

# ***Practitioner Treatment of Choking Report Phobia by Targeting Traumatic Memories with EMDR: A Case Study***

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**Choking phobia is a specific phobia characterized by fear and avoidance of swallowing foods and liquids. It often develops following an episode of choking on food. A prospective case study of a 30-year-old woman with a phobia of choking, acquired after a series of traumatic incidents 5 years previously, demonstrates the usefulness of an approach that is aimed at processing the disturbing memories of a traumatic event. Two therapy sessions of Eye Movement Desensitization and Reprocessing (EMDR) produced a lasting decrease in symptomatology. ©1998 John Wiley & Sons, Ltd.**

## **INTRODUCTION**

Fear of being choked is a disabling condition. In many cases it results in limitation or avoidance of ingestion of food, fluids, or pills and a considerable loss of weight (McNally, 1997). It also may have serious social consequences. While some individuals, for example, appear to be too embarrassed to eat in the company of other people, other patients with choking phobia do not dare to eat alone, for fear that nobody will be able to help in case of choking.

Information on choking phobia is scarce. There is a lack of epidemiological data on its prevalence, while a review of the available literature produced no more than 24 case reports (McNally, 1994, 1997). These reports indicate that choking phobia is some-

what more prevalent among women than men, whereas the onset is usually sudden, after an episode of choking (e.g. during a meal). The most prevalent form of choking phobia is fear of swallowing solid food, while a fear of choking while swallowing fluids only is relatively rare (Öst, 1992).

In a diagnostic sense choking phobia is categorized as a specific phobia within DSM-IV (APA, 1994), and is subtyped under 'other'. Choking phobia is easily distinguishable from other Axis-I diagnoses, but caution is advised so as not to overlook somatic pathology. For example, the passage of liquids and solids may be impeded by organic lesions of the throat, oesophagus, and adjacent organs. Accordingly, if there is difficulty in swallowing, and the patient complains of food 'getting stuck' on the way down the diagnosis 'dysphagia' should be considered. In that case the aetiology should be carefully sought, which makes a physical examination necessary. Although choking phobia may be the only dysfunction presented, in many

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cases it is comorbid with other psychopathology. For example, choking phobia is fairly often seen as a complication of panic disorder or depression (McNally, 1994).

There have been no controlled trials into the efficacy of treatments for choking phobia. Uncontrolled case reports show a wide variety of treatment approaches, varying from exposure to audiotapes of swallowing noises, to elaborate tongue exercises, and the use of tongue depressors (Solyom and Sookman, 1980). Aversion relief therapy has also been reported to be an effective treatment. This approach involved patients pricking themselves in the hand or being administered electric shocks while chewing food. Once the food had been successfully swallowed the pricks or shocks were terminated (Solyom and Sookman, 1980; Ball and Otto, 1994). Other interventions that have been found successful involve graded exposure *in vivo* (McNally, 1986), cognitive therapy (i.e. behavioural experiments intended to correct catastrophic thinking; Öst, 1992), pharmacological treatment (imipramine and alprazolam; Greenberg *et al.*, 1988) or a combination of these treatment approaches (McNally, 1994).

It is a widely accepted notion that exposure *in vivo* (i.e., graded and prolonged exposure to the phobic stimuli) is the treatment of choice for specific phobias (e.g., Emmelkamp *et al.*, 1992). However, it should be acknowledged that regarding the treatment of complex (e.g. trauma related) phobic conditions such as phobias of accidents or choking, controlled outcome studies are totally lacking. Meanwhile, it is a well-established clinical fact that such subtypes of specific phobias require relatively elaborate treatment (see e.g., Emmelkamp *et al.* (1992) for a case report on behavioural treatment of a fear of swallowing that lasted over 30 sessions).

For a number of years a new treatment method, named Eye Movement Desensitization and Reprocessing (EMDR) has been recommended as a treatment mode for psychologically traumatized individuals (Shapiro, 1995). In EMDR, patients are imaginably exposed to components of a traumatic memory. Simultaneously, the client generates rhythmic alternating sets of eye movements, hand taps or auditory tones. It is postulated that through the utilization of alternating external stimuli, negative memories are emotionally processed and assimilated (Shapiro, 1995; Macculloch and Feldman, 1996). An emerging body of controlled research supports EMDR's effectiveness with post-traumatic stress disorder (PTSD; e.g., Marcus *et al.*, 1997; Rothbaum, 1997, Van Etten and Taylor, in

press; Wilson *et al.*, 1997). For example, in a direct comparison between EMDR and standard care (i.e. cognitive-, behavioural or psychodynamic psychotherapy, medication, and group therapy) Marcus *et al.* (1997) found that patients treated with EMDR showed significantly greater improvement than those treated with standard care, and improved twice as quickly.

Given the potency of EMDR in the treatment of psychological trauma, and the fact that the majority of the clients with choking phobia, attribute their anxiety to a traumatic experience, it is possible EMDR can be helpful in treating this and related conditions. Therefore, the purpose of the present case study was to explore the clinical usefulness of the EMDR phobia protocol in a case of choking phobia.

## METHOD

### *Subject*

Nancy is a 30-year-old housewife with a history of stress-related complaints: migraine headache, psoriasis (since she was 9 years old) and hyperventilation since she was 15 years of age. After the birth of her daughter, her complaints worsened and she began to experience severe panic attacks which were initially diagnosed as signs of post-partum depression. For this latter problem she had client-centred psychotherapy and was prescribed anxiolytics and antidepressants but her symptoms never entirely disappeared.

Five years before the present case study started Nancy had to undergo a jaw operation. After the surgery, her jaws had to be wired together for 6 weeks. During her stay in the intensive care unit of the hospital, the tube which was used to drain fluids from her lungs was not inserted properly. It had to be pulled out and re-inserted forcefully, causing Nancy to feel extremely nauseous as well as afraid that she was going to choke to death. The panic that she experienced was aggravated by her helplessness, because of her wired jaws. In her panic, she finally managed to pull out the tube herself. The night after this harrowing experience she had to alert the nursing staff that the patient in the next bed was suffocating, and a few hours later she witnessed the resuscitation of another patient.

A few weeks after her stay in the hospital, Nancy's jaw was still hurting her, and she returned to the surgeon who had performed the operation. It appeared that a piece of drill had been left in the

wound, which later had to be removed under general anaesthesia. After Nancy was discharged from the hospital, she continually had the feeling that something was stuck in her throat and that this would choke her. In addition, Nancy had become extremely scared of dental treatment. She required extensive post-operative treatment to realign her teeth to the new shape of her jaw. However, such a treatment required impressions to be made of Nancy's mouth, which she considered an impossible task because of her extreme fear of choking. A heavy-handed attempt by the orthodontist to take the impressions misfired after which her fears were compounded.

Nancy's dentist referred her to a psychotherapist who recommended psychodynamic therapy. His opinion was that her choking phobia was a symptom of 'fear of losing control'. Through therapy she would 'learn to let go'. After several psychotherapy sessions she was referred to the Regional Institute for Mental Health. Here, Nancy was diagnosed as suffering from 'panic disorder with agoraphobia complicated by extreme choking phobia'. The psychiatrist who conducted her intake, prescribed insight-oriented therapy. However, the clinician who was assigned to her case referred her on yet again, this time to the first author.

### Assessment

The patient's scores on the Dutch version of the Symptom Check List-90-Revised version (SCL-90-R; Derogatis, 1977; Arrindell and Ettema, 1986; norm group 2) fell in the range 'very high' on the dimensions 'anxiety', 'agoraphobia' and 'interpersonal sensitivity and paranoid ideation', and were 'high' on 'depression', 'somatization', and 'cognitive-performance difficulty'. This questionnaire had been administered three times with intervals of 4 months prior to treatment. The SCL-90-R total scores appeared to have remained fairly stable (range: 'high') over this period (197, 173, and 196 respectively). Her scores on the Personality Disorder Questionnaire (PDQ-Revised; Hyler *et al.*, 1982) yielded no indications for serious personality pathology. Extreme scores (20 = maximum) were found on the Dental Anxiety Scale (DAS; Corah, 1969), a widely used measure for dental trait anxiety. The Dental Cognitions Questionnaire (DCQ; De Jongh *et al.*, 1995) was used to assess patients' believability ratings concerning a number of dental-related cognitions (e.g. 'I will suffocate during treatment': 100%).

The patient did not fulfil the criteria for PTSD. For example, there were no recurrent involuntary intrusive memories of what had happened to her in the hospital. However, when asked to recall these episodes, both the memory of the choking and the one of the resuscitation were rated as highly disturbing. On a 0 to 10 Subjective Unit of Disturbance Scale (SUD), where 0 was 'no disturbance at all' and 10 was 'the greatest level of disturbance', the patient indicated a disturbance level of 10 for both incidents.

### Treatment

Treatment was administered by an experienced psychologist who received complete (Level II) training in EMDR. The EMDR phobia protocol was followed as described by Shapiro (1995, pp. 222–226). Specifically, a three-pronged approach of past, present, and future was used that takes into account the following steps: (1) alleviating the distress related to one or more old memories, (2) deconditioning the effects of present stimuli that trigger the fear response, and, (3) preparing the client for future confrontations with the conditioned stimuli. Treatment proceeded as follows.

During the screening interview Nancy was asked to select the picture that best represented the memory of her hospital experience. This was the moment the tube was thrust into her throat and she felt she was going to choke to death. At this point, a negative belief that expressed most satisfactorily a dysfunctional self-assessment related to the traumatic event (Negative Cognition, NC; 'I am a helpless unbalanced person') was selected. Furthermore, a positive belief, to be used as a replacement for the NC, was selected (Positive Cognition, PC; 'I am strong'). Nancy was then asked to assess the validity of the PC using a 1 to 7 Validity of Cognition scale (VoC), where 1 = 'completely false' and 7 = 'completely true'. The credibility of the PC was 2. Finally, Nancy was informed about the use of EMDR and gave consent to the procedure.

When the patient returned for her next appointment, Nancy was very tense. She was afraid of having a panic attack during treatment with which she would be unable to cope. The rest of the session was spent weighing up the 'pro's' and 'con's' of treating her phobia, and the use of EMDR. She decided to proceed and agreed to the use of EMDR at the next session.

In the first treatment session the patient was asked to bring to mind the traumatic event, together with the NC, and the location of the physical

sensation associated with it. The patient received instructions to track the therapist's moving fingers with her eyes, while letting images, thoughts, sensations or feelings occur. Short breaks were taken between each series (set) of eye movements (SEMs) in which the patient explained what came into her awareness. No interpretations were made. Next, new SEMs were made with appropriate variations and changes of focus. During the course of the first treatment session the images and physical sensations followed each other in rapid succession. Suddenly, she became very anxious, turned bright red, gripped her neck with both hands and cried out in a strangled voice: 'I'm choking, I'm choking!' This was followed by a severe panic reaction during which the perspiration literally dripped from her forehead. In EMDR terms, this is an 'abreaction' (Shapiro, 1995). According to EMDR guidelines (Shapiro, 1995, pp. 168–177) eye movements should be continued until the fear has eased to a reasonable level. However, the patient indicated she wanted to stop. It was agreed to reconsider whether to continue with EMDR at the next session.

At the next appointment Nancy indicated that she had noticed a favourable effect after her previous session and that she wanted to try EMDR again. When she was asked to rate the intensity of her emotions when the memories of the hospital were accessed she noticed no disturbance (SUD = 0). Such decrement in SUD ratings serves as the basis for the decision to switch to the next phase of the protocol: installation of the PC. The credibility of the PC ('I am strong') was rated as 4 (on the VoC scale of 1 to 7). The rest of the session was spent on increasing the credibility of the PC ('I am strong'). SEMs were continued until the PC reached a high level of credibility (i.e. 6 on the VoC scale). As part of the phobia protocol, the patient was asked to imagine herself in the future and mentally run a videotape of the time between the present session and a successful confrontation with the anxiety-provoking stimuli. Each disturbing aspect of the process was treated as a separate target. EMDR treatment was repeated until the entire 'mental videotape' could be viewed without distress.

To give the reader an idea of the dynamics and effects of the treatment, a transcript of the last 3 min of the session is reported below:

Patient: I still have a dry mouth.  
(set of eye movements)  
Patient: It really is dry!  
(set of eye movements)

Patient: The feeling's gone. That's weird, isn't it? How do you explain it? My palms are still sweating, not from fear but from what I'm feeling now. It's really strange! That feeling in my throat. It was just as if something was stuck there, and I felt it shrink away! Yes, it's very odd ... I'm very impressed.

Therapist: Do you still feel stressed at all?

Patient: No, I'm simply going to try. I can't choke. I said that last time too. Everybody has told me so, but I now feel a bit more positive.

Therapist: Hang on to that feeling.

(Another set of eye movements)

Patient: I feel so good. I have a lovely feeling inside. I'm going to do it next time. I'm going to do it, I must, I must be able to, I simply must, I'm going for it. What I feel now, I can very easily put into words. A fighting feeling! It's now or never, that's what it is, you know. Isn't that a nice feeling to have?

## RESULTS AND DISCUSSION

At the next session dental impressions were taken, with the patient experiencing almost no anxiety so that the further rehabilitation of her teeth could proceed. Her dentist indicated to be amazed by the fact she was so cooperative and easy to treat. Treatment appeared to also have a generalizing effect onto her fear of choking, making it possible for the client to swallow food normally. An SCL-90 filled out one week after treatment no longer showed high subscale scores with the psychoneuroticism score being 125 ('average'). As can be seen in Table 1, 3 months later the symptomatology had diminished further. The DAS score went from 20 to 7 ('low'), while the credibility of the cognition 'I will suffocate during treatment' decreased (from 100%) to 0%. These changes were still stable 1½ years later (see Table 1); no problems involving avoidance reactions or fear of choking whatsoever were reported. Given that the phobia had already existed for 5 years, and the patient had previously gone

Table 1. SUD, DAS and SCL-90-R total scores at the different assessment points

Measure	Pre	Post	Follow-up (months)		
			3	12	15
SUD	10	0	0	0	0
DAS	20	7	6	7	5
SCL-90-R	196 <sup>1</sup>	125 <sup>2</sup>	114 <sup>3</sup>	—	107 <sup>4</sup>

<sup>1</sup>High; <sup>2</sup>average; <sup>3</sup>below average; <sup>4</sup>low.

through a year-long period of referrals to and from different clinicians (without the traumatic background of the phobia being recognized or treated therapeutically), the treatment effects of two sessions (each involving less than 1 h treatment time) were fairly robust.

It is unclear whether the distraction caused by the repetitive motion of the therapist's hand accounted for most of the gains or that other factors, such as exposure, played a pivotal role in the overall treatment result. Indeed, since imaginal exposure to feared memories is a core component of EMDR the effects may be based on habituation of anxiety. However, the total exposure time in the treatment of Nancy's choking phobia was less than 5 min per session. Such a brief duration of exposure to the traumatic material is considered to be insufficient for habituation to occur (Chaplin and Levine, 1980).

Overall, the empirical support for the application of EMDR with specific phobias is meagre. A number of clinicians have reported favourable results (e.g., Marquis, 1991; Kleinknecht, 1993; De Jongh and Ten Broeke, 1994), while others, are much more reserved regarding the improvements of their patients (e.g., Acerno *et al.*, 1994; Lohr *et al.*, 1995; Muris and Merckelbach, 1995). A few controlled outcome studies on the treatment of spider phobia suggest that EMDR is no more effective than exposure *in vivo* (Bates *et al.*, 1996; Muris *et al.*, 1997, 1998). It might be that EMDR is particularly effective with specific phobias with a strong traumatic component in the aetiology of the disorder, thereby sharing many commonalities with the onset of posttraumatic stress disorder (PTSD). This could explain the discrepancy between the reported effectiveness of EMDR with patients suffering from trauma-related conditions (e.g. De Jongh and Ten Broeke, 1994, De Jongh *et al.*, in press), and the limited success of EMDR with spider phobics (e.g., Muris and Merckelbach, 1995; Muris *et al.*, 1997). With regard to Nancy's choking phobia, her traumatic experiences in the hospital and her fear of choking were associatively activated by specific stimuli and situations (i.e., dental treatment). It would seem that such a mechanism is a typical characteristic of certain subtypes of specific phobia, such as phobias of fire, accidents, choking and dental treatment, but does not play a role in conditions like spider phobia. As a matter of fact, direct conditioning experiences are rarely found in the aetiology of this type of animal phobia (Kleinknecht, 1982).

Taken together, given the empirical support for its utilization among patients suffering from PTSD,

it is conceivable that EMDR can also be an effective treatment for other conditions that have been acquired through clear conditioning experiences in the past. To this end, choking phobia may be a good example.

## REFERENCES

- Acerno, R., Tremont, G., Last, C. and Montgomery, D. (1994). Tripartite assessment of the efficacy of eye movement desensitization in a multi-phobic patient. *Journal of Anxiety Disorders*, **8**, 259–267.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders*, 4th edn. Washington, DC: American Psychiatric Association.
- Arrindell, W. A. and Ettema, J. H. M. (1986). *SCL-90, Handleiding bij een Multidimensionele Psychopathologie Indicator*. Lisse: Swets & Zeitlinger.
- Ball, S. G. and Otto, M. W. (1994). Cognitive-behavioural treatment of choking phobia: 3 case studies. *Psychotherapy and Psychosomatics*, **25**, 207–211.
- Bates, L. W., McGlynn, F., Montgomery R. W. and Mattke, T. (1996). Effects of eye-movement desensitization versus no treatment on repeated measures of fear of spiders *Journal of Anxiety Disorders*, **10**, 555–569.
- Chaplin, E. W. and Levine, B. A. (1980). The effects of total exposure duration and interrupted versus continuous exposure of flooding. *Behavior Therapy*, **12**, 360–380.
- Corah, N. L. (1969). Development of a dental anxiety scale. *Journal of Dental Research*, **48**, 596.
- De Jongh, A. and Ten Broeke, E. (1994). Opmerkelijke veranderingen na één zitting met Eye Movement Desensitization and Reprocessing: Een geval van angst voor misselijkheid en braken. (Remarkable changes after one session of EMDR: fear of nausea and vomiting). *Tijdschrift voor Directieve Therapie en Hypnose*, **14**, 89–101.
- De Jongh, A., Muris, P., Schoenmakers, N. and Ter Horst, G. (1995). Negative cognitions of dental phobics: Reliability and validity of the Dental Cognitions Questionnaire. *Behaviour Research and Therapy*, **33**, 507–515.
- De Jongh, A., Ten Broeke, E. and Renssen M. R. (in press). Treatment of specific phobias with Eye Movement Desensitization and Reprocessing (EMDR): Protocol, empirical status and conceptual issues. *Journal of Anxiety Disorders*.
- Derogatis, L. R (1977). *SCL-90: Administration, Scoring, and Procedures Manual—I for the R(evised) Version*. Baltimore, MD: Clinical Psychometrics Research.
- Emmelkamp, P., Bouman, T. and Scholing, A. (1992). *Anxiety Disorders: A Practitioner's Guide*. Chichester: Wiley & Sons.
- Greenberg, D. B., Stern, T. A. and Weilburg, J. B. (1988). The Fear of Choking: Three successfully treated cases. *Psychosomatics*, **29**, 126–129.
- Hyler, S., Reider, R. and Spitzer, R. (1982). *Personality Diagnostic Questionnaire (PDQ)*. New York: New York State Psychiatric Institute.

- Kleinknecht, R. A. (1982). The origins and remission of fear in a group of tarantula enthusiasts. *Behaviour Research and Therapy*, **20**, 437–443.
- Kleinknecht, R. A. (1993). Rapid treatment of blood and injection phobias with eye movement desensitization. *Journal of Behaviour Therapy and Experimental Psychiatry*, **24**, 211–217.
- Lohr, J. M., Tolin, D. F. and Kleinknecht, R. A. (1995). Eye movement desensitization of medical phobias: Two case studies. *Journal of Behavior Therapy and Experimental Psychiatry*, **26**, 141–151.
- Macculloch, M. J. and Feldman, P. (1996). Eye movement desensitization treatment utilises the positive visceral element of the investigatory reflex to inhibit the memories of post-traumatic stress disorder: A theoretical analysis. *British Journal of Psychiatry*, **169**, 571–579.
- Marcus, S. V., Marquis, P. and Sakai (1997). Controlled study of treatment of PTSD using EMDR in an HMO setting. *Psychotherapy*, **34**, 307–315.
- Marquis, J. N. (1991). A report on seventy-eight cases treated by eye movement desensitization. *Journal of Behavior Therapy and Experimental Psychiatry*, **22**, 187–192.
- McNally, R. J. (1986). Behavioural treatment of a choking phobia. *Journal of Behavior Therapy and Experimental Psychiatry*, **17**, 185–188.
- McNally, R. J. (1994). Choking phobia: A review of the literature. *Comprehensive Psychiatry*, **35**, 83–89.
- McNally, R. J. (1997). Atypical phobias. In: G. C. L. Davey (Ed), *Phobias: A Handbook of Theory, Research and Treatment*. New York: Wiley & Sons.
- Muris, P. and Merckelbach, H. (1995). Treating spider phobia with eye-movement desensitization and reprocessing: Two case reports. *Journal of Anxiety Disorders*, **9**, 439–449.
- Muris, P., Merckelbach, H., Haafte, van H. and Mayer, B. (1997). Eye movement desensitization and reprocessing versus exposure *in vivo*. A single-session crossover study of spider phobic children. *British Journal of Psychiatry*, **171**, 82–86.
- Muris, P., Merckelbach, H., Holdrinet, I. and Sijenaar, M. (1998). Treating phobic children: Effects of EMDR versus exposure. *Journal of Consulting and Clinical Psychology*, **66**, 193–198.
- Öst, L.-G. (1992). Cognitive therapy in a case of choking phobia. *Behavioural Psychotherapy*, **20**, 79–84.
- Rothbaum, B. O. (1997). A controlled study of eye movement desensitization and reprocessing for posttraumatic stress disorder sexual assault victims. *Bulletin of the Menninger Clinic*, **61**, 317–334.
- Shapiro, F. (1995). *Eye Movement Desensitization and Reprocessing: Basic Principles, Protocols and Procedures*. New York: Guilford Press.
- Solyom, L. and Sookman, D. (1980). Fear of choking and its treatment: A behavioural approach. *Canadian Journal of Psychiatry*, **25**, 30–34.
- Van Etten M. L. and Taylor, S. (in press). Comparative efficacy of treatments for posttraumatic stress disorder: A meta-analysis. *Clinical Psychology and Psychotherapy*.
- Wilson, S. A., Becker, L. A. and Tinker, R. H. (1997). Fifteen-month follow-up of eye movement desensitization and reprocessing (EMDR) treatment for post-traumatic stress disorder and psychological trauma. *Journal of Consulting and Clinical Psychology*, **65**, 1047–1056.