

Center for Lung Cancer

The role of peri operative physical therapy

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What inspired us?

Adequate breathing technics and physical condition are of vital importance for outcome after lung surgery. The highly improved organization of the pathway of the lung cancer patients means short pre operation time. By creating the pathway the average lead time of referral to diagnosis has been reduced from 4 weeks to 2.1 weeks. Secondly: our patient comes from all over our region. As it is well known that the principle: better in, better out is ad hand, the question was: how can we improve patients 'vitality' when there is almost no time in the pre operative phase to do so.

Solutions for the Pre Clinical Phase?

We created within the expert team a clear vision about the importance of informing our patients. Knowing that there is no time for an intensive trainings track, we take time to give important information. So in the pre-operative phase we are focused on using visual-, audio- en practical information. All members of the team pay attention to the physical preparation but the physical therapist has time to deepen this. We advise our patients to bring along their family so that the information can be shared.

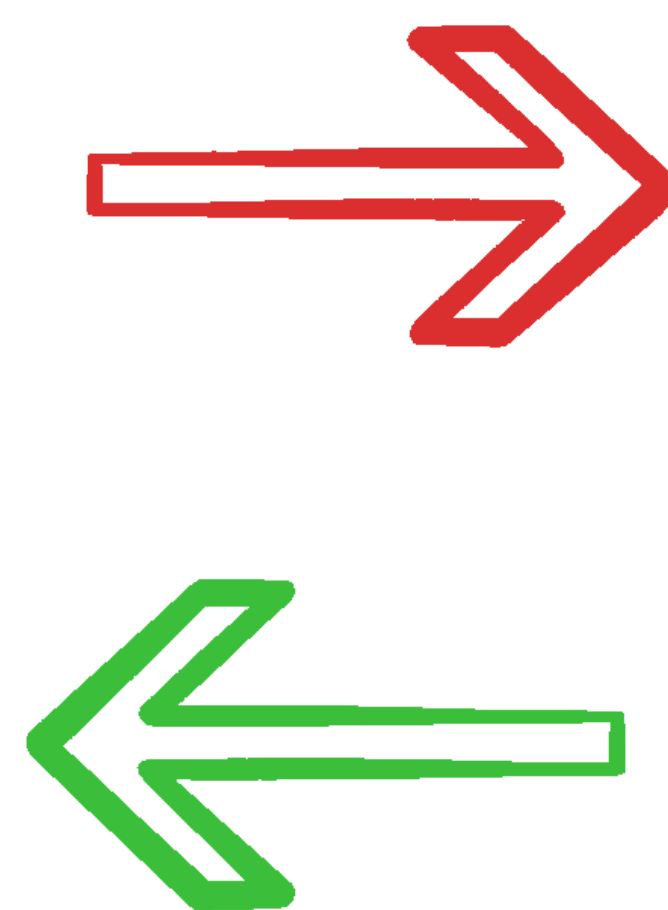
What are the consequences for the patient?

In balance



- Sufficient muscle tension
- Flexibility in breathing
- Connected with the body
- Mind set: positive - broad vision overlooking circumstances
- Ability to adjust to stress

The patient can participate in the process



Out of balance



- Superficial breathing
- Inadequate muscle tension
- No connection upper and lower body parts
- Mind set: negative - no panorama vision, detail sensibility
- Minimal pressure causes increased disbalance; Mentally
Physically
Imune system

The patient becomes more vulnerable

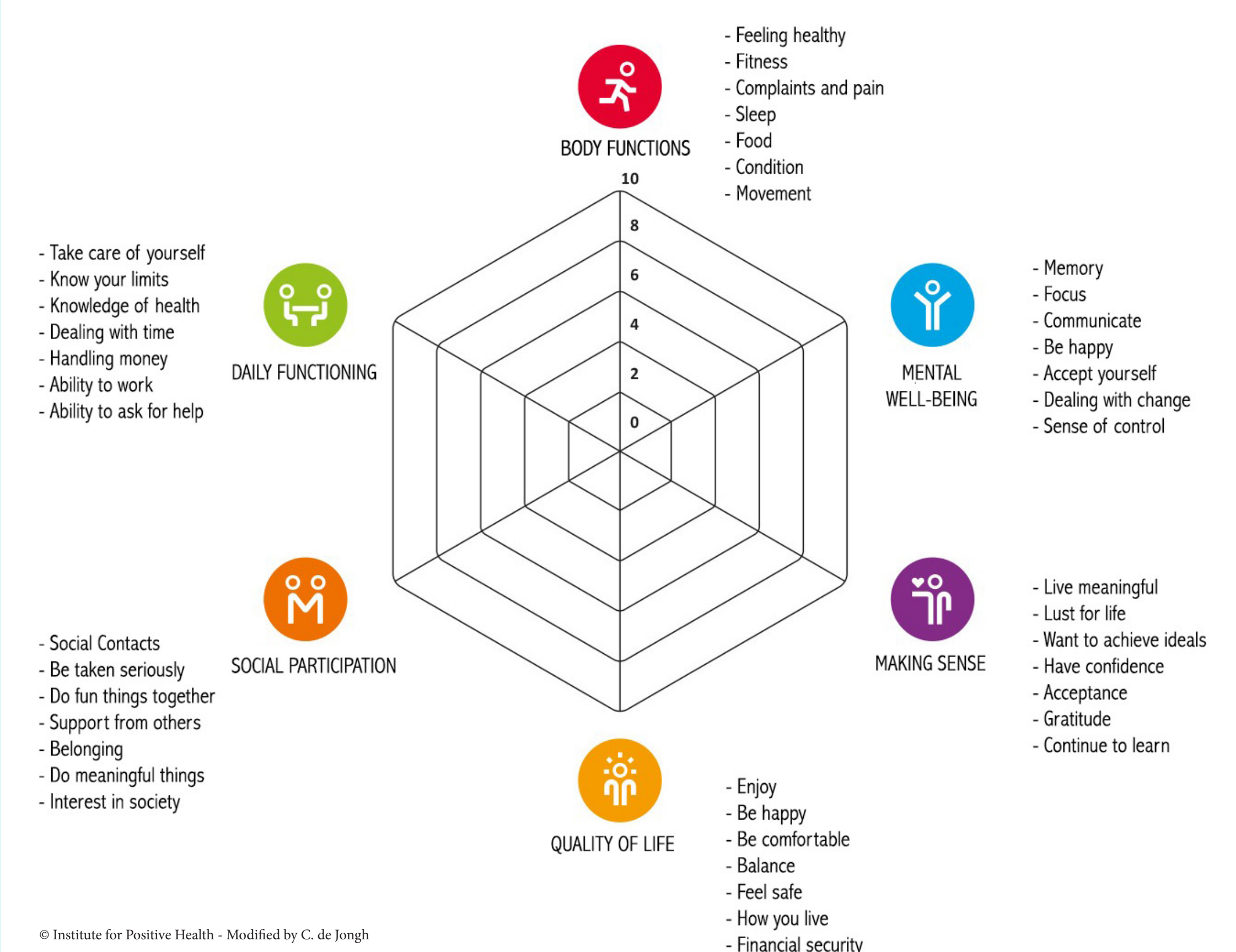
Post-operative: How to organize the quality of life?



First impressions show that the physical therapist working on ICU/High care unit can start therapy within a few hours after the operation. Patient recognises the tasks that are asked for and from day one our patients, knowing what to aspect, can, for an important part, have control in their situation. Because our patients are in control, they themselves will ask for the next step within the post operation protocol.

The pathway shows that, by activating the patient so soon after operation, the complications are less, the recovery is better and our patient go home in better shape knowing what to do at home.

Not only the participation of the patient is an improvement, by using the app, the video's and leaflets the environment of the patient (family and friends) can have a more positive influence in recovery. They oversee all the phases and have a better understanding about the steps that are taken.



How does the Center for Lung Cancer organize this?

Since the start of the Centre for Lung Cancer, the following insights have been obtained:

- **Adjust** your information according to the skillfulness of your patient.
- **KISS Principle;** Keep the Information Short and Simple.
- **Pain**, breathing and movement are the topics.
- **We** use different ways to communicate the information, by talking, reading, showing videos and through body awareness.
- **At** the end of the session we ask for confirmation: is the information well understood, both by patient and his relatives.
- **Our** patients are often educated with the adagio: "don't pay attention to [minor] physical problems, keep on working".
- **To** discover the ability of body awareness, will help them to optimize the re-habilitation.
- **Thus**, pre-operation preparation compensates the lack of time for intense pre-operation physical training.
- **Fourteen** days post-operation, our patients return to the Center for Lung Cancer. We evaluate the patient's experience.
- **If** necessary, we advise rehabilitation close to their home.
- **We** have created a network of capable physical therapists in the area that the hospital provides.
- **If** the situation is more complex, we can use oncology knowledge centers with more specialized physical therapists, often in a multi-disciplinary setting.

Lessons learnt

- 1 The importance of making adjustments in the quality of informing our patients compensates the lack of time for a pre-operative training.
- 2 A clear view from the multidisciplinary team on each professional working process creates a common way of addressing the items which are important.
- 3 By creating an environment where there is time for contact, one can intensify the learning process and adjust the information to the needs and learning ability of the patient.



Boden, I., et al. (2018). *Preoperative physiotherapy for the prevention of respiratory complications after upper abdominal surgery: pragmatic, double blinded, multicentre randomised controlled trial.* Brithish Medial Journal. 360: 5916



Timmerman, J.G., Stuiver, M.M. et al. (2018). *Physical behavior and associations with health outcomes in operable NSCLC patients: A prospective study.* Lung cancer, an international journal for lung cancer and other thoracic malignancies.

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