

Chapter 10 Citations

1. Dose–response association of screen time-based sedentary behaviour in children and adolescents and depression: a meta-analysis of observational studies

Abstract

“Background

Depression represents a growing public health burden. Understanding how screen time (ST) in juveniles may be associated with risk of depression is critical for the development of prevention and intervention strategies. Findings from studies addressing this question thus far have been inconsistent. Therefore, we conducted a comprehensive systematic review and meta-analysis of data related to this question.

Methods

The meta-analysis was conducted in accordance with the PRISMA guideline. We searched the electronic databases of PubMed, Web of Science and EBSCO systematically (up to 6 May 2015). OR was adopted as the pooled measurement of association between ST and depression risk. Dose–response was estimated by a generalised least squares trend estimation.

Results

Twelve cross-sectional studies and four longitudinal studies (including 1 cohort study) involving a total of 127 714 participants were included. Overall, higher ST in preadolescent children and adolescents was significantly associated with a higher risk of depression (OR=1.12; 95% CI 1.03 to 1.22). Screen type, age, population and reference category acted as significant moderators. Compared with the reference group who had no ST, there was a non-linear dose–response association of ST with a decreasing risk of depression at ST<2 h/day, with the lowest risk being observed for 1 h/day (OR=0.88; 95% CI 0.84 to 0.93).

Conclusions

Our meta-analysis suggests that ST in children and adolescents is associated with depression risk in a non-linear dose–response manner.

Link

<http://bjsm.bmj.com/content/early/2015/11/08/bjsports-2015-095084.short?rss=1>

Reference

Liu, M., L. Wu, and S. Yao. "Dose-response Association of Screen Time-based Sedentary Behaviour in Children and Adolescents and Depression: A Meta-analysis of Observational Studies." *British Journal of Sports Medicine* (2015)

2. Meta-analysis of the effects of eicosapentaenoic acid (EPA) in clinical trials in depression.

Abstract

“OBJECTIVE:

Randomized trials of omega-3 polyunsaturated fatty acid (PUFA) treatment for depression have differed in outcome. Recent meta-analyses ascribe discrepancies to differential effects of eicosapentaenoic acid (EPA) versus docosahexaenoic acid (DHA) and to diagnostic heterogeneity. This meta-analysis tests the hypothesis that EPA is the effective component in PUFA treatment of major depressive episodes.

DATA SOURCES:

PubMed/MeSH was searched for studies published in English from 1960 through June 2010 using the terms fish oils (MeSH) AND (depressive disorder [MeSH] OR bipolar depression) AND randomized controlled trial (publication type). The search was supplemented by manual bibliography review and examination of relevant review articles.

STUDY SELECTION:

The search yielded 15 trials involving 916 participants. Studies were included if they had a prospective, randomized, double-blinded, placebo-controlled study design; if depressive episode was the primary complaint (with or without comorbid medical conditions); if omega-3 PUFA supplements were administered; and if appropriate outcome measures were used to assess depressed mood.

DATA EXTRACTION:

Extracted data included study design, sample sizes, doses and percentages of EPA and DHA, mean ages, baseline and endpoint depression ratings and standard deviations for PUFA and placebo groups, and P values. The clinical outcome of interest was the standardized mean difference in the change from baseline to endpoint scores on a depression rating scale in subjects taking PUFA supplements versus subjects taking placebo.

DATA SYNTHESIS:

In a mixed-effect model, percentage of EPA in the supplements was the fixed-effect predictor, dichotomized into 2 groups: EPA < 60% or EPA \geq 60% of the total EPA + DHA. Secondary analyses explored the relevance of treatment duration, age, and EPA dose.

RESULTS:

Supplements with EPA \geq 60% showed benefit on standardized mean depression scores (effect size = 0.532; 95% CI, 0.277-0.733; t = 4.195; P < .001) versus supplements with EPA < 60% (effect size = -0.026; 95% CI, -0.200 to 0.148; t = -0.316; P = .756), with negligible contribution of random effects or heteroscedasticity and with no effects of treatment duration or age.

Supplements with EPA < 60% were ineffective. Exploratory analyses supported a nonlinear model, with improvement determined by the dose of EPA in excess of DHA, within the range of 200 to 2,200 mg/d of EPA.

CONCLUSIONS:

Supplements containing EPA \geq 60% of total EPA + DHA, in a dose range of 200 to 2,200 mg/d of EPA in excess of DHA, were effective against primary depression. Translational studies are needed to determine the mechanisms of EPA's therapeutic benefit.”

Link

<http://www.ncbi.nlm.nih.gov/pubmed/21939614>

Reference

P. Ellis, Amy L. Geant, and J. John Mann. "Meta-Analysis of the Effects of Eicosapentaenoic Acid (EPA) in Clinical Trials in Depression." *J. Clin. Psychiatry The Journal of Clinical Psychiatry* 72.12 (2011): 1577-584.