

Evidence Update

Child Health Series

In communities where intestinal worms are common, does giving children deworming drugs regularly improve their growth and school performance?

Deworming drugs used in targeted community programmes may improve weight gain in some circumstances. Whether deworming drugs have an effect on school performance or cognition is not known.

Inclusion criteria

Studies:

Randomized controlled trials and quasi-randomized controlled trials.

Participants:

Children aged 16 years or less.

Intervention:

Intervention: drugs for treating geohelminth worms.

Control: placebo or no treatment.

Outcomes:

Primary: change in weight or height, measures of nutritional status, measures of school performance.

Secondary: measures of cognitive performance.

Adverse events: any adverse events.

Results

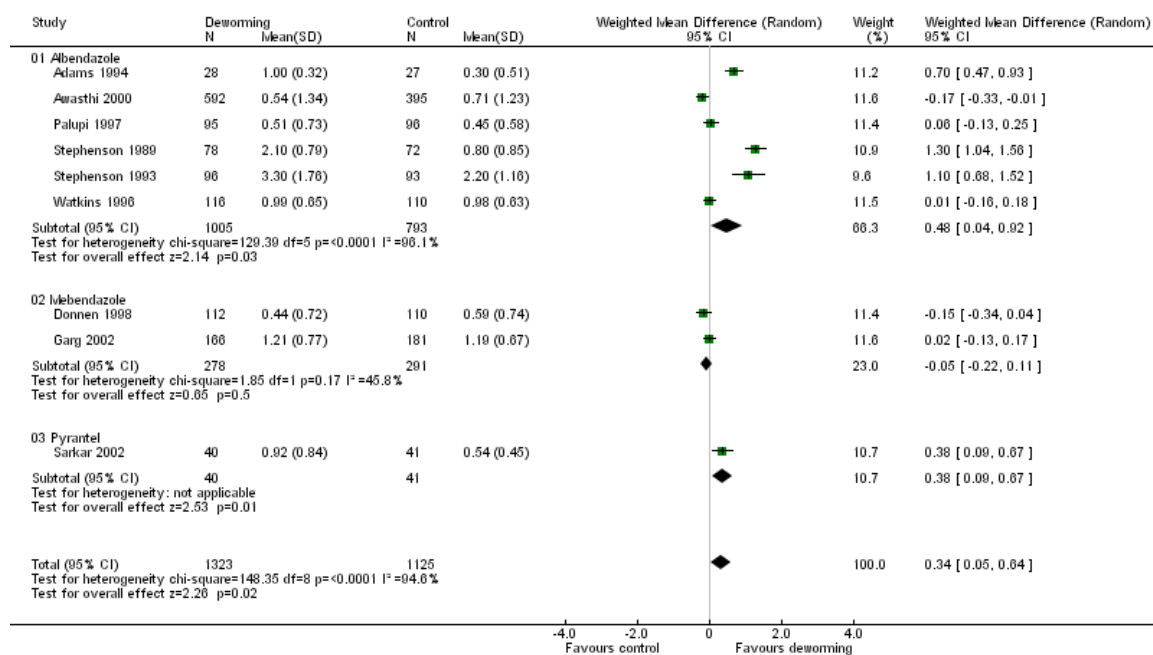
- Thirty-four trials, conducted in 20 countries, met the inclusion criteria; four were adequately concealed.
- For a single dose, 9 trials had data that could be combined. Weight gain was higher in children given deworming drugs (weighted mean difference 0.34 kg, 95% confidence interval 0.05 to 0.64; 2448 children, 9 trials), although the differences varied a lot between trials
- For multiple doses within one-year of starting treatment, no change was demonstrated for weight (1714 children, 6 trials), height (1715 children, 6 trials), mid-upper arm circumference (658 children, 4 trials), or haemoglobin levels (144 children, 2 trials). One cluster randomised trial demonstrated a difference in weight and height for multiple dosing within one year.
- For multiple doses with over a year of follow up, no overall change in weight or height was shown (1219 children, 3 trials). One cluster trial of 30,000 children showed no difference.
- Across all time periods, deworming drugs had no clear effect on cognitive function or school performance (7 trials).
- No serious adverse events were reported (2 small trials).



Adapted from Taylor-Robinson DC, Jones AP, Garner P. Deworming drugs for treating soil-transmitted intestinal worms in children: effects on growth and school performance. *Cochrane Database of Systematic Reviews* 2007, Issue 4. Art. No.: CD000371. DOI: 10.1002/14651858.CD000371.pub3. *Evidence Update* published in May 2008.

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Single dose of deworming drug vs control: change in weight (kg)



Authors' conclusions

Implications for practice:

Deworming drugs used in targeted community programmes may improve weight gain in children in some situations but not others. It is not known whether the use of deworming drugs has an effect on school performance or cognition.

Implications for research:

Further research is required to determine whether it is worthwhile to implement deworming drugs in communities, and the benefit or harm of the deworming drugs on children's long-term growth and school performance. A large trial in progress in Lucknow, India will help answer some of these questions.