

LES BIENFAITS DE LA PLONGEE SUR LA SANTE MENTALE

NIVEAU 1 – MEDECINE DU TRAVAIL - FORMATION INITIALE – MARSEILLE 2022

mathieu.coulange@ap-hm.fr

Médecine Hyperbare, Subaquatique et Maritime, Pôle Réanimation Urgences SAMU Hyperbarie, CHU Marseille
Centre de Recherche en Cardio-Vasculaire et en Nutrition, Aix Marseille Université
Institut de Médecine et de Physiologie en Milieu Maritime et en Environnement Extrême - PHYMAREX
Centre National de Plongée, de Secours Nautique & de Survie, ECASC / SDIS13
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POMPIERS
DES BOUCHES-DU-RHÔNE
13





- ☑ La **génése** du projet
- ☑ Les bénéfices sur le **stress post traumatique**
- ☑ Les perspectives sur l'**épuisement professionnel**



1

La **genèse** du projet

(Divstress - 2015)



Recent neurochemical basis of inert gas narcosis and pressure effects.



J.C. ROSTAIN, N. BALON



2015

J0

Divstress

Session 1

140 stagiaires- **Evaluation n°1**

Exclusions

67 stagiaires **UCPA**
Population appareillée

Plongée
n = 37

Multisport
n = 30



J7

Fin des Protocoles

Session 2

post stage

Evaluation n°2

Session 3

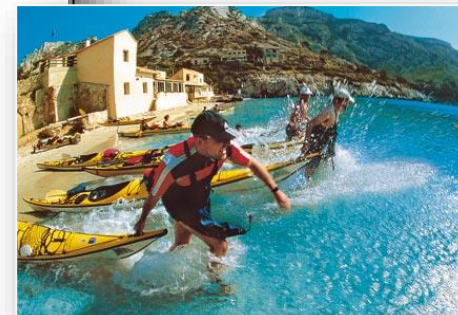
Suivi à 1 Mois post stage

Evaluation n°3



Marion Trousselard

M1



Recreational Diving Practice for Stress Management: An Exploratory Trial

Frédéric Bonato¹, Guillaume Michoud^{2,3}, Mathieu Coulanges⁴, Nicolas Lalno⁴, Céline Ramdani⁵, Marc Borgnotte⁶, Patricia Broton⁷, Régis Guleou⁸, J. C. Rostain⁹ and Marion Troussalard^{2,3,4,10*}

¹ Laboratoire UMR - M22, Faculté de Médecine Nord, Aix-Marseille Université, Marseille, France; ² Department of Emergency, Ste Anne's Military Hospital, Toulon, France; ³ Ecole du Val de Gaillos, Paris, France; ⁴ Pôle Réanimation Urgence SAME/Hypertension, CHU Ste Marguerite, Marseille, France; ⁵ Département de Neurosciences et Contraintes Opérationnelles, Breligny sur Orge, France; ⁶ Institut National de Plongée Professionnelle, Marseille, France; ⁷ Union Nationale des Centres Sportifs de Plaisir Air, Paris, France; ⁸ Laboratory of Biochemistry, Thonon University Hospital, UMR M22, Aix-Marseille University Marseille, France; ⁹ AFSSMAG-APS/Secr. GR4352 UDE, LFR/CHU, Metz, France; ¹⁰ Chaire de Mindfulness, Sciences au Travail et Plan Économique, Grenoble Ecole de Management, Grenoble, France

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Edited by:

Caterina Galante,
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Reviewed by:

François Guerin,
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University of Western Brittany, France

*Correspondence:
Marion Troussalard

Background: Within the components of Scuba diving there are similarities with meditation and mindfulness techniques by training divers to be in a state of open monitoring associated with slow and ample breathing. Perceived stress is known to be diminished during meditation practice. This study evaluates the benefits of scuba diving on perceived stress and mindful functioning.

Method: A recreational diving group (RDG; $n = 37$) was compared with a multisport control group (MCG; $n = 30$) on perceived stress, mood, well-being and mindfulness by answering auto-questionnaires before and after a 1-week long UCPA course. For the diving group, stability of the effects was evaluated 1 month later using similar auto-questionnaires.

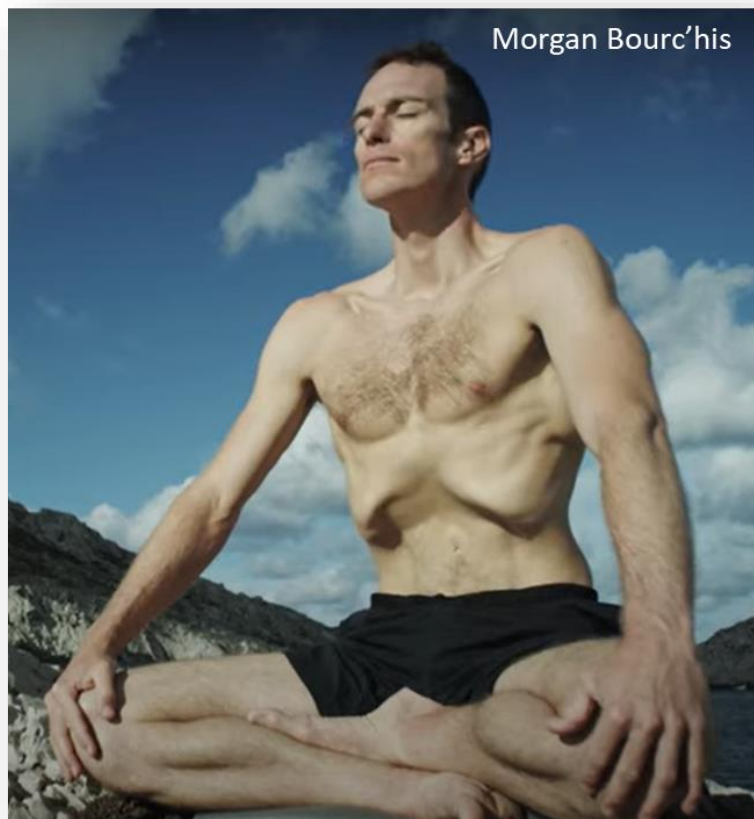
Results: Perceived stress did not decrease after the course for the MCG [The divers showed a significant reduction on the perceived stress score ($p < 0.05$) with a sustainable effect ($p = 0.01$)]. An improvement in mood scale was observed in both groups. This was

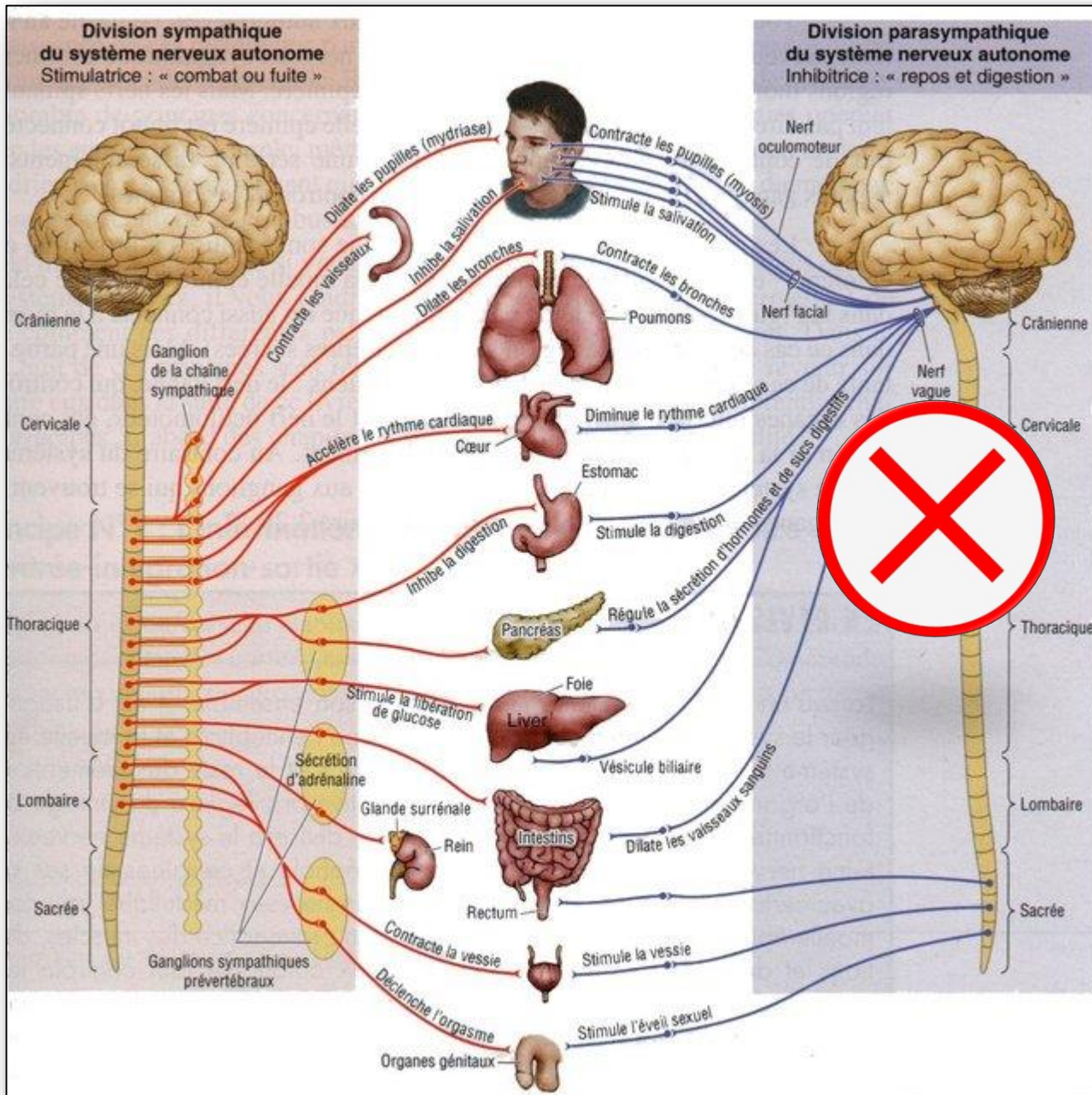
Conclusions: The practice of a recreational sport improves the mood of subjects reporting the **thymic benefits** of a physical activity performed during a vacation period. The health benefits of recreational **diving** appear to be greater than the practice of other sports in **reducing stress** and improving **well-being**.

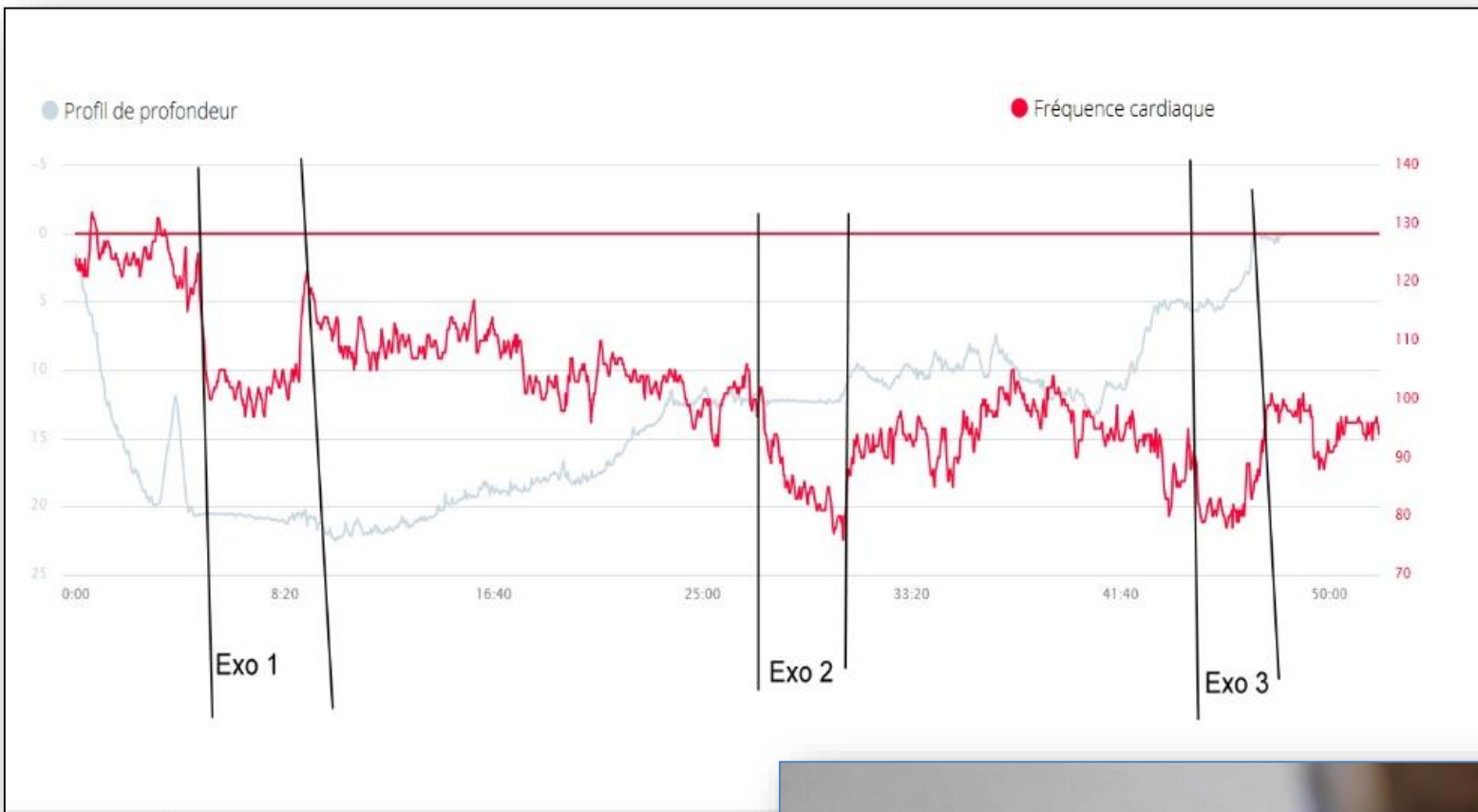
Troussalard M (2017) Recreational Diving Practice for Stress Management: An Exploratory Trial. *Front. Psychol.* 8:2193. doi: 10.3389/fpsyg.2017.02193

with them. Chronic stress can occur in response to everyday stressors that are ignored or poorly managed. The reaction of individuals to chronic stress is theorized in the general alarm syndrome (Selye, 1956) and allostasis theories (McEwen, 2004), contributing to high biological cost featuring the allostatic load (Chrousos, 2009). Excessive chronic stress, which is constant and persists over

N°1 - Réactiver la **systeme parasympathique**... par la ventilation sur **détendeur**







N°2 - Favoriser la **pleine conscience**... par un état de **méditation involontaire**



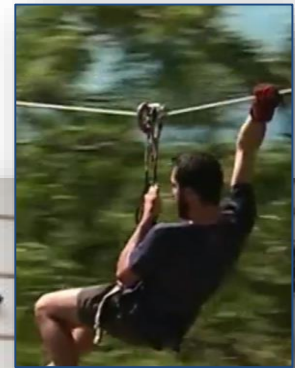
A background image of an underwater scene. Two divers are visible, one in the upper center and another in the lower left. Bubbles are rising from the divers, and the water is a deep blue color. A white circle with the number '2' is positioned above the main text box.

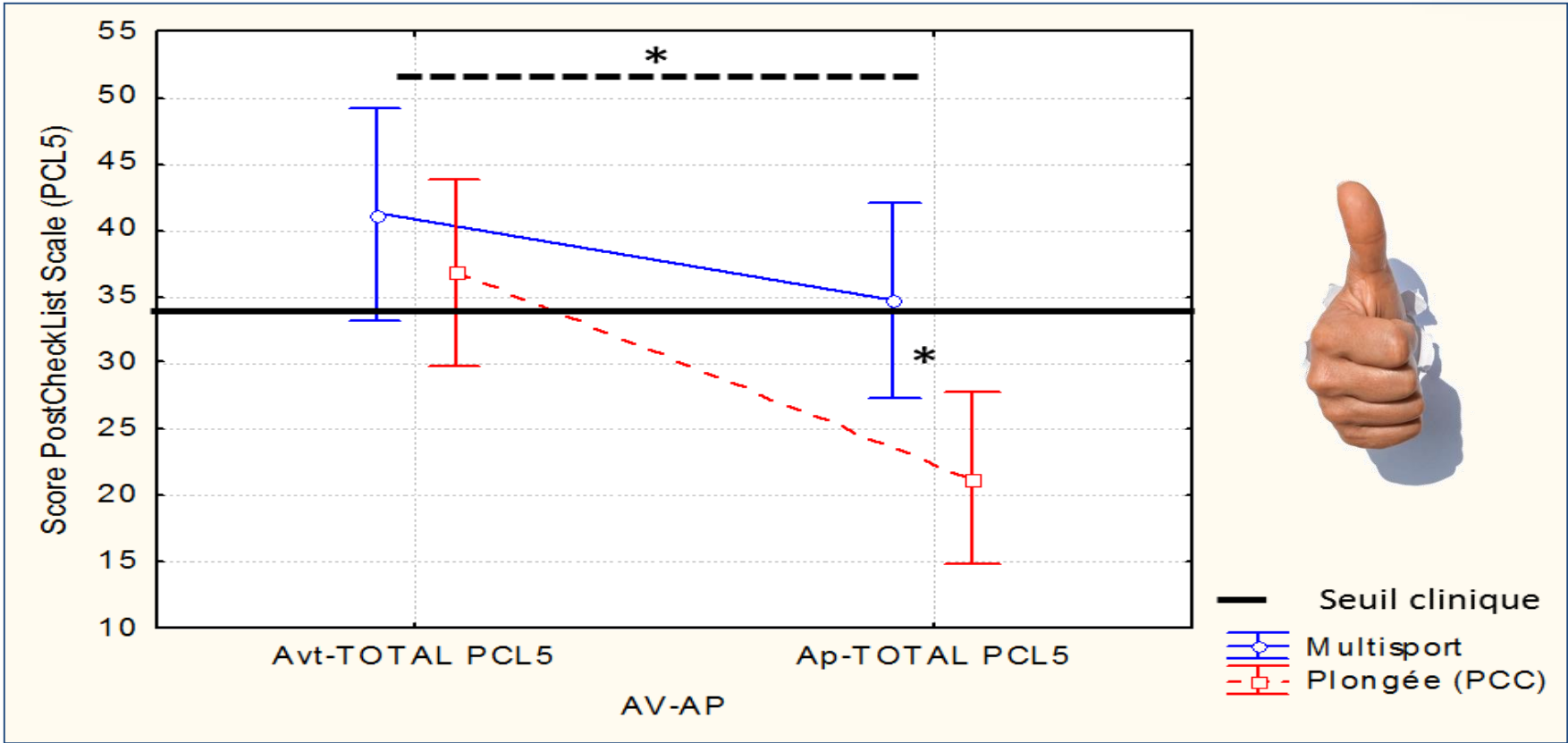
2

Les bénéfices sur le **SPT**

(Divhope - 2017 & Cognidive - 2018)

2017





AUCUN EIG





SHORT COMMUNICATION



Comparing meditative scuba diving versus multisport activities to improve post-traumatic stress disorder symptoms: a pilot, randomized controlled clinical trial

Lionel Gibert^{a,b,c}, Mathieu Coulange^{d,e,f}, Jean-Charles Reynier^{d,g}, Frédéric Le Quiniat^{d,g}, Aymeric Molle^h, Frédéric Bénétou^g, Vincent Meurice^g, Jean Arthur Micoulaud^{h,i} and Marion Trousselard^g

^aPsycoMadd, Université Paris Saclay, France; ^bStress neurophysiology, French Armed Forces Biomedical Research Institute, Brétigny-sur-Orge, France; ^cHôpital Paul Brousse, Aphp, Villejuif, France; ^dService de Médecine Hyperbare, Subaquatique Et Maritime, Assistance Publique Des Hôpitaux de Marseille, France; ^eHyperbaric medicine, Institut de Physiologie Et de Médecine En Milieu Maritime Et En Environnement Extrême, Phymarex, Marseille, France; ^fInserm 1263 – Inra 1260, Team V: Adenosinergic System and Cardiovascular Disease, Aix Marseille Université, France; ^gDiving department, Bathysmed, Bouillante, Guadeloupe; ^hSleep medicine, Services Universitaire de Médecine du Sommeil, Sums, Chu de Bordeaux, Bordeaux, France; ⁱUlr Cnrs 3413 Sanpsy, Chu Pellegrin, Université de Bordeaux, France

ABSTRACT

Background: Post-Traumatic Stress Disorder (PTSD) is a chronic and disabling disease that currently has no fully effective therapeutic solution. Complementary approaches, such as relaxation, sport, or meditation, could be therapeutic aids for symptom reduction. Scuba diving combines sport and mindfulness training and has been found to have a positive effect on chronic stress and PTSD.

Objectives: The first objective of this pilot study is to compare the effectiveness of diving associated with mindfulness exercises (the Bathysmed[®] protocol) with multisport activity in reducing PTSD symptoms. The secondary objective is to compare the impact of the Bathysmed[®] protocol on mindfulness functioning in the two groups of subjects suffering from PTSD.

Method: This proof-of-concept took the form of a controlled randomized clinical trial. The primary endpoint was the severity of PTSD symptoms, measured by the PCL-5 (PTSD Check List) scale. Half of the group were exposed to the Bathysmed[®] protocol (the experimental condition), and the other half to a non-specific multisport program.

Results: Bathysmed[®] protocol improved PCL-5 scores more than the multisport program but the result was not significant. The protocol was significantly better than the multisport activity in reducing intrusion symptoms of PTSD after one month. Globally, trait mindfulness scores improved up to one month after the course, but the result was not significant. Three months after the course, there was no difference between the two groups with regard to PCL-5 and Freiburg Mindfulness Inventory scores.

Conclusion: Our study demonstrates the value of the Bathysmed[®] protocol even though it suffers from a lack of power and could only obtain partial but encouraging results. Mindfulness must be practiced over the long term to achieve stable benefits. This probably explains why no differences persisted three months after the course. Further work is needed to confirm the initial results obtained with this pilot study.

ARTICLE HISTORY

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KEYWORDS

PTSD; scuba diving;
mindfulness; terrorist attack

PALABRAS CLAVE

TEPT; Buceo; mindfulness;
Ataque terrorista

关键词

PTSD; 水肺潜水; 正念; 恐怖袭击

HIGHLIGHTS

- Meditative scuba diving improved overall PTSD symptoms after one month more than multisport activity but not significantly.
- PTSD intrusion symptoms were significantly improved after one month by the meditative diving.
- The positive effects of meditative diving faded after 3 months.



Original Article

Can scuba diving offer therapeutic benefit to military veterans experiencing physical and psychological injuries as a result of combat? A service evaluation of Depthery UK

Alice Morgan , Harriet Sinclair, Alexander Tan, Ellen Thomas & Richard Castle

Pages 2832-2840 | Received 30 Apr 2017, Accepted 22 May 2018, Published online: 29 Jun 2018



An underwater scene with two divers. One diver is in the foreground, slightly to the right, with bubbles rising from their regulator. Another diver is visible in the background, further down. The water is a deep blue, and the lighting is soft, creating a serene atmosphere.


3

Les perspectives sur l'**épuisement professionnel** des soignants en contexte COVID

(Bluehealth - 2022)

Research Article

Burnout Syndrome among Emergency Department Staff: Prevalence and Associated Factors

Audrey Moukarzel ¹, Pierre Michelet,¹ Anne-Claire Durand,² Mustapha Sebbane,³ Stéphane Bourgeois,⁴ Thibaut Markarian,¹ Catherine Bompard,¹ and Stéphanie Gentile^{2,5}

¹Service d'Accueil des Urgences, Hôpital de la Timone 2, Assistance Publique des Hôpitaux de Marseille, 264 rue Saint Pierre, 13385 Marseille Cedex 5, France

²Equipe de Recherche EA 3279 "Santé Publique, Maladies Chroniques et Qualité de Vie", Faculté de Médecine, Aix-Marseille Université, 27 boulevard Jean Moulin, 13 385 Marseille Cedex 5, France

³Département de Médecine d'Urgence, CHU Lapeyronie, Université Montpellier 1, 34295 Montpellier, France

⁴Service d'Accueil des Urgences, Centre Hospitalier Henri-Duffaut, 305 rue Raoul Follereau, 84000 Avignon, France

⁵Service d'Evaluation Médicale, Hôpital de La Conception, Assistance Publique des Hôpitaux de Marseille, 147 boulevard Baille, 13005 Marseille, France

Correspondence should be addressed to Audrey Moukarzel; audrey.moukarzel@ap-hm.fr

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Objectives. Emergency department (ED) professionals are exposed to burnout syndrome due to excessive workload and high demands for care. The objective of our study was to assess the prevalence burnout among all ED staff and to determine associated factors. **Methods.** A cross-sectional survey was conducted in 3 EDs. The data were collected using a standardized questionnaire. It included demographical and occupational data, general health questions, burnout level (Maslach Burnout Inventory), job strain (Karasek), and quality of life (Medical Outcome Study Short Form). **Results.** Of the 529 professionals working in EDs, 379 responses were collected (participation rate of 71.6%). Emotional exhaustion (EE) and depersonalization (DP), the major components of burnout, were reported, respectively, by 15.8% and 29.6% of the professionals. Burnout prevalence was 34.6%, defined as a severely abnormal level of either EE or DP. The medical category was significantly more affected by the burnout compared with their colleagues: nearly one ED physician out of two had a burnout (50.7%). In the multivariate analysis of covariance, job strain and a low mental component score were the two main factors independently associated with burnout ($p < 0.05$). **Conclusion.** The results of our study show that ED professionals are a vulnerable group. Preventive approaches to stress and burnout are needed to promote quality of work life.





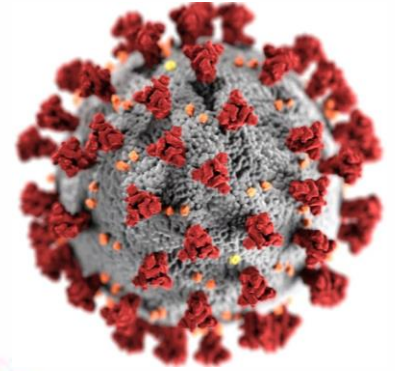
Randomisation :
l'ordinateur répartit les
patients en deux
groupes de façon
aléatoire



Groupe de contrôle
recevant le traitement
standard ou un placebo



Groupe expérimental
recevant le nouveau
traitement





Docteur Mathieu COULANGE
Chef de Service
Praticien Hospitalier
N° RPPS: 10003429932
mathieu.coulange@ap-hm.fr
Tél. 04 91 74 56 53

Marseille, le 01/06/2022

M ...

Docteur Bruno BARBERON
Réfèrent Urgence Marième
Praticien Hospitalier
N° RPPS: 10003374823
bruno.barberon@ap-hm.fr
Tél. 04 91 74 49 42

Protocole de recherche sur les bienfaits de la plongée sur l'épuisement professionnel des soignants

Docteur Jérôme POUSSARD
Réfèrent Médecine Hyperbare
Praticien Hospitalier
N° RPPS: 10004085238
jerome.poussard@ap-hm.fr
Tél. 04 91 74 49 43

Faire pratiquer 10 séances de plongées dans un centre partenaire afin de prévenir le risque de burn out

et d'améliorer le bien-être au travail.

Docteur Jean Charles REYNIER
Réfèrent Médecine Aéronautique
Praticien Hospitalier
N° RPPS
jeancharles.reynier@ap-hm.fr
Tél. 04 91 74 49 43

Dr Mathieu COULANGE

AP-HM – HOPITAL AUX SUB
Docteur Mathieu COULANGE
Praticien Hospitalier
Centre Hyperbare
N° d'inscription Ordre 19496

Docteur Emilie THOMAS
Praticien Attaché
N° RPPS : 10100436673
emilie-caroline.thomas@ap-hm.fr
Tél. 04 91 74 49 43

Attachés au titre des astreintes :

Docteur Didier LEPESSANT
Praticien Hospitalier
N° RPPS: 10003082269
didier.lepesant@ap-hm.fr



Le cancer touche environ 400 000 personnes par an en France. Si plus d'un patient sur deux en guérit, un stress post-traumatique s'installe fréquemment. Il est possible de surmonter cette épreuve grâce à une aptitude appelée résilience. Or la plongée sous-marine peut contribuer à l'acquérir et à la développer. C'est justement la mission que s'est fixée l'association Plongée Résilience. Entretien avec sa présidente, la cancérologue Élisabeth Carola.

par Élisabeth Carola



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Sein'biose : Cancer et plongée

Ép. 3

Le parcours de soins d'une femme atteinte d'un cancer du sein est jalonné de rendez-vous médicaux. Mais la prise en charge d'un cancer ne s'arrête pas au traitement de la maladie seulement.

Lors de cette série de **Podcasts Sein'Biose**, nous allons découvrir ensemble des soins de support que vous ne connaissiez probablement pas encore.

Pour l'épisode d'aujourd'hui, nous écoutons le **Dr Élisabeth Carola**, chef de pôle oncologie à l'hôpital de Creil et le **Dr Mathieu Coulangue**, médecin urgentiste et chef de service du centre hyperbar à APHM de Marseille, nous parler du bénéfice de la plongée dans le parcours de soin des femmes atteintes d'un cancer du sein.

Mercredi 11 mai 2022
23h05 - 00h01 (Durée : 56mn)

3

Réseau d'enquêtes



La thérapie des profondeurs

Genre : Magazine de société

Présentateur(s) : Charles-Henry Boudet

Résumé :

Gros plan sur une médecine nouvelle, la plongée sous-marine sur ordonnance, désormais prescrite par de nombreux médecins. Avec son mari, Fanny était au concert du Bataclan le 13 novembre 2015. Ils ont survécu mais en restent profondément affectés. En Guadeloupe et au large de Marseille, elle a effectué des séances de plongée thérapeutique en compagnie d'autres personnes en état de stress post traumatique. Sous l'eau, la respiration et la fréquence cardiaques ralentissent, d'où un apaisement qui facilite la résilience. Et pour ceux qui ne peuvent plonger, les centres de médecine hyperbare prennent le relais.

CALEDONIA CONFÉRENCE - Les bienfaits de la plongée sous-marine sur la santé

A photograph of Charles-Henry Boudet, a man in a green shirt, speaking into a microphone at a podium. The background is a dark wood panel.

<http://phymarex.com/gallery/>

CALEDONIA CONFÉRENCE

PLUS DE VIDÉOS

« LES BIENFAITS DE LA PLONGÉE SOUS-MARINE SUR LA SANTÉ »

CALEDONIA





Quand l'Océan soigne l'Homme...



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mathieu.coulangue@ap-hm.fr