The child with tension-type headache
Physical factors and interactive interventions

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Bakgrund
Debut vid 7 års ålder.
Förekomsten är 2-23% för frekvent och kronisk TTH.
Flickorna dominerar.
Ett antal barn lider av mixed headaches.

Mental eller mekanisk belastning kan initiera dysfunktioner.

Risken är frånvaro från skolan, överanvändning av läkemedel och försämrad livskvalitet.
Reduced neck-shoulder muscle strength and aerobic power together with increased pericranial tenderness are associated with tension-type headache in girls: A case-control study

Birte Tornoe1,2,3,4, Lars L Andersen5, Jørgen H Skotte5, Rigmor Jensen6, Gunvor Gard1, Liselotte Skov2 and Inger Hallström1

Abstract
Background: Tension-type headaches (TTH) are common among children worldwide and mean a potential risk of disability and medication overuse headache. The associated mechanisms, however, remain unsolved. Our study investigated muscle strength in the neck-shoulder region, aerobic power and pericranial tenderness in girls with TTH compared with healthy controls.
Methods: A blinded case-control study comprising 41 girls with TTH and 41 age-matched healthy controls. Standardised testing of isometric maximal voluntary contraction (MVC) and force steadiness of neck flexion and extension, as well as MVC and rate-of-force development of dominant shoulder, was conducted. VO₂ max was recorded by a submaximal ergometer test and pericranial tenderness by standardised manual palpation. Logistic regression analyses were applied.
Results: Girls with TTH demonstrated significantly higher pericranial tenderness than controls, in correlation with headache frequency (r = 0.66, p < 0.001). Results indicated that the odds ratio of girls having headache are 7.6 (95% CI 1.4–40.9) for weak to strong shoulder muscles; weak to average neck-shoulder strength OR 3.1 (95% CI 1.2–8.1); neck flexion strength OR 1.3 (95% CI 1.0–1.6) and 5.2 (95% CI: 1.4–19.6) for each unit of decrease in VO₂ max.
Conclusions: Reduced neck-shoulder strength and aerobic power together with increased pericranial tenderness are associated with TTH in girls. Future interventions should be directed towards health promoting patient educational programmes on enhanced physical exercising. Much more exact and detailed research in young girls and boys are needed.

Keywords
Neck and shoulder muscles, strength capacity, hypersensibility, cardiovascular fitness, children, tension-type headache

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Specific strength training compared with integrated counselling for girls with tension-type headache: A randomised controlled trial

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Abstract

Background
Childhood tension-type headache (TTH) is a prevalent and debilitating condition. Low-cost non-pharmacological treatments are usually the first choice of professionals. This study examined the outcomes of specific strength training for girls with TTH.

Methods
Forty-nine girls 9-18 years with TTH were randomised to patient education plus strength training compared with counselling by nurse and physiotherapist. Primary outcomes were headache frequency, intensity and duration; secondary were neck-shoulder muscle tension and pericranial tenderness, measured baseline, after intervention and at 12 months. Questionnaires were assessed at baseline.

Results
For both groups headache frequency decreased significantly, $p=0.001$ and there were no significant between-group differences. The odds of having headache at week 22 were 0.65 (0.50-0.84) (OR 95% CI). For both groups neck tension decreased significantly with a decrease in cervicothoracic ratio to 1.7, indicating a change. The training group shoulder strength increased ≥ 10% in 5/20 girls and predicted VO2 max in 4/20 girls.

Conclusion
Both strength training and counselling lead to headache reduction. Adjusted primary outcomes suggest that interventions may precede strength gains. Strength training may lead to important changes in the headache and health. Restructuring patient education and examining dose-response of exercises.
Figure 3. Four resistive exercises
Vi vet också att ergonomiska rekommendationer är detsamma för barn och vuxna.

Bendtsen & Fernandez de-las-Penas, 2011
Straker et al. 2008
Google images
Vad ska vi ta hem?
Ett barn med återkommande huvudvärk bör diagnostiseras. Vi bör arbeta med optimala positioner och uppmärksamhet på muskelspänningar i vardagen.

Ge prioritet till fri lek och idrott utomhus för att främja hälsa, muskelstyrka och syre-upptagningsförmågan.

Följ rekommendationerna från WHO om fysisk aktivitet.
Tack för er uppmärksamhet