5th Congress of the European Academy of Neurology

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Teaching Course 7

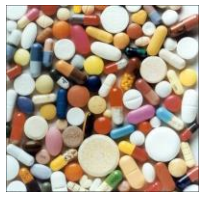
Acute headache treatment (Level 1)

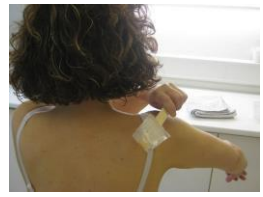
Self-management of acute headaches

Charly Gaul
Königstein, Germany

Email: c.gaul@migraene-klinik.de

Self-management of acute headaches





Charly Gaul
Migraine and Headache Clinic Königstein
Germany

Migräne- und Kopfschmerz-Klinik Königstein

Disclosure

Lectures, clinical studies and advisory boards:
Allergan Pharma, Ratiopharm, Boehringer Ingelheim Pharma, Lilly, Novartis Pharma, Desitin Arzneimittel, Cerbotec, Bayer vital, Hormosan Pharma, electroCore, Reckitt Benckiser, TEVA

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Whats self-management?

…there is no commonly accepted definition of self-management (in regards to headaches)

'a structured, thought, or self-thought course or intervention programme principally aimed at patients (rather than carers or lay advisors) with the goal of improving the participants health status or quality of life by teaching them skills to apply to everyday situations'

Carnes et al. Effective delivery styles and content for self-management interventions for chronic musculoskeletal pain: a systematic literature review. Clin J Pain 2012;28:344-54

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Why is self-management needed?

… 'the rationale for promoting self-management interventions is grounded in the hypothesis that people can learn ways to help themselves manage their headaches better and this can have positive effect on both physical symptoms and functional capacities'

… self-management is under the individual control
… preventive strategies are closely related to self-care and self-management
… self-management can be cost-effective
… successful self-management may increase internal locus of control
… self-management is a preference of patients
… self-management has a major impact on chronic conditions

Carnes et al. Effective delivery styles and content for self-management interventions for chronic musculoskeletal pain: a systematic literature review. Clin J Pain 2012;28:344-54

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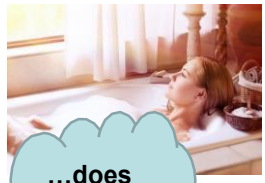
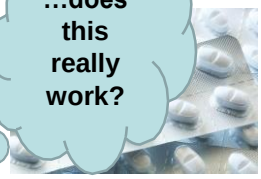
What is recommended on the internet?



…does this really work?

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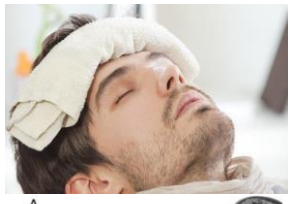
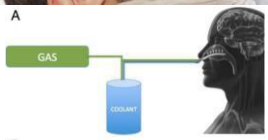
Cooling the head

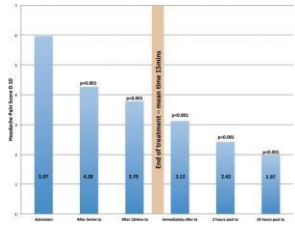




RhinoChill© Intranasal cooling system

- Cryotherapy is the most common non-pharmacological pain-relieving method.

- **Proposed mechanisms:**
- Neurovascular (vasoconstriction, inhibition of release of inflammatory mediators)
- Pain gating (slowing nerve conduction velocity)
- Metabolic mechanism (decreases metabolic and enzymatic activity)
- Transient Receptor Potential (TRP) channels respond to temperature changes



Vanderpol J, Bishop B, Matharu M, Glencorse M. Therapeutic effect of intranasal evaporative cooling in patients with migraine: a pilot study. J Headache Pain 2015;16:5

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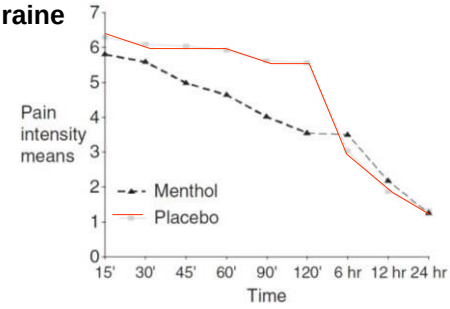
Peppermint oil

Migraine



Tension Type Headache

- Peppermint oil was superior to placebo after 15 and 60 minutes ($p < 0.01$)
- Peppermint oil was just as effective as Acetaminophen 1000 mg

Migraine:
Borhani Haghighi et al. Cutaneous application of menthol 10% solution as an abortive treatment of migraine without aura: a randomised, double-blind, placebo-controlled, crossed-over study. Int J Clin Pract 2010;64:451-6
TTH:
Göbel et al. [Effectiveness of Oleum menthae piperitae and paracetamol in therapy of headache of the tension type]. Nervenarzt 1996;67:672-81

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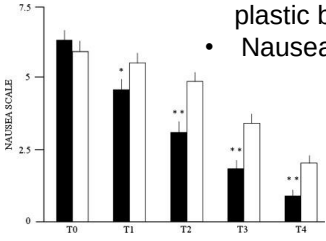
Auto-acupressure for migraine pain and nausea



Pain

- No controlled trial for pain reduction in migraine

Nausea

- Nausea occurred in ~90 % of all migraineurs; nearly one-third of these had nausea during every attack
- Chinese medicine uses acupuncture and stimulation of the acupoint PC6 Neiguan for treatment of nausea
- Sea-Band® was given to the patients to control nausea
- Its' an elastic wristbands with a 1 cm protruding round plastic button
- Nausea in 6 attacks (3 vs 3) were evaluated

Kurland HD. Treatment of headache pain with auto-acupressure. Dis Nerv Syst. 1976;37:127-9.
Allais et al. Acupressure in the control of migraine-associated nausea. Neurol Sci 2012;33 Suppl 1:S207-10

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What patients find on the internet…

- Migraine headaches can be triggered by certain foods. The most common are:
- Any processed, fermented, pickled, or marinated foods, as well as foods that contain monosodium glutamate (MSG)
- Baked goods, chocolate, nuts, and dairy products
- Fruits (such as avocado, banana, and citrus fruit)
- Meats containing sodium nitrates, such as bacon, hot dogs, salami, and cured meats
- Red wine, aged cheese, smoked fish, chicken liver, figs, and certain beans
- Alcohol, stress, hormonal changes, skipping meals, lack of sleep, certain odors or perfumes, loud noises or bright lights, exercise, and cigarette smoking may also trigger a migraine.

https://medlineplus.gov/ency/patientinstructions/000420.htm

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How are patients supposed to live then?
Avoidance theory of Headaches

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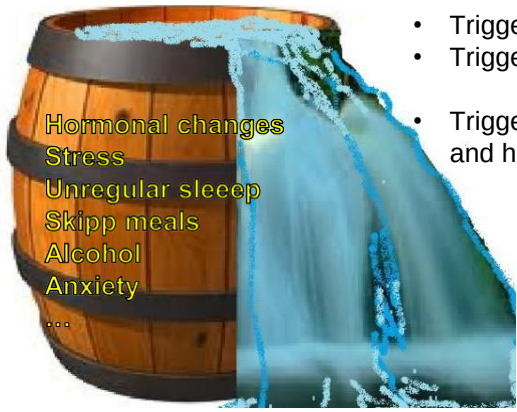
Educating a model of attack triggers: the barrel model



- Triggers are individual
- Triggers are inconsistent

- Trigger avoiding may increase stress and headaches

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Trigger management instead of avoiding triggers

- Accurate identification of individual attack profiles is a prerequisite for testing which are true triggers and for development of trigger avoidance or de-sensitisation strategies.
- "learning to cope with triggers" is advocated: controlled exposure and approach/confront strategies are used to manage migraine triggers
- No single strategy can be identified as the best way of managing all headache triggers.
- Sometimes avoidance will be the strategy of choice but more often, approach/engagement/exposure strategies will be the strategies of choice.

Peris et al. Towards improved migraine management: Determining potential trigger factors in individual patients. Cephalalgia 2017;37:452-463
Martin. Behavioral management of migraine headache triggers: learning to cope with triggers. Curr Pain Headache Rep 2010;14:221-7

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Integrative Cognitive Behavioral Therapy Program for Adults With Migraine

- Developing of a novel cognitive behavioral therapy program exclusively for adults with migraine
- Combination of different approaches of behavioral therapy into one program: relaxation therapy, cognitive behavioral therapy, trigger management.
- The treatment program consists of 7 sessions including:
  - Psychoeducation
  - lifestyle counseling
  - coping with fear of attacks
  - trigger management
  - stress management

Klan, Liesering-Latta, Gaul, Martin, Witthöft. An integrative cognitive behavioral therapy program for adults with migraine: a feasibility study.
Headache 2019;59:741-755

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Integrative Cognitive Behavioral Therapy Program for Adults With Migraine

- The treatment program was very well accepted.
- Every session was rated as comprehensible, and overall satisfaction with the sessions was high.
- Participants greatly appreciated having access to a specific treatment, exclusively addressing migraine.
- A randomized controlled trial to determine the efficacy of our program is currently running.

Klan, Liesering-Latta, Gaul, Martin, Witthöft. An integrative cognitive behavioral therapy program for adults with migraine: a feasibility study.
Headache 2019;59:741-755

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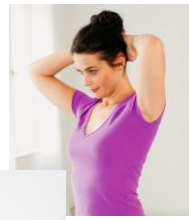
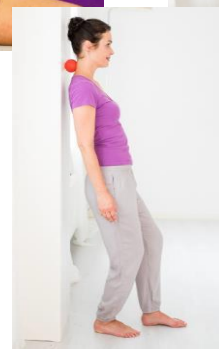
Physical therapy and physiotherapy in headaches

- Movement therapy
- Mobilization exercises
- Stretching





- Trigger points
  - M. masseter and M. temporalis
  - Neck muscles
  - M. sternocleidomastoideus
  - M. trapezius

Schäfer B. Übungen bei Kopfschmerzen und Migräne. Trias 2017

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Psychologically informed Physiotherapy (PIP)

- Based upon the evidence from chronic back pain, musculoskeletal pain and gonarthrosis

PIP includes:

- Physiotherapeutic techniques (exercises, manual therapy, ergonomics)
- Pain coping skills
- Migraine specific patient education
- Self-managment strategies
- Interventions to improve adherence in self-management strategies (goal setting, barriers management, training schedule, exercise sheets)

- Concept should be established in headache therapy to improve self-management and adherence to therapy

Wilson et al. Psychologically informed physiotherapy for chronic pain: patient experiences of treatment and therapeutic process. Physiotherapy 2017;103:98-105
Jacobs et al. Brief psychologically informed physiotherapy training is associated with changes in physiotherapists' attitudes and beliefs towards working with people with chronic pain. Br J Pain. 2016;10:38-45

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What should the neurologist teach the patient?

- Explain: migraine is a brain disorder
- Explain the migraine aura
- Spend a lot of time on ‚how to treat a migraine attack'
- Medication: ‚right time, right dose!'
- Triptans are safe!
- Use antiemetics
- Explain a model of stress and attack frequency
- Take enough time
- Let patients ask questions

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Self-management in Headache

- Physical exercises
- Trigger point therapy – instructions
- Cryotherapy
- Aerobic exercise
- Relaxation exercises
- Lifestyle modifications
- Disease specific education
- Cognitive behavioural therapy
- Auto-hypnosis
- ….

Falsiroli Maistrello et al. Effectiveness of Trigger Point Manual Treatment on the Frequency, Intensity, and Duration
of Attacks in Primary Headaches: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Front Neurol 2018;9:254.
Gaul et al. Clinical outcome of a headache-specific multidisciplinary treatment program and adherence to treatment recommendations in a tertiary headache center: an observational study. J Headache Pain 2011;12:475-83.
Gaul. Headache: patient education as part of a multidisciplinary treatment. Are there reliable results? Bundesgesundheitsblatt…2014;57:961-6.

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Self-management in Cluster Headache

Current situation

- Patients are not aware of other cluster headache patients
- Lack of disease specific education:
  - Acute treatments
  - Prophylactic treatments
  - Natural course of disease (risk of becoming chronic)
  - Triggers
  - Nicotine abuse
  - Sleep disturbance
- Access to medication (oxygen, high numbers of triptans are difficult sometimes)
- Who is the right doctor?
- Loss of work days
- Familiy members are worried because of the disease and the changes of behaviour during attacks or episodes
- Shame about the attacks

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Self-management of cluster attacks

Be prepared!

- Sufficient acute medication is needed at home and at work, additional portable oxygen
- Teaching
  - How to use sumatriptan injections
  - How to use oxygen
- Patients need an emergency plan:
  - What to do if attack frequency increases
  - What to do if attack aborting medication is no longer sufficient
- Maybe a separate bedroom is helpful because of attacks during the night (pacing around, use of oxygen, use of sumatriptan injection)

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Self-management of cluster attacks

Additional suggestions

- Use of skills (derived from the Dialectical Behavior Therapy for borderline personality disorder) for emotional regulation
- Teaching of self-hypnosis techniques for some patients
- Discuss role of triggers (alcohol during bouts of cluster headache vs outside of bouts)
- Analyse stress as a potential trigger
- Discuss the role of nicotine dependency
- Information for the family
- Ask about use of illegal substances, inform about risks
- Offer information about patient support groups

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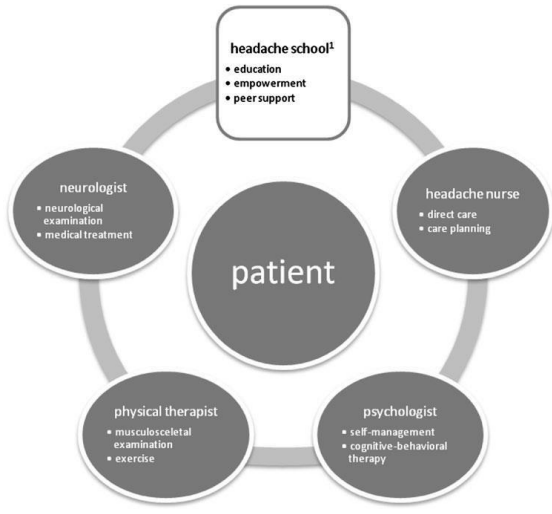
Education is the most important step to self-management



[1] All disciplines contribute to the headache school

Gaul et al. Team players against headache: multidisciplinary treatment of primary headaches and medication overuse headache. J Headache Pain 2011;12:511-9.

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Conclusion

- Lack of scientific evidence for many self-management strategies
- Need for disease specific strategies
- Patients are highly interested in self-management
- Be prepared for attacks in cluster headache
- Trigger-management instead of trigger avoiding in migraine
- Succesfull self-management may increase the internal locus of control

… there is no „one-size-fits-all“ – strategy

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