Psychological Trauma and its Treatment

In the field of recreational and technical diving, traumatic situations can happen such as nitrogen narcosis, decompression sickness or assisting people who manifest with various discomforts linked to this activity for example, disorientation or a sense of suffocation due to staying underwater beyond their own perceived personal limits.

When people have experiences like this, their thoughts constantly return to the incident experienced: they listen to the advice of relatives and friends, read articles in the papers or even buy books on the subject. All of this helps them to think about the situation and to know how they could feel about it once they have recovered from it. And yet we go on feeling isolated, dragging along the emotions that cling onto the past even when we achieve a rational view of the trauma experienced. But when can we talk about trauma? First of all we can distinguish between “trauma” with a small “t” and Trauma with a capital “T”: the greater the feeling of one’s own vulnerability in the face of an extreme danger, the greater the traumatic consequences of the event experienced will be.

In defining post-traumatic stress disorder, the DSM IV TR (The Diagnostic and Statistical Manual of Mental Disorders) speaks about traumatic events such as situations that entail actual or threatened death or serious injury, or a threat to one’s own physical integrity or that of others. Faced with this situation a person responds with intense fear and feelings of helplessness or horror. Psychologically the border of trauma is an emotion that cannot be processed, a feeling of desperate helplessness.

The traumatic event tends to be revisited with unpleasant recurring or intrusive recollections and nightmares and when faced with situations that remind the victim of the trauma the person feels disturbed and experiences physiological reactivity. Following this situation the traumatised person tends to protect him/herself avoiding anything that arouses recollections of it. In the case of posttraumatic stress disorder these types of reactions are present for more than a month and entail impairment in social and occupational functioning.

Faced with problematic situations, people enact strategies that involve planning, devising and putting into action an appropriate resolution of the difficulty. Resilience (the ability for psychobiological recovery) can be defined as the correct mix of psychological, biological and environmental elements that allow human beings to go through periods of chaos and serious stress without succumbing to them and continuing their own development despite them. People, thus, are endowed with their own tools to resolve traumas. In some situations however, this system can be inadequate.

Francine Shapiro, a psychological researcher and member of the Mental Research Institute at Palo Alto, California, discovered a method that reactivates this method of resolution in stressful situations. The story about how she discovered the method is rather well known. During a walk in a park, Shapiro, bothered by some thoughts, noticed that their disturbing content disappeared after a few moments. When she tried to bring to mind the content that had disturbed her, she realised that it didn’t have the emotional weight that it had had previously anymore.

Shapiro began to pay attention to the conditions that accompanied the formation of the disturbing thoughts and the ensuing loss of the emotional import. She observed that when the content of the thought was evoked her eyes began to move rhythmically and speedily in a diagonal motion. She understood thus that there could be a connection between the eye movements and the loss of emotional intensity in the

contents of the intrusive thoughts. In the following weeks she started to test the system with friends and acquaintances.

This was the beginning of EMDR. EMDR is the acronym for Eye Movement Desensitization and Reprocessing and is a method for the treatment of stress illnesses. In clinical practice as well as eye movements, listening to sounds can also be used (alternately on the right and the left of the interlocutor by means of headphones) as well as stimulation of the skin by tapping.

The EMDR method can only be applied in a therapeutic context by a psychotherapist trained in its use. According to the theory of EMDR, rather than being processed, the information regarding the trauma remains imprinted in the nervous system in its initial form. The images, thoughts, sounds, smells, emotions, physical sensations and the beliefs that derive from them are stored in a network of neurons that conduct an independent life. Anchored in the emotional brain and disconnected from the rational consciousness, this network becomes a package of unprocessed information that reactivates itself at the slightest recollection of the trauma undergone.

The brain functions by associations and this has important consequences for emotional memories: any sensations of the senses similar to those of the traumatic event immediately evoke the memory of that moment. Even the body has a memory! In the application of EMDR first of all the bodily sensations and emotions linked to the traumatic event are evoked, then, thanks to eye movements, sounds or stimulation of the skin (tapping), it attempts to break the link between these sensations of malaise and the event: during the eye movements free associations come spontaneously to mind that activate and transform the associative links between memories, connected to each other through the emotions.

It is thought that the eye movements are comparable to those that we have spontaneously during REM sleep and that they can sustain the natural system from deterioration of the brain because they complete what we didn't manage to achieve on our own. Among the effects of the eye movements there is also, from the first sequence, a "response of relaxation", which translates into an immediate reduction of the heart rate and an increase in body temperature. Thanks to the treatment with EMDR, patients in general notice that their ability to remember the traumatic event is unchanged.

What is modified on the other hand is the emotional import associated with the event. In practice, patients note that they remember the event, but that the event is not anymore in itself, a cause of the emotional activation typical of the response to traumatic events. Often, patients who are treated with EMDR describe the experience as if they were seated in a train and observing the traumatic event that unfolds before them with a sense of detachment. This treatment helps the patients to process the traumatic event from an emotional as well as from a psychological point of view.

EMDR has been successfully used in emergencies, in the major catastrophes that have shaken the world, including the tsunami of 2004 that put many divers into difficulty, allowing them to take up diving again.
A good example is what happened in this situation to a diving instructor. One morning the instructor left in a boat with some divers for the usual daily dive. During the trip out, the group learned via radio communication that a tsunami had struck their own village. The divers did not perceive any danger. On the return the group faced a scene of destruction.

When two months after the incident, the instructor requested psychological help, he recounted how his life had changed since that day. He didn't feel like the person that he had been since that moment and he wasn't able to work anymore as a diving instructor because of the anguish that he felt at the mere thought of diving, particularly with a group. The issue triggered a lot of anxiety in him; he believed that he would never be able to work in his area and feared having to change career and take up a less exciting one. The

diver related in addition that the things that had made him happy until then didn't mean anything to him anymore.

His symptoms included sleep disturbances (interrupted sleep), nightmares and continual flashbacks of the incident, including visions of some dead people. The instructor complained of irritability. He stated that his way of seeing had changed; he didn't make any plans for the future and had a pessimistic view of life. All of this was accompanied by a sensation of helplessness and by a lack of motivation. Suddenly, nature, people, work and the plans that had given meaning to his life until then didn't have any value for him anymore. He avoided talking about what had happened and avoided watching television. If anything had happened to his friends or to his group of divers the instructor felt that his sense of guilt would have been intolerable.

Thanks to treatment with EMDR it was possible for the instructor to sleep as early as after from the first session. Within three sessions he was able to return to his work around the world and to continue to bring divers underwater (the case was treated by Dr. Isabel Fernandez). A further case described in the literature relates that following the death of a student diver during a training dive, the student's instructor suffered from post-traumatic stress disorder. After four treatment sessions an improvement was noted that progressed positively even in the follow-up meetings (Ladd G. "Treatment of psychological injury after a scuba-diving fatality", Diving and Hyperbaric Medicine, 2007; 37: 36-39). At the end a case was reported of fear of swimming in deep water that was treated with excellent results thanks to EMDR (John Campbell-Beattie, May 2002).

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EMDR Europe Association. You can contact the Administrator, Dafna, at dafna@emdr.co.il or via the web site www.emdr-europe.org where you can look up each country and city where you may need EMDR therapy for a diver.