Long-Term Efficacy of Methylphenidate Immediate-Release for the Treatment of Childhood ADHD - A Systematic Review and Meta-Analysis

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Objective: To evaluate the long-term effects of methylphenidate immediate-release (MPH-IR), and to confirm the efficacy established in previous meta-analyses of short-term studies.

Method: Published and unpublished studies in which participants were treated with MPH-IR for 12 weeks or more were searched. Pooled effect sizes from these studies were computed with the DerSimonian and Laird random-effect model. Meta-regression analysis was conducted to estimate covariates associated with treatment effects.

Results: Seven studies were included. Pooled parents ratings for inattention and hyperactivity/impulsivity resulted in standardized mean difference (SMD) = 0.96 (95% confidence interval [CI] = [0.60, 1.32]) and SMD = 1.12 (95% CI = [0.85, 1.39]), respectively; pooled teachers ratings showed SMD = 0.98 (95% CI = [0.09, 1.86]) for inattention and SMD = 1.25 (95% CI = [0.7, 1.81]) for hyperactivity/impulsivity. No evidence of association of any covariates with treatment effect was detected in the meta-regression.

Conclusion: MPH-IR is efficacious for childhood ADHD for periods longer than 12 weeks.