

# Pharmacology

## Phentermine

### What is Phentermine?

Oral Phentermine Hydrochloride (HCL) is prescribed for weight loss. It is in the family of appetite suppressants. When used in conjunction with diet, exercise, and behavior therapy, Phentermine may help you lose weight while you are learning new ways to eat and exercise.

Each Phentermine Hydrochloride capsule contains phentermine hydrochloride, 30 mg (equivalent to 24 mg of Phentermine). Phentermine Hydrochloride is a white crystalline powder, very soluble in water and alcohol. Chemically, the product is phenyl-tertiary-butylamine hydrochloride.

*Inactive Ingredients:* FD&C Blue 1, Methylcellulose, Polyethylene Glycol, Starch, Titanium Dioxide, Sucrose and Invert Sugar

The branding ink used on the gelatin capsule contains: Ethyl Alcohol, FD&C Blue 1 Aluminum Lake, Isopropyl Alcohol, n-Butyl Alcohol, Propylene Glycol, Pharmaceutical Shellac (modified) or Refined Shellac (food grade)

### How does Phentermine work?

Phentermine works by stimulating the hypothalamus gland and affecting certain neurotransmitters to decrease appetite. The hypothalamus is the region of the brain that controls the autonomic nervous system, regulating sleep cycles, body temperature, appetite, etc.

### What is the proper use?

Phentermine should be taken on an empty stomach, once daily, prior to breakfast. If in tablet form, the tablet may be broken or cut in half. Do NOT break, crush, or chew tablets. As phentermine may disrupt normal sleep patterns, avoid taking a dose late in the day. If taking more than one dose a day, take the last dose approximately 4-6 hours prior to going to bed.

### Proper use, continued

The following information is specific only to the average doses of Phentermine. The recommended dose of Phentermine may be different for different patients. If your dose is different, do NOT change it unless your provider tells you to do so.

#### Adults under age 60

*Oral dosage form (capsules)* - 15 to 30 mg once daily before breakfast

*Oral dosage form (tablets)* - 15 to 37.5 mg once daily before breakfast or 1-2 hours after breakfast. Instead of taking it once a day, your provider may tell you to take 15 to 37.5 mg in divided doses, one-half hour before meals.

*Oral resin dosage form (capsules)* - 15 to 30 mg once daily before breakfast

#### Adults age 60 and over

A reduced dosage may be necessary. Consult your provider.

#### Infants and Children

Phentermine is NOT recommended for children under age 16.

### What are the maximum dosage recommendations of Phentermine?

Take Phentermine only as directed by your provider. Do NOT take more of it. Do NOT take it more often, and do NOT take it for a longer time than your provider ordered. If too much Phentermine is taken, it may cause unwanted effects or become habit-forming. Speak with your provider if you think that Phentermine is not working properly after you have taken it for a few weeks. Do NOT increase the dose.

### What drug interactions are there with Phentermine?

Phentermine should not be taken by patients with glaucoma, hyperthyroidism, or a history of drug abuse or psychotic illnesses. Phentermine is not recommended for patients with symptomatic heart disease, including rhythm problems, hypertension, etc. Patients on Phentermine should have their blood pressure closely followed. Insulin requirements may change in patients with Phentermine. Abrupt stoppage of the drug can cause withdrawal with fatigue and depression. Phentermine is potentially addictive.

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## Phentermine, continued

### What are possible side effects?

Side effects of Phentermine include diarrhea, dry mouth, constipation, an unpleasant taste, hives, impotence, palpitations, high blood pressure, and fast heart rates. Central nervous system side effects include overstimulation, insomnia, restlessness, tremor, and dizziness.

### What is the clinical use of Phentermine?

Generally, it is recommended by the FDA that Phentermine should be used short-term (usually interpreted as 'up to 12 weeks'), while following nonpharmacological approaches to weight loss such as healthy dieting and exercise. However, recommendations limiting its use for short-term treatment may be controversial. One reason given to support limiting its use to 12 weeks is drug tolerance, whereby Phentermine loses its appetite-suppressing effects after the body adjusts to the drug. On the contrary, it has been shown that Phentermine did not lose effectiveness in a 36-week trial (PMID 11054601). However, the risk of drug addiction may be a significant reason to limit Phentermine for short-term use.