

Podcast:

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Supportive information

Aquatic physical therapy at an intensive care unit (ICU) is rare. But the ICU at the university hospital RadboudUMC in Nijmegen, Netherlands, has a pool since 2012. The reason is to help with recovery of e.g. critically ill ventilated patients in a very early stage, also for patients with serious complications of Covid-19.

Therapists not only aim to treat the physical effects of intensive care unit acquired weakness (a part of the post intensive care syndrome), but also aim to positively affect control, hope and thrust. This combination of goals comes from the *embodiment paradigm*.

At its heart, *embodiment* emphasizes an orientation towards the whole person (an attitude towards the full richness of human life), and a rejection of singular, reductionistic views of the body common to the biomedical sciences (from Nicholls 2010).

Embodiment is also defined as being specifically concerned with the lived experience of one's own body. This lived experience refers to the way that individuals negotiate their everyday lives via the utility of their bodies, and how they mediate, interpret, and interact with their physical and social environments. *Embodiment* is about the implicit/tacit functioning of the body in everyday perception and performance.

Body, mind, action, and perception are a unity in this concept, influenced by e.g. Merleau-Ponty (1962).

Merleau-Ponty described the "basic sense of self": the "mineness" of all experiences, embedded in a background feeling of the body in terms of "my experiences are my own". The "mineness of acting" is the experience of the one who – spontaneously – initiates action.

Disembodiment is the disturbance of this implicit functioning. Disability can disembody, as wonderfully has been painted by Frida Kahlo in her "The Broken Column". The hemiplegic neglected arm can be disembodied, or the fractured leg as described by Oliver Sacks in "A leg to stand on". Disembodiment also exists in the ICU: life is at stake and the normal body becomes an infarcted heart that is monitored in various ways with an abundance of equipment.

To align body, mind and action again, a person has to relearn that "my bodily experiences are my own" through sensorimotor (movement) experiences in combinations with emotions and behavior.

Practically: a person needs the experience that the body can perform and can be controlled. Aquatic therapy facilitates this: slow movements or maintaining a posture only need some 5% of maximum strength (on land this is about 20%). This helps embodiment also through the model of self-efficacy: belief in one's own capabilities (yesss, in the pool I can already make a few steps; I will also be able to do that on land at some moment: possibly providing a turning point in my recovery). Training

weakness is a fight against gravity. Buoyancy during immersion counteracts gravity and depends on the amount of immersion (volume displacement). Progression in training needs a gradual increase of gravity, which is realized by the adjustable floor.

** not every patient can go into the pool. There are the regular in/exclusion criteria. Specific for Covid-19: 3 negative tests.

Otherwise the safety criteria are related to circulation and respiration:

Patient does not fulfill vital functions safety criteria:

1. Respiratory unstable

- Inspiratory oxygen fraction (FiO₂) > 60%
- Positive end expiratory pressure (PEEP) > 10 cmH₂O
- Frequent desaturation < 90%
- Breath rate > 40/min

2. Hemodynamical unstable

- Mean arterial pressure (MAP) < 65 mmHg (norm value 65-110)
- new myocardial ischemia * serious arrhythmia's

3. Neurological unstable

- Intracranial pressure (ICP) > 15 mmHg (norm value 7-15)

4. Other

- Fever > 40⁰ C / 104⁰F
- active bleeding
- serious agitation: Richmons Agitation Sedation Scale (RASS) +1 till +4
- thrombocyte count < 10 (*10³/ml)
- unsafe endotracheal tube

Video's

These news items include video's of aquatic therapy and of COVID -19 in RadboudUMC

<https://eenvandaag.avrotros.nl/item/eenvandaag-31-08-2020/>

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