TRE – Tension, Trauma and Stress Releasing exercises. Forskningsstöd.

Se www.traumaprevention.com
För en kort presentation av TRE på engelska se http://traumaprevention.com/what-is-tre/
och introduktionvideo https://vimeo.com/103209258

Forskning

- Berceli D, Salmon M, Bonifas R, Ndefo N. Effects of self-induced unclassified tremors on quality of life among non-professional caregivers: A pilot study. Glob Adv Health Med. 2014;3(5):45-48. | Abstract

    - En studie på en grupp anställda på SOS Children's Village i Sydafrika gjorde TRE enl. program i 10 veckor och uppnådde *en signifikant förbättring av självupplevd livskvalitet* enligt ett individuella utvärderingformulär.

- Berceli D. Evaluating the effects of stress reduction exercises employing mild tremors: a pilot study [dissertation]. Phoenix (AZ): Arizona State University; 2009. | Download

    - Denna studie på 61 universitetsstudenter (33 i kontrollgruppen och 28 i behandlingsgruppen) gjorde TRE 6x30 min under en två-veckorsperiod och utvärderades före och efter med subjektiva och objektiva mätinstrument – HRV, heart rate variability, som testar fluktuationer i hjärtrytmen och reflekterar samspelet mellan det parasympatiska och sympatiska delarna av det autonoma nervsystemet (förenklat - stress vs avslappning) och de svarade även på ett psykologiskt formulär för ångest före och efter studien. Pga. tekniska problem i utförandet så gav inte HRV-delen några signifikanta resultat, däremot visade formuläret ett signifikant minskning av ångest hos deltagarna. Resultaten var inte fullt tillfredställande och behövde uppföljning.

- Berceli D. [Neurogenic tremors: A body-oriented treatment for trauma in large populations]. Trauma und Gewalt. 2010 May; 4 (2):148-156. German. |Download

    - Artikel om TRE i den tyska tidskriften Trauma und Gewalt som presenterar TRE som metod och teori och adresserar behovet av ett nytt paradigm för traumabearbetning, en approach till trauma som möter det behov som finns i världen idag. Författarna föreslår att att TRE skulle kunna va en avgörande beståndsdel i en sådan utveckling.

- Berceli D, Napoli M. A proposal for a mindfulness-based trauma-prevention program for social work professionals. Complement Health Pract Rev. 2007 Oct; 11 (3):1-13.| Abstract

    - Ett förslag till forskningsstudie som kombinerar mindfulness och TRE för att behandla traumatiserade populationer. Innehåller en mycket bra vetenskaplig sammanfattning av behovet för TRE och mekanismerna/teorin bakom TRE.

- Department of Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury. Mind Body Skills for Regulating the Autonomic Nervous System. Published June 2011. | Download

    - Amerikansk försvarsdepartementets rekommendationer för psykologisk hälsa inkluderar en längre text som avhandlar rekommenderade metoder för att reglera det autonoma nervsystemet. Där ingår TRE som en av flera tekniker som rekommenderas. TRE har använts av amerikanska militären.

- Johnson S. Interventions for stress and burnout of secondary school educators in high-risk schools. In: Robert M, ed. Abstracts of the 30th International Congress of Psychology; 2012 Jul 22-27; Cape Town, South Africa. Oxon, UK: Psychology Press; 2012. p. 167. | Download

    - Sydafrikansk studie på lärare i riskzonen för utbrändhet. De behandlades med en kombination av TRE, transpersonell psykologi och transaktionsanalys. Preliminära resultat visar att utbrändhet kan nedregleras och ev. undvikas mha. en sådan kombination av behandlingsmetoder.

- McCann T. An evaluation of the effects of a training program in trauma release exercises on quality of life [master's thesis]. Cape Town, South Africa: University of Cape Town; 2011. | Download

    - Magisteruppsats från sydafrikanskt universitet testade en mindre grupp deltagare i en 4-dagars kurs i TRE. Studien visade positiva och blandade resultat genom formulär som utvärderade livskvalitet och ångest.

- Macedo D. [Tension and trauma release exercise: Application to situations of domestic violence][Master's thesis]. Brasilia, Brazil: Universidade de Brasilia; 2013. Portuguese | Download

    - Denna brasilianska studie testade TREs påverkan på mental hälsa och strategiskt tänkande hos personer som varit offer eller förövare i äktenskapsvåld. Studien visade goda resultat både gällande stressreduktion och förbättrad förmåga att skapa strategier för att undvika framtida våldshändelser.

- Nibel H.Shake it up baby! Trauma and Tension Releasing Exercises (TRE@) as a new promising offering in promoting occupational health Proceedings of the Gesellschaft für Arbeitswissenschaft [Society of Occupational Science] Spring Convention; 2015 Feb 25-27; Karlruhe, Germany. | Download

    - En tysk studie i arbetsvetenskap/arbetsterapi visade mycket lovande resultat för applikationen av TRE för att förbättra arbetsrelaterad hälsa. Frågeformulär som fylldes i av 173 personer före och 70 personer efter. Resultaten visade minskade smärtnivåer och medicinska symtom samt ökad livskvalitet, självförtroende och trivsel i arbetet.

- Schweitzer E, Bradt KM. [Dem Malinowski-Blues entgehen: Körperorientierte EntspannungsÜbungen zur Stressbewältigung während der Feldforschung]. Ethnoscripts. 2015; 17(1): 228-242.German| Download

- En tysk atropologisk studie som behandlar TRE, stress och traumabearbetning i nutida fältforskning.

Pågående Forskning

- Austrian Military Research Project Outline – Download

    - Österrikiska militären planerar fördjupade studier av TRE i syftet att utvärdera dess påverkan på stressnivån hos deras militära styrkor.

- Neurogenic Tremors Training (TRE) for Stress and PTSD: A Controlled Clinical Trial (VA Hospital, Phoenix, Arizona) – Download

    - En omfattande studie för testa effekterna av TRE på 90 amerikanska krigsveteraner som har lider av PTSD, posttraumatisk stress. Den första riktigt omfattande studien med TRE.

Forskningsrelaterat material

- Heath, R. (2013) Inquiry into the care of ADF Personnel Wounded and injured on Operations: The use of Trauma Releasing Exercises for Resilience Training and Early Interventions in the ADF – Download

    - En förfrågan till australiensiska försvarsdepartementet med förslag om att integrera TRE i hälso- och återhämtningsprogram för soldater inom australiensiska försvaret. En omfattande text, 50 sidor, som pläderar för användning av TRE ur forskningsmässig, terapeutisk och ekonomisk synvinkel.

- Heath, R. & SWBCA inc (2013) Evaluation of Trauma Release Exercises (TRE) Workshop for Bushfire Affected Communitites - Download

Svensk forskning

En svensk studie inleddes av Kajsa M. Nordström vid Danderyds Kris- och traumacentrum med goda förtecken. Tyvärr avslutades inte studien pga. avhopp från en redan mindertalig testgrupp.

Artiklar om TRE i svensk media

Hälsa, oktober 2011, http://www.traumaprevention.com/wp-content/uploads/2011/12/TRE-i-tidningen-Halsa.pdf och http://www.tidningenhalsa.se/artiklar/kategori/20111021/skaka-bort-stress-och-oro

Skånska Dagbladet, 2012,
http://www.minskadinstress.se/storage/Artikel%20TRE%20Sknskan%20och%20Norra%20Skne.pdf
Inspire, mars/april 2013, http://www.omnibalance.se/Homepage/Download-File/f/395447/h/1af98257931755022496 4b55f97e837c/Deva+Laya

Fler artiklar
The Telegraph, 2013, http://www.dailytelegraph.com.au/lifestyle/relationships/shaking-with-fury-the-weird-new-way-to-get-over-a-love-cheat/story-fni0dqfn-1226670802889
Otago Daily Times, 2012, https://www.odt.co.nz/lifestyle/health-fitness/more-joy-less-stress

Anekdotiska fynd

TRE har lärts ut till närmare 2 miljoner människor världen över och har enligt otaliga rapporter uppnått goda resultat för stora grupper i varierade kontext över alla kontinenter. TRE har implementerats bland sjukvårdare, krigsdrabbade, våldsoffer, lärare, studenter och elever, ungdomsbrottslingar, offer för naturkatastrofer, polis, militär, brandmän, ambulansvårdare och många vanliga människor som söker hjälp för sina psykiska och fysiska smärtor. TRE har lärts ut i många krigsdrabbade länder och efter olika typer av naturkatastrofer. Däribland Kina 2008, Filipinerna 2013, Japan 2011, Australien 2009,

Här finns en samling på uppemot 200 videos med anekdotisk evidens; videoreportage, personliga berättelser och föredrag: https://vimeo.com/user3089502/videos

Sammanfattningar av TRE i vetenskaplig text

Utdrag ur Berceli (2009)

Introduction
It is not uncommon in many cultures to hear phrases such as: “I was so frightened my jaw was quivering.” “My hands were shaking so badly I couldn’t calm myself down.” “My legs were trembling as I gave my speech.” “I was so angry I shook.” These experiences of shaking or tremoring are so common that they are recognized as diagnostic features of Panic Attacks (300.21), Social Phobias (300.23), Generalized Anxiety Disorder (300.02), and Post Traumatic Stress Disorder (309.89) in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association [APA], 2000). These tremors are best defined as neurogenic tremors as they are a neurological response to stressful situations. They are a primordial somatic experience originating in the natural processes of the brain’s procedural memory system that is part of the genetic composition of the human body (Scaer, 2005).
The physical sensation of neurogenic tremors is most commonly described as a mild vibration or shaking of the muscles. Although muscle tremors have been researched as physiological responses of the body in the fields of athletic performance (Cardinale & Bosco, 2003; Torvinen et al., 2002; Bosco et al., 1999; Issurin, & Tenenbaum, 1999) and physical therapy (Bosco, Cardinale, & Tsarpela, 1999; Bosco et el., 2000), there is less research on the psychotherapeutic potential of these tremors. Two neurologists who have written most extensively about the possible psychotherapeutic value of these tremors are Dr. Robert Scaer

(2005) and Dr. Peter Levine (1997). They believe that humans have been socialized out of this naturally occurring response. Because the tremors are uncomfortable and are experienced as an 'uncontrollable' behavior, they are deemed as socially unacceptable and should be avoided (Levine, 1997). Due to the psychological discomfort of the uncontrollable nature of neurogenic tremors, our culture avoids this physiological reaction or even anesthetizes it through the consumption of medicine, alcohol or other substances (Levine, 1997).
This current social thought is reinforced by the medical field in which these tremors have often been associated with a reduced ability to cope with stressful situations (Günther, Köster, Lücking, & Scheidt, 2004). Due to the prevailing ideology that tremors are a pathological expression of the human condition, little research or consideration has been given to the possibility of the potential therapeutic nature of bodily tremors (Koller et al., 1989). Until the prevailing thought of the pathological expression of these tremors is reconsidered, research into the value of these tremors will remain scarce. The research on tremors as a potential therapeutic response to stressors was first explored in animals by Selye (1973). His research demonstrated that animals have a natural tremoring reaction following stressful or traumatic events. He was also the first researcher to discover that these tremors seem to have an adaptive advantage for the animal. His research with baby chicks demonstrated that chicks that were deliberately stressed and allowed to have their natural tremoring reaction were more resilient to subsequent stressful events than those who were not allowed to have their natural tremoring reaction (Selye, 1956). His work was the precursor to the non-specific response of the human organism to stressors. Neuro-physiological studies in animal experimentation have already demonstrated that physiological shock occurs during the time of a traumatic event. This shock produces a sharp and immediate biochemical reaction in the animal causing the secretion of protective hormones (Deuschl, Raethjen, Lindemann & Krack, 2001). The increase in protective hormones is accompanied by a high energetic charge in the musculature of the body. This provides the organism with the ability to create a fight/flight or freeze response. The human animal has this same reaction to a perceived threat or danger (LeDoux, 1996). However, the difference between the human animal and other mammalian species is that after a traumatic event has ended for animals in the wild, they utilize an innate 'trembling' mechanism that discharges this high biochemical and neuromuscular charge from the body thereby facilitating a spontaneous recovery from the traumatic event (Muggenthaler, 2001; Scaer, 2001; Levine, 1997). This trembling mechanism according to animal researchers provides animals in the wild with a builtin immunity to post traumatic stress disorder (PTSD) that enables them to return to normal life after a highly charged life-threatening experience without developing PTSD symptoms (Levine, 1997). Muggenthaler (2001) offers additional theoretical insight into these tremors exhibited by animals. She observed that these tremors involve an expenditure of energy at a particularly vulnerable time of recovery from physical stress. Since animals do not expend energy uselessly during a threatening or stressful event, it would indicate then that these tremors are somehow involved in the survival process. She believes that for these tremors to have survived the evolution of the species, there must be a survival advantage to this behavior.

Utdrag ur Berceli & Napoli (2007)

TRAUMA-RELEASING EXERCISES
Trauma releasing exercises (TREs) were designed to engage the primitive mammalian survival mechanism used to recover from a traumatic event. The same tremors found in other mammalian species can also be easily evoked in the human species through a series of five simple exercises. The exercises produce a slight fatigue in the major muscle groups of the legs and pelvis. This is done by isolating the muscle groups and exercising them

individually. A full explanation of this method can be found in Figure 2. The induced muscle discharge in the form of tremors is used to extinguish somatic procedural memory, thereby mitigating ongoing symptoms of trauma (Scaer, 2005).
Usually, when one experiences a traumatic event, attention is moved out of conscious awareness because the situation is overwhelming and the conscious mind does not know how to process this experience. However, the reactions from the event are stored in the body through primitive and instinctual postures of defense (Conger, 1994; Van der Kolk, 1994). This instinctual posture not only causes the nervous system to react but it also produces
changes in muscle tone and reflexive reactions (Scaer, 2005). The muscles may become more powerful or more flaccid; they may rigidify if the freeze response is activated or begin to tremor after the danger has subsided. The primary muscles involved in this process are known as the flexor muscles. Collectively these muscles contract to roll the body forward into a ball. This forward bending movement helps to protect the core or underbelly of the body (Koch, 1981). The core flexor muscles of the startle response known as the psoas muscles are particularly vulnerable to later motor dysfunction and chronic contraction. The psoas muscles, connecting the spine, pelvis, and legs, are one of the most primitive core muscles used intrinsically in flexor responses of the startle reflex (Koch, 1981). Procedural memory for repetitive psoas activation causes chronic tension and increased baseline levels of arousal, postural dysfunction, and back pain (Scaer, 2005).
Trauma-releasing exercises were designed by David Berceli over a 5-year period of observing large populations of traumatized people in five war-torn countries of Africa and the Middle East. This observation revealed an instinctual somatic pattern of defense that transcended cultural expressions—a purely human contraction against life-threatening danger. After studying the flexor muscle pattern that contracts toward the fetal position during danger, it was possible to design exercises to relax that specific muscle group, thereby restoring a sense of physical comfort that reportedly extended to greater psychological calmness. The tremoring exercise involving this specific muscle pattern was developed by observingthe natural tremor reactions of individuals during intensely dangerous situations suchas aerial bombings, shootings, and tank shelling. Children often tremored freely, and adults often froze the mechanism as a way of not appearing frightened. This natural tremoring of the body as well as the socialized behavior of controlling these tremors is commonly foundin our culture. It is not uncommon to hear phrases such as, “I was so frightened my jaw was quivering.” “My hands were shaking so bad I couldn’t calm myself down.” “My legs were trembling as I gave my speech.” “I was so angry I shook.” “After birthing, my body shook all over uncontrollably.”
Trauma-releasing exercises have been used with very favorable results in 19 countries of Africa and the Middle East over the past 15 years to reduce the hyperarousal symptoms of PTSD (Berceli, 2005) (see Figure 2). The value of these exercises is that they can be done individually or with large groups at a single time. The exercises are easy to follow, and the results can be reproduced without the guidance of a therapist. This is an important consideration when working with large traumatized populations who do not have access to counseling services or providers. (…) this technique has been used successfully with very encouraging results in war countries.

Utdrag ur ”Department of Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury…”

Trauma/Tension Releasing Exercises (TRE) : TRE’s are a brief series of techniques designed

to produce trauma healing and stress reduction by using six simple exercises that evoke neuromuscular tremors/shaking that is generally experienced as relaxing or pleasurable.[76] It is believed that when evoked, the tremors begin to release deep chronic muscular tension held within the core (psoas muscle, paraspinal muscles, abdomen, etc.), or "energetic center," in the body. When tremors are evoked, which generally occurs within 15 minutes, the shaking is observed to reverberate throughout the body, often beginning in the legs and pelvis, and traveling to other areas of the body releasing deep chronic tension throughout. TRE has been taught to U.S. military personnel prior to deployment with the intent of their being able to use it to modulate ANS during deployment.

TRE holds appeal because the techniques can be easily self"taught through a short instructional video or one"two hour workshop, and individuals who practice the technique report immediate anxiety and muscular tension relief. The technique is easily reproducible and most who try the exercises experience the neurotremor release. The technique was discovered through observing the natural tremors/shaking response that can occur immediately after traumatic events. For some, it is recommended the technique be used in conjunction with therapy because it may release emotions and memories associated with past trauma. However, according the TRE founder, the neurotremor response is generally experienced as pleasurable, is under the individual's control, and can be stopped by the individual at any time. Although no research investigating the efficacy of TRE exists, it appears promising for its ease of use, reducing hyper"arousal and multiple anecdotal reports of its immediate benefit, including those from military personnel (http://traumaprevention.com). Further research into the technique is merited.

Uttalande av framstående läkare, psykologer och neurologer inom området stress/traumabearbetning och "neurogenic tremors" (vilket TRE genererar) (utdrag från "The Effects of Neurogenic Tremors on the Human Body"):

Dr. Robert Scaer
Dr. Robert Scaer MD (Neurologist) Author of: The body bears the burden: Trauma, dissociation and disease and The trauma spectrum: Hidden wounds and human resiliency.
Dr. Scaer says that the brain is basically forming and discarding neurons, dendrites and synapses (neural nets) constantly through every perception we receive and every response that we make. During time of tremoring, the product of trauma-induced neural nets, the intrusive as well as unconscious bombardment on our consciousness by trauma-linked messages of threat, seem to be progressively extinguished.
Neurogenic tremors therefore appear to be providing the environment for the extinction of negative, and the formation of positive neural nets. Neurogenic tremors therefore, seem to be able to inhibit, or down regulate the amygdale.

Dr. Riccardo Cassiani-Ingoni
Dr. Riccardo Cassiani-Ingoni (Rome, Italy) was awarded the Mangrella Prize for the best Italian neuroscientist by the National Council of Research (I) in 2006, as well as the Integrative Neural Immune Award by the National Institute of Mental Health (USA) in 2003.
Dr. Cassiani Ingoni claims that the neurogenic tremors evoked by the Trauma Releasing Exercises (TRE) act as a very specific training protocol with significant potential of inducing functional long-term changes in neuro-muscular crosstalk: e.g. changes in neurotransmitter receptor properties, density, and distribution at the neuromuscular junction; changes in

muscular end-organ receptor signaling; and changes in central and peripheral nervous system processing of proprioceptor information.

Dr. Arild Hafstad
Clinical Psychologist: (Blefjell, Norway)
Dr. Hafstad believes that the pulsation in neurogenic tremors has a reflex-like quality. It seems like the driving focus of the tremors is outside the "ego" and cannot be replicated by willed decision. It seems to happen *in* the body, quite independent of emotions or thoughts. It's a "mechanism" that stays activated by itself.
The impulses of the tremors seem in a peculiar way to bypass the sites of primary affects (not stimulating emotionality) and reach regions in the brain involved in more advanced sentiments like feelings of wonder, well being, pleasantness, peacefulness, friendliness, meaning, personal value.

Dr. Maria Henriqueta Camarotti
Clinical Neurologist: (Brasilia, Brazil)
The TRE tremors, besides the proprioceptic inferences (profound sensations pertaining to the muscular-skeletal system) promote the regulation of the serotonin system and the cerebral GABAergic, leading to the deactivation of a hyper-aroused amygdala system. This leads to the negative feedback of the prefrontal cortex, activating the mechanism for extinguishing the fear response and activating the regulation of emotions.