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[Intervention Review]

Massage intervention for promoting mental and physical health in infants aged under six months

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ABSTRACT

Background

Infant massage is increasingly being used in the community for low-risk babies and their primary care givers. Anecdotal claims suggest benefits for sleep, respiration, elimination and the reduction of colic and wind. Infant massage is also thought to reduce infant stress and promote positive parent-infant interaction.

Objectives

The aim of this review was to assess the effectiveness of infant massage in promoting infant physical and mental health in population samples.

Search methods

Searches were undertaken of CENTRAL 2005 (Issue 3), MEDLINE (1970 to 2005), PsycINFO (1970 to 2005), CINAHL (1982 to 2005), EMBASE (1980 to 2005), and a number of other Western and Chinese databases.

Selection criteria

Studies in which babies under the age of six months were randomised to an infant massage or a no-treatment control group, and utilising a standardised outcome measuring infant mental or physical development.

Data collection and analysis

Weighted and standardised mean differences and 95% confidence intervals are presented. Where appropriate the results have been combined in a meta-analysis using a random effects model.

Main results

Twenty-three studies were included in the review. One was a follow-up study and thirteen were included in a separate analysis due to concerns about the uniformly significant results and the lack of dropout. The results of nine studies providing primary data suggest that infant massage has no effect on growth, but provides some evidence suggestive of improved mother-infant interaction, sleep and relaxation, reduced crying and a beneficial impact on a number of hormones controlling stress. Results showing a significant impact on number of illnesses and clinic visits were limited to a study of Korean orphanage infants. There was no evidence of effects on cognitive and behavioural outcomes, infant attachment or temperament. The data from the 13 studies regarded to be at high risk of bias show uniformly significant benefits on growth, sleep, crying and bilirubin levels.

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Authors' conclusions

The only evidence of a significant impact of massage on growth was obtained from a group of studies regarded to be at high risk of bias. There was, however, some evidence of benefits on mother-infant interaction, sleeping and crying, and on hormones influencing stress levels. In the absence of evidence of harm, these findings may be sufficient to support the use of infant massage in the community, particularly in contexts where infant stimulation is poor. Further research is needed, however, before it will be possible to recommend universal provision.

PLAIN LANGUAGE SUMMARY

Massage for promoting mental and physical health in infants under the age of six months

This review aimed to assess the impact of infant massage on mental and physical outcomes for healthy infants in the first six months of life. A total of 23 randomised controlled trials were included. Thirteen of these that were assessed to have a high risk of bias and were analysed separately. One study reported follow-up data only. It was only possible to combine the results of the remaining studies for a very small number of outcomes. The results of nine studies suggest that infant massage has no effect on growth, but provides some evidence suggestive of improved mother-infant interaction, improved sleep and relaxation, reduced crying and a beneficial impact on a number of physiological processes. Results showing a significant impact on number of illnesses and clinic visits were limited to a study of Korean orphanage infants. There is no evidence of any impact on infant attachment, temperament, psychomotor or mental development. These results provide tentative evidence to support current practice with regard to the teaching of infant massage in the community during the first six months of life, but fall short of the evidence needed to recommend universal provision. Further research is needed to identify the relative benefits in different population groups, its influence on outcomes such as mother-infant interaction, and the physiological mechanisms involved. Further research is also needed to identify the relative benefits of the different approaches to infant massage, the best approach to teaching parents and the optimum frequency and intensity.