



# Interventions

## EMDR and addiction

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## Learning objectives

- Learn about the large number of potential EMDR interventions in addiction
- Understand (and experience) the use of EMDR in positive memory representations
- Obtain background information of the RCT presented Sunday morning 10.30 a.m. at this conference

References on last slides (for download)

## Two main approaches to use EMDR in addiction

### 1. A trauma-oriented approach:

- a. Targeting comorbid PTSD
- b. Targeting other trauma-related symptoms relevant for the addiction

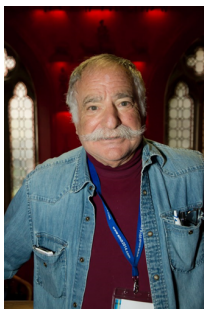
→ *Standard EMDR protocol*

### 2. An addiction-oriented approach: ← RCT

- a. Increase motivation and self-control
- b. Desensitization of addiction-related memory representations

→ *Modified EMDR protocols, RDI protocol*

## Pioneers



Arnold Popky



Robert Miller



Michael Hase



Jim Knipe

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## Reasons to start research

- *Positive clinical case reports*
  - Binge eating disorder (Hornsveld & Ten Broeke, 2008)
  - Stalking (Tjon & Hornsveld, 2014)
  - Exhibitionism (Ten Hoor, this conference)
  - Gambling (Bae et al., 2013)
  - GHB (Rouhollah et al., submitted)
- *Existing protocols based on credible theory*
  - EMDR to target craving, present triggers and positive affect
  - Addiction memory  $\approx$  trauma memory
- *Relevant laboratory studies*
  - EM desensitize positive memories
  - EM reduce craving
- *Randomized Clinical Trial* (Hase, Schallmayer & Sack, 2008)
  - Positive, but only one!

## First off

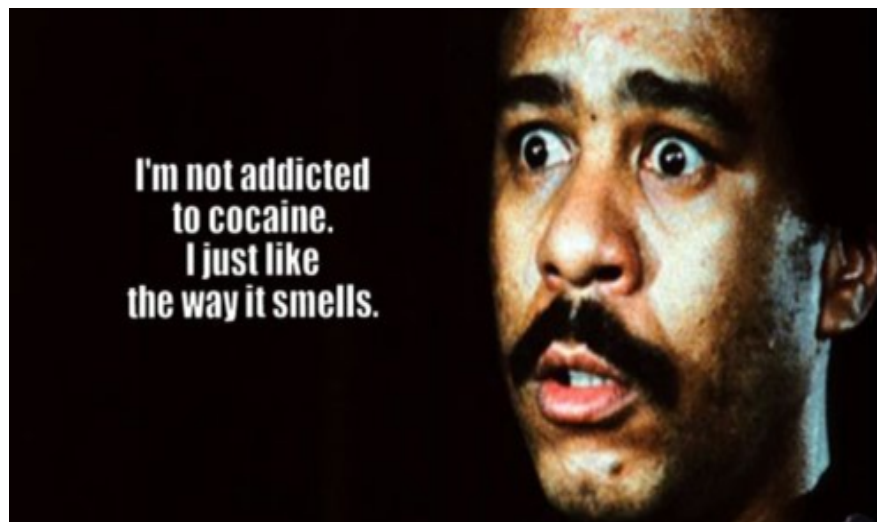
- High expectations, workshops, good evaluations, positive feedback of succesfull application of the protocol
- In short: a protocol waiting to be validated (starting in 2013)
- Preliminary results of RCT with  $N=109$  outpatients with alcohol addiction
- Zero results!!
- What can we learn?

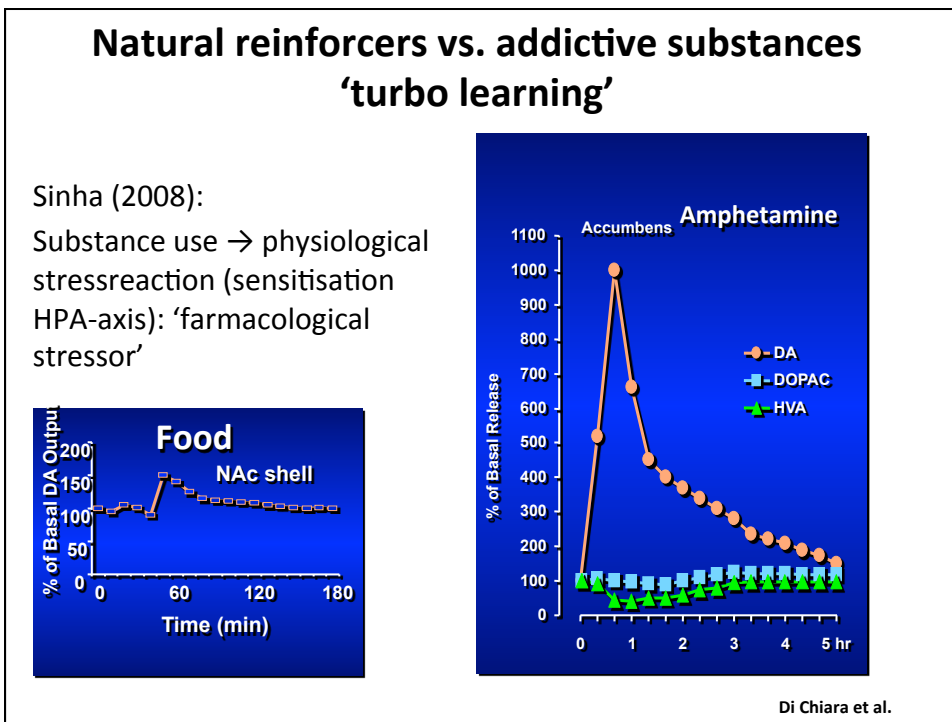
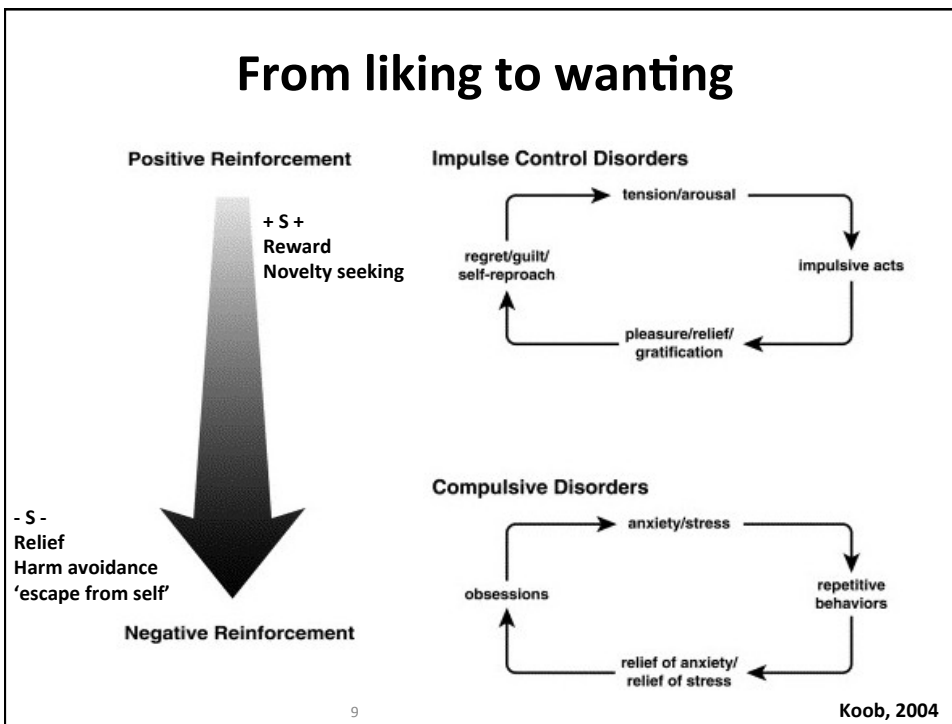


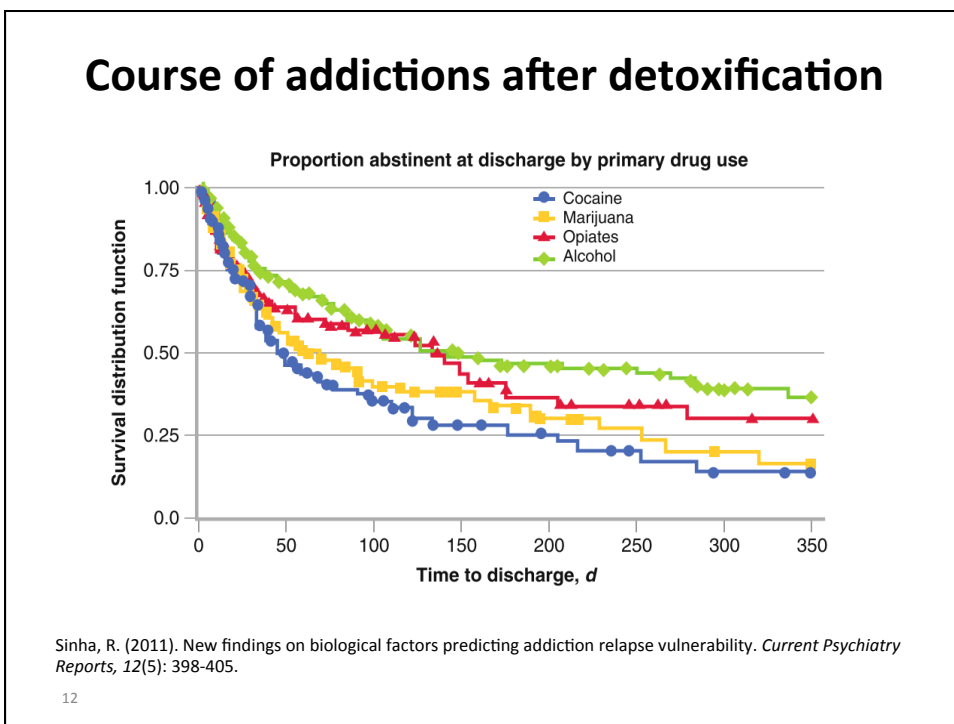
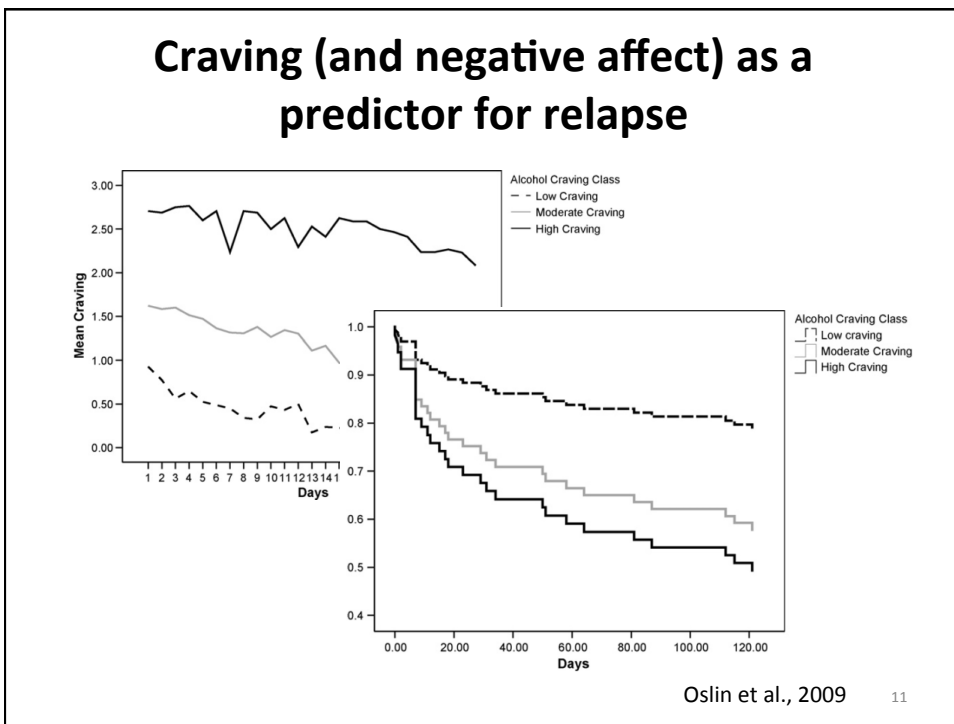
## Today's presentation

- Some words on addiction
- Possible interventions, incl. video fragments
- Time for questions and discussion

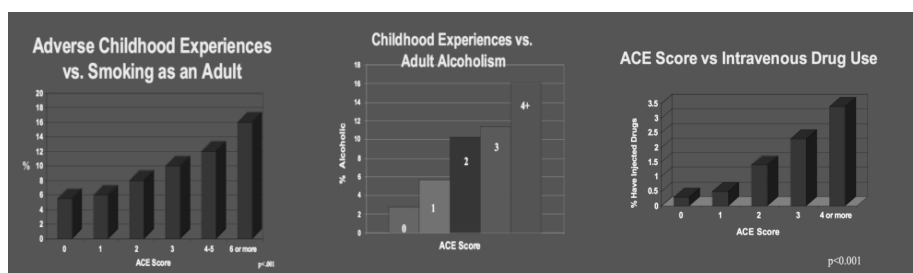
## Some words on addiction







## Dose-response relationship between Adverse Childhood Experiences (ACEs) and addiction later in life



Vellitti, V.J. & Anda, R.F. (2010). The relationship of adverse childhood experiences to adult medical disease, psychiatric disorders, and sexual behavior: Implications for healthcare. In R.A. Lanius, E. Vermetten and C. Pain (Eds.), *The hidden epidemic: The impact of early life trauma on health and disease* (pp. 77-87). Cambridge University Press.

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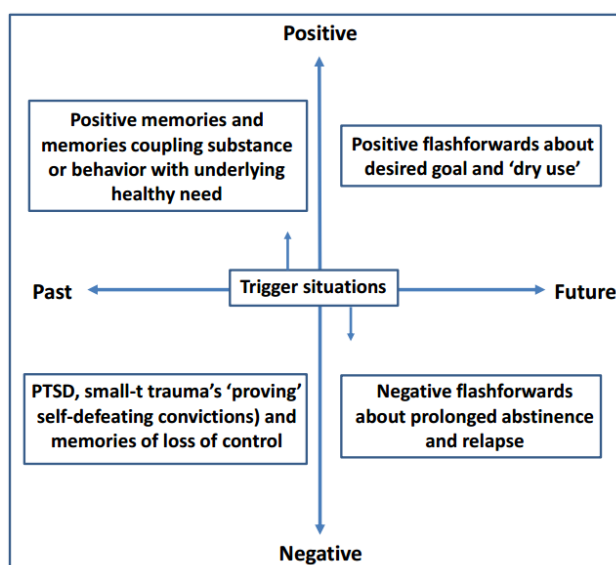
## Conclusions

- Addiction is increasingly characterized by seemingly irrational approach behavior that conflicts with one's autonomy
- The effect and context of substance use is encoded as particularly meaningful by the reward system and emotional brain
- Relapse is the most probable outcome of addiction treatment
- Craving and stress can predict relapse
- Pre-existing trauma (ACEs) predispose to later addiction

## Intermezzo: Memories and memory representations

- PTSD: symptoms related to negative life experiences
  - We do not treat the events but memories of these events
  - How they are stored in memory: memory representations or mental representations (MR)
- Disturbing MR, fantasies of what could have happened (but not really happened)
- Disturbing MR of what might going to happen (flashforwards)
- Positive MR, MR of drug effects or triggers
- For EMDR: best targets are personal, emotionally charged, and as vivid as possible (stills).

## Possible EMDR targets in addiction



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## Requirements for EMDR in addiction

- EMDR for addiction is not a stand alone therapy
- Contra-indications
  - Absolute: none
  - Relative: therapy interfering behaviors and situations need to be anticipated and addressed first
- (Re)lapse is part of recovery and should be treated as a learning experience which provides information and possible targets

## Two main approaches to use EMDR in addiction

1. **A trauma-oriented approach:**
  - a. Targeting comorbid PTSD
  - b. Targeting other trauma-related symptoms relevant for the addiction

→ *Standard EMDR protocol*
2. **An addiction-oriented approach:**
  - a. Increase motivation and self-control
  - b. Desensitization of addiction-related memory representations

→ *Modified EMDR protocols, RDI protocol*

## The trauma-oriented approach

- Treatment of PTSD facilitates treatment of addiction (Hien et al, 2010)
- A(C)Es are causally related to addiction and other comorbidity, but is it useful to target (MR of) ACEs with EMDR?
  - Yes:
    - Adaptive Information Processing (Shapiro)
    - Self-medication hypothesis (Khantzian)
  - However:
    - Little evidence that asymptomatic ACEs are therapeutically relevant in addiction
    - Risk of premature stopping therapy (esp. when mismatch of expectations)
    - Even then: what are the benefits to rake up old pain in very avoidant patients?
    - What are alternatives to cope with the emotional pain?
  - Research necessary
- For individual cases: make behavioral analysis of the addiction
  - Examine the role of ACEs in individual case conceptualization (not only causative but also maintaining).

## Individual case conceptualization and A(C)Es

- Is the primary function of the addiction relief, avoidance or escape from emotional pain?
  - Addiction is very seldom primarily *maintained* by positive reward!
- Is the avoided pain related to ACEs and still maintained by memory representations of ACEs?
- Do you expect pain-relief from EMDR therapy that will make it easier for the patient to stop the addictive behavior?
  - See also R. Miller on Feeling States

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## EMDR to increase motivation and self-control

- Low motivation due to difficulty imaging addiction-free future?  
→ Installation of positive treatment goals (A.J.Popky)
- Low sense of self-efficacy or self-worth?  
→ RDI or COMET (Staring 2016, this conference)
- Low motivation due to negative ideas about abstinence?  
→ EMDR on flashforward of prolonged abstinence → [video](#)

## Intermezzo: Flashforwards

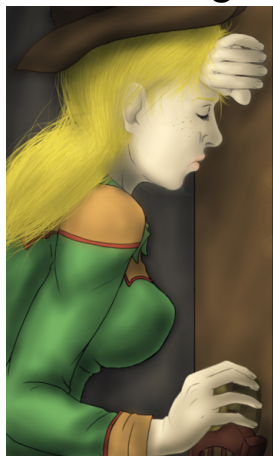
(Logie & de Jongh, 2015)

- MR of an event that *could* happen in the future (e.g. plane crash, snake bite )
- Emotionally charged
- The more vivid, the more probable it feels
- EM make images less vivid, less emotional and less probable (Engelhard, et al, 2010, 2011).
- Question: does this image represent the worst-case scenario?



## Flashforwards of prolonged abstinence

*Boring*



*Too hard*



## **Flashforwards of prolonged abstinence**

**Goal:** reducing ambivalence, reduce aversion of a sober future

**Examples:** *'alone and bored at the kitchen table', 'ridiculed by my friends at a party', 'endless struggle with craving'*

**Key question:** *What negative associations do you have of a life without your addiction? Make an image of yourself being abstinent. Make a still of the most disturbing part of this scenario"*

## **Video fragment of smoker with negative flashforward of prolonged abstinence**

She really wants to quit but is also dreading abstinence...

## Flashforwards of prolonged abstinence: observations

- **Negative self-referring cognition (NC):** *'I can't stand it'; 'I don't want to look at it', 'It is unbearable to think of ... [a life without gambling]*
- **Positive self-referring cognition (PC):** *'I can handle the image', 'I'm the one to make sure that this will not happen'; 'I'm not powerless'; 'I'm in control of my life / own future'*
- **Observations:** The original flashforward fades out and makes room for a more realistic picture (spontaneous rescripting and future templates)

## EMDR to *disarm* the addiction memory

- High SUD-memories of relapse or *fear* of relapse?
  - Desensitization of memories of loss of control / relapse → video
- High positive affect (LoPA) or craving (LoU) memories of addictive behavior
  - video
  - *Exercise in pairs*
- Present trigger situations

## **The ‘addiction-memory’**

Craving (LoU), positive affect (LoPA) or SUD

- MR of relapses, severe loss of control (aversive outcome)
  - Debilitating (paralyzing) memories of earlier relapses and/or feared future relapse (flashforward)
- MR of the addiction (behavior / desired outcome)
  - of drug effects
  - of performing the addictive behavior
  - of the desired consequences
- MR of triggersituations (context)
  - Situations or emotions eliciting craving or urge to perform the behavior

## **Video fragment of sex-addict with flashforward of relapse**

Despite high motivation, the patient is quite afraid of a relapse and the consequences for his relationship...

Interestingly, the SUD of the flashforward regarding a future relapse was much higher than for past relapses...

## Desensitisation of trigger situations

**Goal:** to increase control in the trigger situation

**Adaptation:** standard positive cognition: *'I can handle it'*

**Observations:**

- Often quick reprocessing
- The positive often becomes aversive before it becomes adaptive

## Intermezzo: EM and positive memories

- Positive memories become less positive with EM!  
Consistent finding in 5 studies with healthy subjects
- It has never been demonstrated that EM can make positive memories more positive or more stable, no research data for RDI and safe place
- Clinical practice: *very slow EM*, this is fully congruent with (prevailing) working memory hypothesis
- Thus: no EM (or very slow EM) for memory inflation: RDI, safe place, positive goal
- But: EM to desensitize unwanted/dysfunctional positive memories!!



**Positive  
memory  
representations  
of substance use**



## **EMDR and positive memories**

- New possibilities in
  - Substance Use Disorders
  - Impuls Control Disorders
  - Paraphilias
  - Suicidal ideation
  - Unattainable love
  - Phantasies of revenge



## **Video fragment of heroin addict with a recent positive memory**

30 years of severe heroin addiction has left its mark...

## EXERCISE with positive targets

- **SYMPTOM: too much of a behavior**
- Take a behavior of yourself with positive (appetitive) aspects that you perform too much
- Examples: drinking, smoking, relish, sex, working, social media, watching TV, shopping, eating, sport, to brag, criticizing others

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## Write down 3 examples

- Positive memory (past) e.g. *first, most intense, most recent*

\_\_\_\_\_ Level of Positive Affect . . .

- Triggersituation (present)

\_\_\_\_\_ Level of Positive Affect . . .

- Positive flashforward (Future)

\_\_\_\_\_ Level of Positive Affect . . .

## Conclusion

- Many possibilities for EMDR in addiction
- Positive case reports (... but ≠ proof)
- Future research
  - Study separate interventions (component studies)
  - Testing interventions on:
    - Other kinds of addictive behavior, in particular non-substance use addictions
    - Subgroup of high cravers?
  - The use of memory inflation to empower addicted patients
  - EMDR to treat ongoing effects of Adverse Childhood Experiences
- Visit our presentation on Sunday morning 10.30 AM to hear more about the ins and out of the RCT

## Questions?



## The EMDR study protocol (7 x 90 min.)

- **Session 1:**
  - Rationale, goal, rules
  - Installation **positive treatment goal** (≈ DeTUR; Popky, 2009)
  - Desensitization of **negative flashforwards of prolonged abstinence** (≈ Logie & De Jongh, 2014)
  - Desensitization of **positive memories** (≈ Knipe, 2009)
- **Session 2-3:**
  - Desensitization of **memories of loss of control** (≈ CravEx; Hase, 2009/≈Two-method approach; De Jongh, Ten Broeke, & Meijer, 2010 )
- **Session 4-5:**
  - Desensitization of early **memories that 'proof' a self-defeating conviction** (≈Two-method approach; De Jongh, Ten Broeke, & Meijer, 2010)
- **Session 6:**
  - Desensitization of **trigger situations** (≈ DeTUR; Popky, 2009; ≈ CravEx; Hase, 2009)
- **Session 7:**
  - Remaining targets
  - Desensitization of **negative flashforwards of relapse** (≈ Logie & De Jongh, 2014)
  - **Future templates** of trigger situations

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## EMDR & positive targets

- Barrowcliff, A. L., Gray, N. S., Freeman, T. C. A., & Mac-Culloch, M. J. (2004) Eye-movements reduce the vividness, emotional valence and electrodermal arousal associated with negative autobiographical memories. *The Journal of Forensic Psychiatry & Psychology*, 15(2), 325–345
- Hornsveld, H. K., Houtveen, J. H., Vroomen, M., Aalbers, I. K. D., Aalbers, D., van den Hout, A. (2011). Evaluating the effect of eye movements on positive memories such as those used in resource development and installation. *Journal of EMDR Practice and Research*, 5, 146–155
- Hornsveld, H. K., De Jongh, A. & Ten Broeke (2012), Stop the Use of Eye Movements in Resource Development and Installation, Until Their Additional Value Has Been Proven: A Rejoinder to Leeds and Korn (2012). *Journal of EMDR Practice and Research*, 6(4), xxx-xxx
- Van den Hout, M. A., Eidhof, M., Verboom, J., Littel, M. & Engelhard, I.M. (accepted). Blurring of emotional and non-emotional memories by taxing working memory during recall. *Emotion & Cognition*
- Van den Hout, M., Muris, P., Salemink, E., & Kindt, M. (2001). Autobiographical memories become less vivid and emotional after eye movements. *The British Journal of Clinical Psychology*, 40, 121–130
- Engelhard, I.M., van Uijen, S.L., & van den Hout, M.A. (2010). The impact of taxing working memory on negative and positive memories. *European Journal of Psychotraumatology*, 1: 5623, 1-8

**Case studies on craving, gambling, and sexual phantasies provide additional evidence of the desensitising effects of EM during retrieval of memories with a positive valence**

## EMDR and addiction (selection)

- Brown, S., Stowasser, J. E. & Shapiro, F. (2011). Eye movement desensitisation and reprocessing (EMDR): Mental health-substance-use. In D.B. Cooper (Ed.), *Intervention in mental health-substance use* (pp. 165-93), Oxford: Radcliffe publishing.
- Hase, M., Schallmayer, S., & Sack, M. (2008). EMDR reprocessing of the addiction memory: Pretreatment, posttreatment, and 1-Month follow-up. *Journal of EMDR Practice and Research*, 2: 170-179
- Knipe, J. (2009). "Shame is my safe place": AIP targeting of shame as a psychological defense. In R. Shapiro (Ed.), *EMDR solution II: For depression, eating disorders, performance, and more* (ed., pp. 49-89). New York: Norton Professional Books
- Markus, W. & Hornsveld, H. K. (2013). EMDR and alcohol addiction, Research proposal and protocol, Internal publication IrisZorg, Arnhem
- Miller, R. (2012). Treatment of behavioral addictions utilizing the feeling-state addiction protocol: A multiple baseline study. *Journal of EMDR Practice and Research*, 6(4), 159-169
- Popky, A. J. (2005). *DeTUR, an urge reduction protocol for addictions and dysfunctional behaviors*. In R. Shapiro (Ed.), *EMDR solutions: Pathways to healing* (pp. 167-188)

## EMDR & flashforwards

- Engelhard, I., van den Hout, M., Dek, E., Giele, C., van der Wielen, J., Reijnen, M., & van Rooij, B. (2011). Reducing vividness and emotional intensity of recurrent "flashforwards" by taxing working memory: An analogue study. *Journal of Anxiety Disorders*, 25, 599–603
- Engelhard, I., van den Hout, M., Janssen, W., & van der Beek, J. (2010). Eye movements reduce vividness and emotionality of "flashforwards". *Behaviour Research and Therapy*, 48, 442–447
- Logie, R. & De Jongh, A. (2014). The 'Flashforward procedure': Confronting the catastrophe. *Journal of EMDR Practice and Research*, 8, 25-32

## EMDR & working memory hypothesis

- De Jongh, A., Ernst, R., Marques, L., & Hornsveld, H. (2013). The impact of eye movements and tones on disturbing memories of patients with PTSD and other mental disorders. *Journal of Behavior Therapy & Experimental Psychiatry*, 44, 447–483
- Van den Hout, M., Muris, P., Salemink, E., & Kindt, M. (2001). Autobiographical memories become less vivid and emotional after eye movements. *The British Journal of Clinical Psychology*, 40, 121–130
- Van den Hout, M., Engelhard, I., Rijkeboer, M., Koekebakker, J., Hornsveld, H., Leer, A., . . . Akse, N. (2011). EMDR: Eye movements superior to beeps in taxing working memory and reducing vividness of recollections. *Behaviour Research and Therapy*, 49, 92–98
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## EMDR in addiction: three main approaches

- EMDR to resolve the unprocessed (underlying) emotional trauma / conflict
  - EMDR is evidence based for PTSD
  - Challenge: how to determine whether ACEs are relevant to treat
- EMDR as additional tool in TAU (evidence based CBT for addiction)
  - Self-efficacy and self-image (RDI)
  - Positive Future Templates (Installation of Positive Goals)
  - Fear of an addiction free future
- EMDR directed towards specific addiction related memory representations 'addiction memory':
  - memories of relapses
  - memory representations of drug-effects, craving and triggersituations