouth inhale and powerful mouth exhale – superventilation – strong rapid gas turn over – off loading excess CO2 High anaerobic (short duration / high intensity)

Recovering control using breathing gears

Work back through the gears aiming to be able to return to gear one as quickly as possible.

Using gears during a cold-water immersions

Entry into cold water – Involuntary gasp reflex (Cold Shock Response) – breathing is fast and shallow through the mouth for both inhale and exhale (hyperventilation) . Use Gear 5. (Mouth in mouth out – Superventilation) to gain control of breathing rhythm and ratio. Even the inhale and exhale count and introduce a pause after the exhale (triangle breathing).

Once control is gained using Gear 5 switch to inhaling through the nose but maintain oral exhale (Gear 4). Lengthen and slow the exhales. Start slowing breath cadence and lengthening breathing components.

As more control is gained switch to nasal inhales. You may still be breathing hard (Gear 3 – All nasal, Powerful inhales and exhales or you maybe be able to jump straight to gear 2. All nasal – Power inhale and long, slow, controlled exhale.

Final transition is to Gear 1. Complete control with controlled nasal inhale , nasal exhale and a pause following the exhale. Triangle breathing or if possible, switch to box breathing.

4. Voluntary sigh.

Note 1 to 3 voluntary sighs are sufficient to reduce stress and anxiety levels in a given moment and allow a feeling of almost immediate calm to occur.

Perform a Voluntary sigh as follows.

a) Double or extra-large inhale through the nose – 1st inhale is the longest, followed immediately by second shorter inhale (top up) to create maximum inflation of the lung tissues.
b) Followed the inhale with a long, controlled but powerful exhale through either the mouth or the nose.

5. Nervous system reset

The hypoxic reset drill uses a combination of superventilation, breath hold and resonant frequency breathing techniques to create a detoxifying and recalibration effect on all systems in the body. On the CWI workshop we use this drill prior to entering the Cold Water or ice. The drill recenters and recalibrates folks' nervous system prior to them being exposed to the stress of the cold water.

The sequence:

1. Power nasal inhale / power mouth exhale- superventilation (Gear 3) 60 sec
2. FRC (passive nasal exhale) 60 sec
3. RFB nasal breathing 60 sec.

Repeat x 3 - 5 rounds

Part 1 – Superventilation (1 minute)

a) Strong full inhale through the nose and strong full exhale through the mouth as fast as possible.
b) Stretches the lung tissues and breathing musculature, maximising O2 uptake and off-loading CO2. Increasing pH and alkalising blood.
c) Retards Bohr effect causing systemic hypoxia.
d) Unloading of CO2 delays the urge to breath during the subsequent breath holds allowing the body to reach a state of hypoxia before the breath hold break point is reached.

Part 2 – Exhale breath hold (1 minute)

a) Upon completing the final superventilation, inhale through the nose then passively exhale through the nose. Pinch the nostrils closed and hold the breath.
b) Continue breath hold until a strong urge to breathe / break point is reached.
c) This breath hold, performed with low CO2 (respiratory alkalosis) on the exhale creates an environment conducive to stimulating systemic hypoxia, prior to the break point of the breath hold being reached. Oxygen in the blood is depleted and O2 delivery is prioritised to the vital organs, including brain.

Part 3 – Resonant frequency breathing (RFB) (1 minute)

a) Upon reaching or break point (whichever comes first) exhale passively and with control through the nose
b) Commence slow nasal breathing at a natural relaxed cadence.
c) Resist any urge to breathe hard or gasp and allow breathing to settle.
d) Transition to RFB.
e) RFB is breathing at a slow relaxed rate in and out through the nose, at a pace between 3-6 breath cycles per minute.

RFB is used as a recovery tool for this drill, training the breath holder to master control of their breathing. Resisting the urge to gasp and restricting breathing to slow nasal breathing, may feel like it reduces the speed at which the body is recovering but it is in fact optimising the reoxygenation of the body via the Bohr effect, which is enhanced my maintaining higher than normal levels of CO2 in the body as O2 is reintroduced to the system.

The combination of these techniques into a single drill containing several rounds (15 – 70 minutes depending on time you have available) creates a very powerful hypoxic and stress regulation and stress control training tool. Whereby, we are deliberately subjecting the body and mind to high biomechanical, biochemical, and psychophysiological stress and then recovering from and controlling that stress intermittently, using slow controlled nasal breathing.

At the conclusion of 3 - 5 full rounds, commence 5 - 45 minutes full lung resonant frequency nasal breathing, followed by 3 - 5 x cyclic sighs to recalibrate and rebalance the autonomic nervous system before entering the cold water.

Step four – Set up the Cold Tubs

1. To maintain the flow of a workshop you may decide to prep the cold tubs prior to the breathing phase of the workshop. This way it is ready for participants directly following the breathing phase. Or.
2. You may choose to have participants fill up and prepare the tubs. This is our preferred option as it has proven to be a great lead into the actual cold plunge, creating a scenario where participants are actually setting up the tool that is about to cause them discomfort and stress. This helps training their brains to be receptive to elements of voluntary discomfort.
3. Ice always goes in first. Add all ice first before adding water.
4. A good measure is 10kg of ice per 100 Litres of water e.g. In a 300L chest or tub add 30kg of cubed ice.
5. Putting ice in the cold tub before adding any water, cools the tub itself and cools the water more quickly and efficiently, and preserves the ice. When ice is added to the water, the water warms the ice faster than the ice cools the water. The ice starts melting immediately, but due to the laws of cooling (thermal dynamics) the water may not cool enough to keep the ice from melting rapidly. This can help maintain the ice and cooler cold plunge temperatures for longer periods.

Step five – Debriefing

Keep your participants under full observation and together following their immersions. Do not allow any person to leave your care until you have checked in with them and determined they are ok and suffering no adverse reactions to their cold water immersion.