

PAIN IN MOTION

Retraining Pain Memories in Chronic Pain Patients: the Next Generation of Exercise Therapy – examples in English

Exercise therapy for chronic pain patients can address movement-related pain memories by applying the ‘exposure without danger’ principle. By addressing patients’ perceptions about exercises, therapists should try to decrease the anticipated danger (threat level) of the exercises by challenging the nature of, and reasoning behind their fears, assuring the safety of the exercises, and increasing confidence in a successful accomplishment of the exercise.

Such ‘cognition targeted exercise therapy’ for patients with chronic musculoskeletal pain is illustrated here with an example of a therapist discussing the patient’s perceptions about exercises before performing them for the first time (presented in Italian below). The second part includes the same therapist discussing the patient’s experience with the exercises (follow-up of the exercises), again in Italian.



One of the disks in my lower back is already damaged. So if I would lift the bucket, then the disk will probably tear ...

"Therapists should try to decrease the anticipated danger (threat level) of the exercises by challenging the nature of and reasoning behind their fears, assuring the safety of the exercises, and increasing confidence in a successful accomplishment of the exercise."

PAIN IN MOTION

Cognition targeted exercise therapy in patients with chronic musculoskeletal pain: Example of a therapist discussing the patient’s perceptions about exercises before performing them for the first time.

- Therapist (T): *I understand that you have not been using your*

full range of neck motion ever since that car accident, especially not for moving your head upwards and backwards, like you do when you look over your shoulder. Why is that?'

- *Patient (P): 'The osteopath, who treated me in the early phase of my whiplash injury, explained me that in despite of my young age, I already have some wear in the joints of the lower part of my neck, which might have been accelerated by the whiplash trauma. He explained to me that the full weight of the head, which is quite heavy, supports on the lower part of the cervical spine when moving your head backwards. So I feel I need to protect my lower neck from becoming more damaged.'*
- *T: 'But that was way before you learned about the hypersensitivity of your nervous system and how it enlarges the signals from your neck muscles and joints. How do you feel about it at this moment?'*
- *P: 'I understand that even the slightest increase in muscle tension will be enlarged by my brain and therefore experienced as severe pain, but nevertheless the wear in my lower neck is still there, isn't it?'*
- *T: 'Many people from your age have a similar amount of wear in the lower neck joints, and few of them actually are in pain. This implies that many people with similar 'damage' in their neck do not feel neck pain at all. What does that tell you about the importance of the wear in your neck?'*
- *P: 'That's is not so bad after all?'*
- *T: 'Exactly! Back to your neck mobility: would you value if you could look over your shoulders like you used to, and move your head upwards and even backwards, to look at the sky?'*
- *P: 'Certainly, I need it for driving the car – at least when I'm ready to do that again – and for riding my bicycle. Do you think I am capable of doing that? Is my neck ready for that?'*
- *T: 'What do you think?'*
- *P: 'I don't know. It might be safer to wait for a while...'*
- *T: 'I am confident that you are up to it. Your neck muscles are definitely ready. You just need some practice and then you'll soon obtain your full range of neck motion back again. Shall we try it here together with me while sitting in that chair? I will first demonstrate the exercise and then you can have a go.'*
- *P: 'Yes, I'll probably have to try and see how it goes.'*
- *T: 'What do you think will happen when you move your head backwards and afterwards look over your right, and then your left shoulder?'*
- *P: 'It will probably increase the pain.'*
- *T: 'And what does that pain increase tell you? Does it imply*

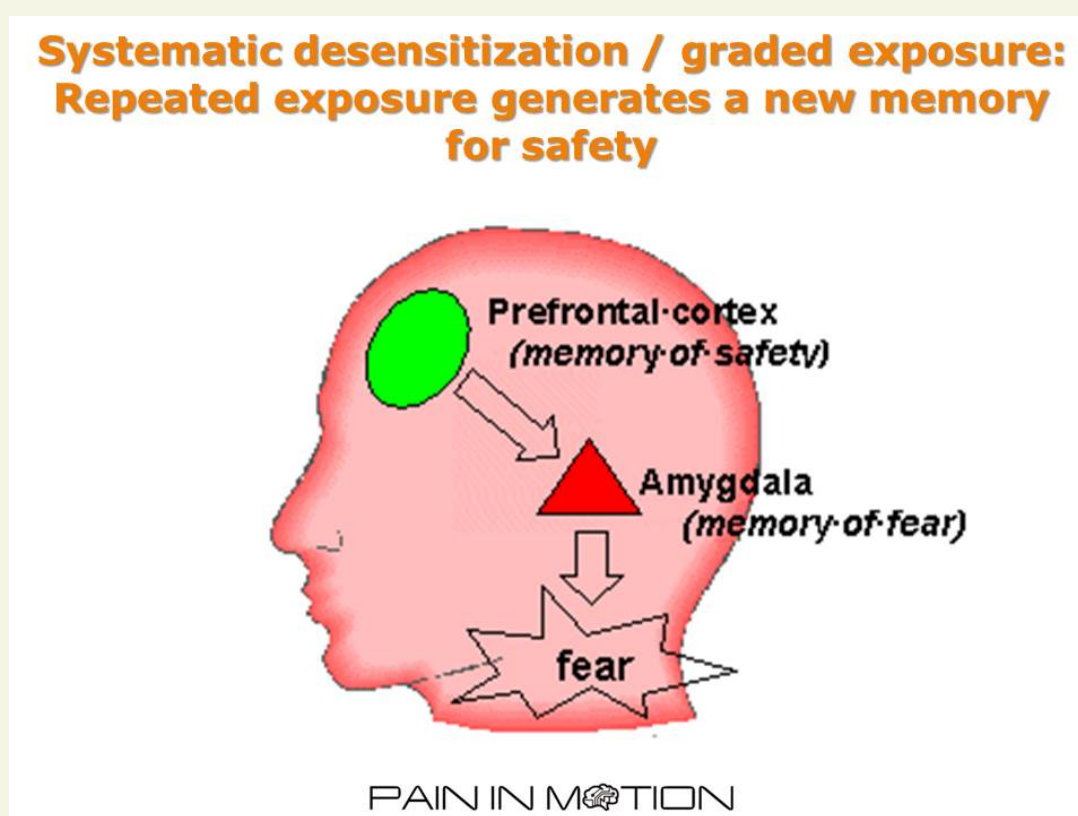
that a neck muscle has torn?'

- P: *'Not at all, I know that I should not rely on the pain that I feel – my nervous system is so sensitive especially for all the signals coming from the neck region.'*
- T: *'Great that we think alike and that you now have full understanding of your condition. The neck exercises are perfectly safe, and even in the event of a pain increase post-exercise, it will not prevent you from performing daily activities. On the contrary, regaining your neck mobility will enable you to do much more and enjoy life. I will now demonstrate the exercise.'*

Cognition targeted exercise therapy in patients with chronic musculoskeletal pain: Example of a therapist discussing the patient's experience with the exercises (follow-up of the exercises).

- Therapist (T): *'So how did it go?'*
- Patient (P): *'It went OK, less frightening as anticipated upon. It's such a relief to be able to use my neck this way again. I thought I would never be able to do that again.'*
- T: *'Are you willing to practice the exercises at home, knowing that I won't be there to assist you?'*
- P: *'Yes, and in fact I look forward to it. I can practice this in the living room, the kitchen, etc.'*
- T: *'If one training session comprises of 3 series of 15 repetitions for each of the 3 exercises, how many times a week are you willing to practice?'*
- P: *'Shall I practice once every day? Is that enough?'*
- T: *'That's fine. Let's make it 6 times a week, so you have one day off. Is that fine with you?'*
- P: *'OK.'*
- T: *'Let's discuss the unlikely event of the exercises going less smoothly at home than they were experienced a few minutes ago. What will you do in case you are halfway your exercise program for that particular day, and suddenly you feel a pang in your neck. What will you do?'*
- P: *'I stop the exercise and try again later that day?'*
- T: *'It's all about the interpretation of the pang. Does the pang implies that a muscle is torn inside your neck, or that you have damaged one of the joints in your cervical spine?'*
- P: *'I see... it relates to the burglar alarm which is activated in despite there's no burglar. The pang simply indicates that my burglar alarm is too sensitive.'*

- T: *'Exactly! The sensitive burglar alarm should not prevent you from being in control of your own life. It should not prevent you from continuing the exercises. It's like rewarding a child for its undesirable behavior. Stopping the exercise because of pain is like rewarding your brain for producing pain, and we don't want that, don't we?'*



Jo Nijs

2014 Pain in Motion

Further reading:

[http://www.maneyonline.com/doi/abs/10.1179/174328808X251948?
queryID=13%2F253063](http://www.maneyonline.com/doi/abs/10.1179/174328808X251948?queryID=13%2F253063)

<http://www.ncbi.nlm.nih.gov/pubmed/23717046>

<http://www.ncbi.nlm.nih.gov/pubmed/24481595>