



ชมรมโรคระบบหายใจและเวชบำบัดวิกฤตในเด็กแห่งประเทศไทย

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Role of Theophyllines in control of Asthma

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สถาบันสุขภาพเด็กแห่งชาติมหาราชินี

Factors altering theophylline metabolism

Factor	Effect
Physical alteration Diet	<u><i>Increase elimination</i></u> Low carbohydrate, high-protein diet Charcoal-broiled meat <u><i>Decrease elimination</i></u> High-carbohydrate, low-protein diet whereas large quantities of dietary xanthines may slow elimination (there are of clinical importance only if change in usual eating patterns is sustained and extreme)

Hendeles,et al. J Pediatr 1992; 120(2):177-83.

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Bronchopulmonary dysphasia	<i>Decreases elimination variably; may be profound</i>
Fever, if sustained for > 24 hrs	Slow theophylline elimination by an average of ~50%
Heart failure	<i>Decreases elimination variably; may be profound</i>
Hyperthyroidism	Increases elimination by an average of 20%
Hypothyroidism	<i>Decreases elimination by an average of 40%</i>
Liver disease	<i>Decreases elimination variably; may be profound</i>

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Factor	Effect
Drug Interaction	
Allpurinol (high)	Slow elimination by average of 25%
<u>Cimetidine</u>	Decreases elimination by average of 50%
<u>Ciprofloxacin</u>	Decreases elimination by average of 30%
Contraceptive pills	Decreases elimination by average of 30% (may be less with low dosage)
<u>Carbamazepine</u>	Increases elimination by average of 60%

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