Exercise: Prophylactic or Trigger for Pediatric Migraine Symptoms?
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Background
- Children and adolescents with migraines are limited in school, hobbies, and physical activities and have reduced quality of life.
- While clinical recommendations call for exercise and physical activity, few are based on scientific evidence.

Purpose
- To critically appraise the literature relevant to effects of exercise on pediatric migraines.
- To determine whether exercise is detrimental, helpful, or if there is a dose-response relationship in respect to exercise’s effect on pediatric migraine symptoms.

Methods
- MedLine, EMBASE, Web of Science, ProQuest Dissertations & Theses, ClinicalTrials.gov
- Included studies from the years 1997-2017
- 19 years of age or younger
- Migraine diagnosis not due to trauma/concussion
- Exercise as intervention for/in association with pediatric migraine

INCLUSION CRITERIA
- 827 articles
- Six of which met inclusion criteria

DATABASES REVIEWED
- SEARCH YIELDED

Results
- Exercise is associated with increased migraine frequency3
- Participating in exercise decreased migraine symptoms4 5
- Those with low exercise levels experience greater migraine frequency than their more active peers6 7 8
- All studies displayed moderate to high levels of bias according to QUIPS analysis

Conclusions
- Future research is needed to clarify the role exercise plays in either preventing, alleviating, or triggering migraines in children.
- It is unclear whether migraine symptoms prevent children from participating in physical activity or if low levels of physical activity trigger migraines.
- It is unknown if physical activity has a direct effect on pediatric migraines and/or an indirect effect based on reduced BMI and improved health.
- More research is needed to clarify the dose-response relationship of exercise’s effects on pediatric migraine symptoms.
- Problem includes cross-sectional study designs.

Clinical Relevance
- Future research is needed to guide clinicians in exercise prescription for children experiencing migraine.
- To effectively guide clinicians, future research must employ prospective research designs to elucidate the influence of exercise on pediatric migraine.

References

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