immediate-release MPH formulations, a new generation of long-acting MPH formulations has emerged. Direct head-to-head studies of these long-acting MPH formulations are important to facilitate an evaluation of their comparative pharmacokinetics and efficacy; however, to date, relatively few head-to-head studies have been performed. The objective of this systematic review was to compare the evidence available from head-to-head studies of long-acting MPH formulations and provide information that can guide treatment selection. METHODS: A systematic literature search was conducted in MEDLINE and PsycINFO in March 2012 using the MeSH terms: attention deficit disorder with hyperactivity/drug therapy; methylphenidate/therapeutic use and All Fields: Concerta; Ritalin LA; OROS and ADHD; Medikinet; Equasym XL and ADHD; long-acting methylphenidate; Diffucaps and ADHD; SODAS and methylphenidate. No filters were applied, and no language, publication date, or publication status limitations were imposed. Articles were selected if the title indicated a comparison of two or more long-acting MPH preparations in human subjects of any age; nonsystematic review articles and unpublished data were not included. RESULTS: Of 15,295 references returned in the literature search and screened by title, 34 articles were identified for inclusion: nine articles from pharmacokinetic studies (nine studies); nine articles from laboratory school studies (six studies); two articles from randomized controlled trials (two studies); three articles from switching studies (two studies) and three articles from one observational study. CONCLUSIONS: Emerging head-to-head studies provide important data on the comparative efficacy of the formulations available. At a group level, efficacy across the day generally follows the pharmacokinetic profile of the MPH formulation. No formulation is clearly superior to another; careful consideration of patient needs and subtle differences between formulations is required to optimize treatment. For patients achieving suboptimal symptom control, switching long-acting MPH formulations may be beneficial. When switching formulations, it is usually appropriate to titrate the immediate-release component of the formulation; a limitation of current studies is a focus on total daily dose rather than equivalent immediate-release components. Further studies are necessary to provide guidance in clinical practice, particularly in the treatment of adults and preschool children and the impact of comorbidities and symptom severity on treatment response.

Daminet, S. et al. (2014). "Best practice for the pharmacological management of hyperthyroid cats with antithyroid drugs." *J Small Anim Pract* 55(1):4–13.

Pharmacological management of feline hyperthyroidism offers a practical treatment option for many hyperthyroid cats. Two drugs have been licensed for cats in the last decade: methimazole and its prodrug carbimazole. On the basis of current evidence and available tablet sizes, starting doses of 2.5 mg methimazole twice a day and 10–15 mg once a day for the sustained release formulation of carbimazole are recommended. These doses should then be titrated to effect in order to obtain circulating total thyroxine (TT4) concentrations in the lower half of the reference interval. Treated cases should be monitored for side effects, especially during the first months of treatment. Some side effects may require discontinuation of treatment. At each monitoring visit, clinical condition and quality of life should also be evaluated, with special attention to possible development of azotemia, hypertension, and iatrogenic hypothyroidism. When euthyroidism has been achieved, monitoring visits are recommended after 1 month, 3 months, and biannually thereafter. Cats with preexisting