

# Placebo und Nocebo und was das mit Elektrosensibilität zu tun haben könnte

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Placebo

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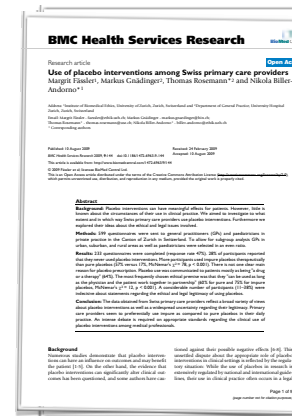
## Frühe Strahlung. Animalischer Magnetismus, Luis XVI. und Benjamin Franklin



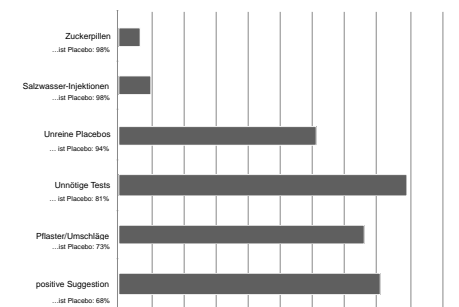
Placebo

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## Einsatz von Placebo in der Medizin



### Einsatz in klinischer Praxis

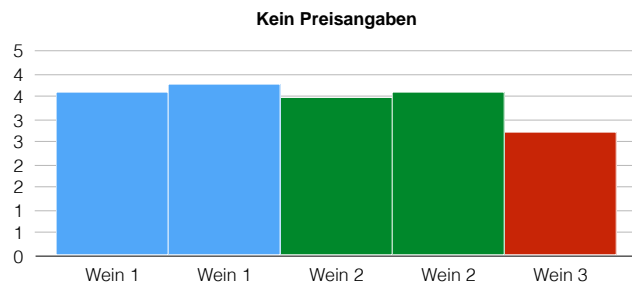


Fässler et al., 2009 BMC Health Serv Res

Placebo

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In vino veritas...

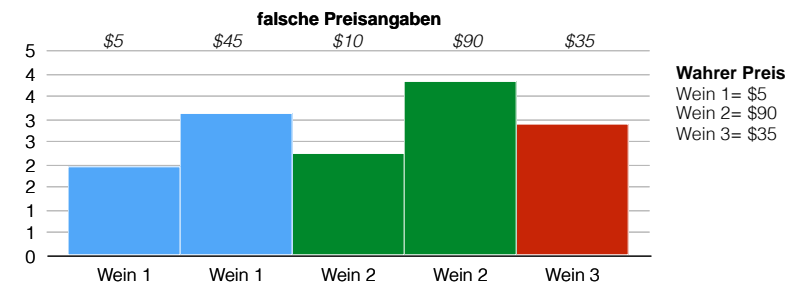


Plassmann et al., 2008, Proceedings of the National Academy of Sciences

Placebo

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In vino veritas...

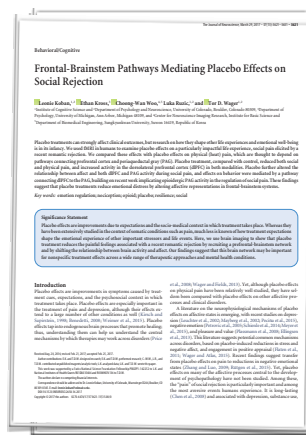


Plassmann et al., 2008, Proceedings of the National Academy of Sciences

Placebo

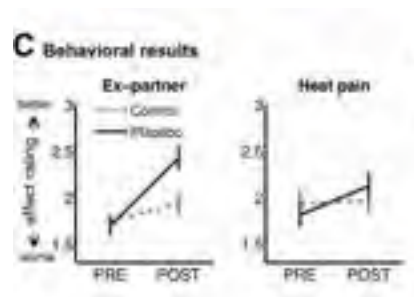
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True love hurts, time is a healer nd nothing works wonders.



Placebo

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Psychologische Placebos. Man und es muss glaubhaft sein...



Placebo

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Gaab et al. 2019 Scientific Reports

## Psychologische Placebos. Man und es muss glaubhaft sein...



Placebo

Gaab et al. 2019 Scientific Reports

6

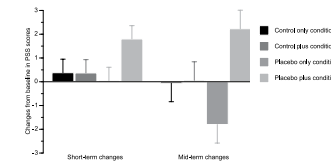
## Psychologische Placebos. Man und es muss glaubhaft sein...



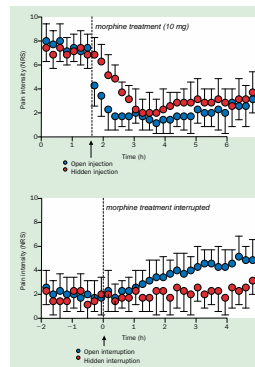
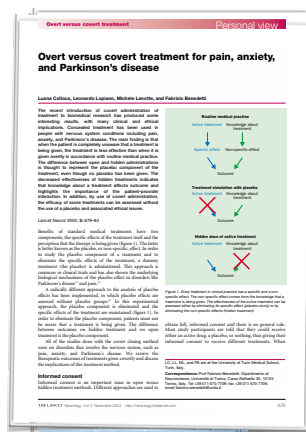
Placebo

Gaab et al. 2019 Scientific Reports

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## Placeboeffekte ohne Placebo. Open/hidden administration.

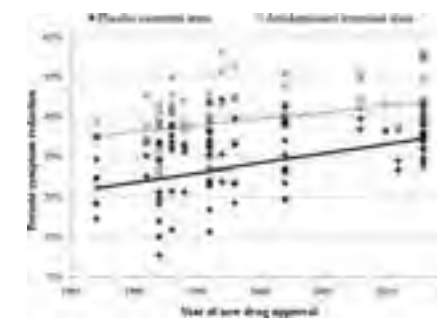
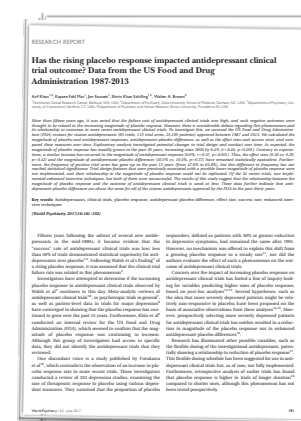


aus: Colloca 2004 Lancet Neurology

Placebo

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## Placebo effect in antidepressants. Strong and getting stronger...

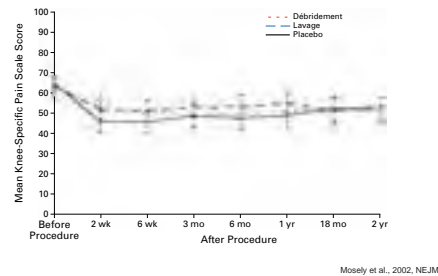


Khan et al., 2017 World Psychiatry

Placebo

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## Placebo and verum effects of surgery



Placebo

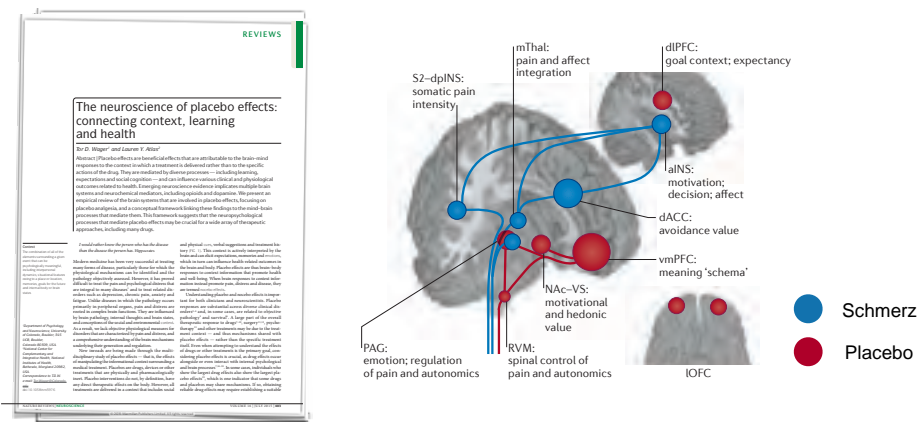
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## Placebo and verum effects of surgery

Placebo

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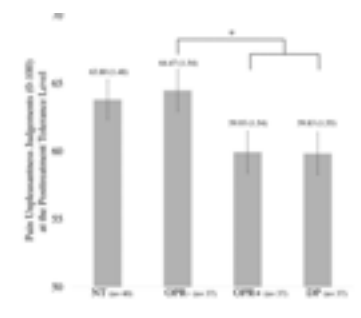
## Placebo. Neurobiologische Prozesse.



Placebo

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## Open versus deceptive placebo. Man kann, muss aber nicht täuschen.



Placebo

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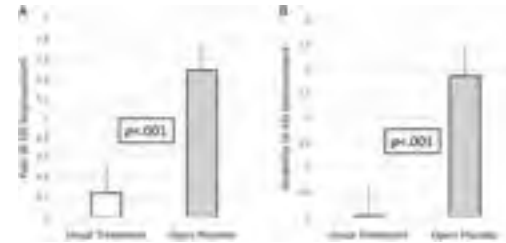
Open-label placebo. Chronic low back pain.



Carvalho et al., 2016, PAIN

Placebo

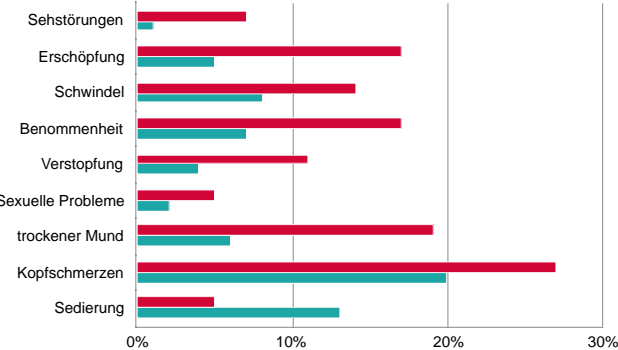
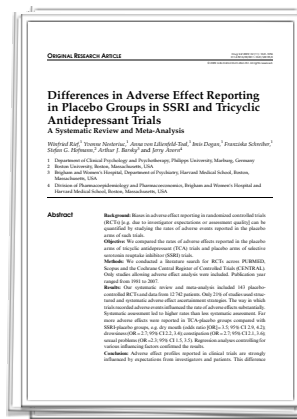
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Placebo

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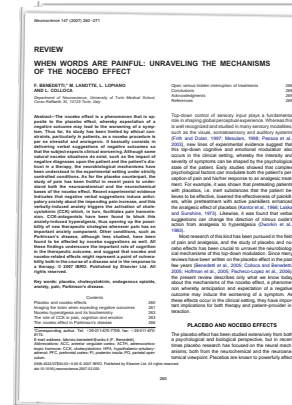
Nocebo. When words are painful.



Placebo

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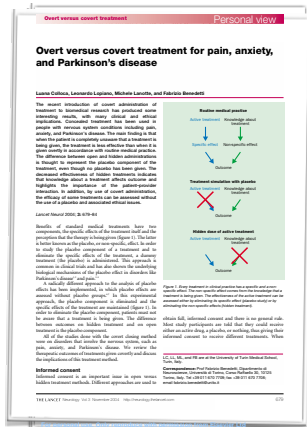
Nocebo. When words are painful.



Placebo

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## Placeboeffekte ohne Placebo. Open/hidden administration.



aus: Colloca 2004 Lancet Neurology

Placebo

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## Windräder. Good or bad?



Wind turbines are directly responsible for a number of non-specific symptoms, such as headache, fatigue and nausea.



Infrasound has health benefits:

- Release endorphins necessary to reduce pain
- Relieve muscle spasms
- Provides fast relief from general soreness
- Improves tissue quality
- Releases natural cortisone to reduce swelling
- Reduces swelling and inflammation
- Helps relieve discomfort of arthritic joints
- Increases blood circulation

Placebo

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## Windräder. Nocebo mit Placebo behandeln



Gruppe I:  
positive first

positive  
Erwartung

Infrasound +  
Windrad-  
Geräusch

negative  
Erwartung

Infrasound +  
Windrad-  
Geräusch

Gruppe II:  
negative first

negative  
Erwartung

Infrasound +  
Windrad-  
Geräusch

positive  
Erwartung

Infrasound +  
Windrad-  
Geräusch

positive Erwartungen: therapeutic benefits of infrasound  
negative Erwartungen: adverse health effects of exposure to infrasound

Placebo

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## Windräder. Nocebo mit Placebo behandeln



positive Erwartungen: therapeutic benefits of infrasound  
negative Erwartungen: adverse health effects of exposure to infrasound

Placebo

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## Windräder. Nocebo mit Placebo behandeln

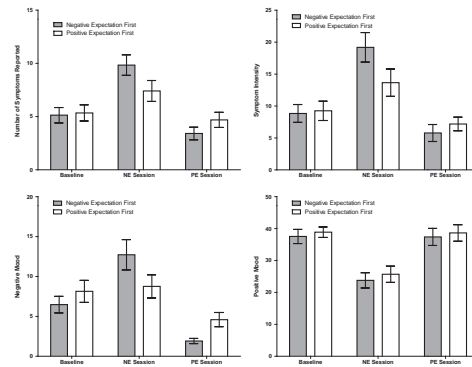
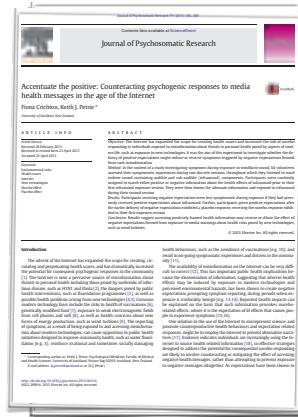


Fig. 1. Symptom and mood reporting by each group at baseline and during negative expectation (NE) and positive expectation (PE) listening sessions.

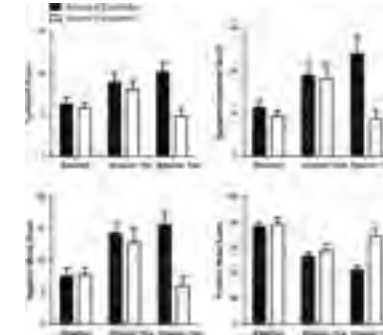
positive Erwartungen: therapeutic benefits of infrasound

negative Erwartungen: adverse health effects of exposure to infrasound

Placebo

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## Windräder. Nocebo mit Aufklärung behandeln



- **After baseline:** Audio-visual presentation featuring material from the internet about the purported health risks posed by infrasound produced by wind farms
- **Nocebo explanation:** Audio-visual material which explained that the scientific evidence did not support a direct link between symptoms reported and infrasound, and then described how the nocebo effect could provide a pathway for symptom reporting
- **Biological explanation:** Audio-visual material which presented pathophysiological theories for symptom reporting

Placebo

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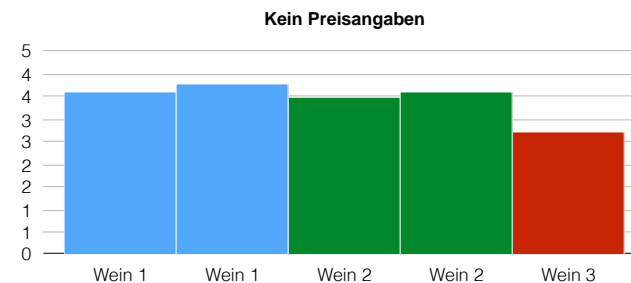


Science Brunch 31

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## In vino veritas...

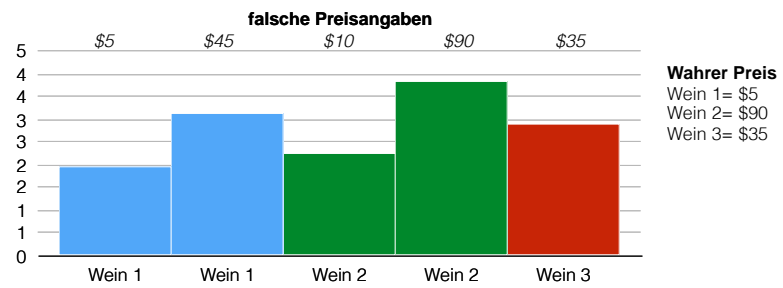


Plassmann et al., 2008, Proceedings of the National Academy of Sciences

Placebo

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In vino veritas...



Plassmann et al., 2008, Proceedings of the National Academy of Sciences