

## Haloperidol

**Introduction:** Haloperidol is a tranquilizer used to treat schizophrenia. Haloperidol can help keep in touch with reality and reduce mental problems. Haloperidol can help to control tics and vocal outbursts in patients with Tourette's syndrome and treat behavioral problems in children with severe conduct disorders (hyperactivity, mood swings, aggressive behavior, or difficulty maintaining attention).

### Indications:

- Acute and chronic schizophrenia
- Mania and hypomania
- Organic psychoses
- Agitation in psychotic illness

**Childhood behavioural disorders:** Explosive hyperexcitability and extreme hyperactivity in children (i.e. aggressivity, mood lability, difficulty sustaining attention and poor frustration tolerance). Motor tics and vocal utterances of Gilles de la Tourette's syndrome.

**Mechanism of action:** It is Central nervous system depressants. It is postulated that the behavioural effect of neuroleptic drugs is mediated through the inhibitory pathways of the extrapyramidal midbrain system. It is thought that haloperidol, a butyrophenone, may act by mimicking GABA (gamma aminobutyric acid) and opposing the action of glutamic acid, particularly in specific areas of the extrapyramidal system. The anti-psychotic action of haloperidol could be correlated with surface tension lowering properties and the consequent ability to form a monomolecular film on certain cell membranes. Such a mechanism could contribute towards the action of haloperidol on GABA/glutamic acid transmitter systems and also on catecholamine transmitter systems. Haloperidol blocks dopamine receptors, possibly by a feed-back mechanism that increases dopamine turnover in the brain.

### Dosage:

**Adults:** For the treatment of psychoses and associated behavioural disorders the usual dose is 0.5 to 5 mg twice or three times daily. In severe psychoses or resistant patients, doses of up to 100 mg daily may be required. In very high dose therapy, doses of 200 mg daily have been used. When maximum improvement is reached, the dose should be gradually reduced to the lowest effective maintenance dose.

**Children:** Haloperidol is not intended for children under 3 years old. Maintenance dosage: 0.025 – 0.05 mg per kg body weight per day in two to three divided doses. The daily dosage may be increased as needed and tolerated, by 0,5 mg increments at five to seven day intervals up to a maximum of 0.150 mg per kg body weight per day.

**Side effects:**

- **Neurological effects:** especially extrapyramidal syndromes, are the most common. Where high dosage treatment is used, extrapyramidal side-effects may be encountered at an early stage in the form of dystonic reactions or motor restlessness (akathisia).
- **CNS disorders:** reported are insomnia, restlessness, anxiety and neuroleptic malignant syndrome. Prolonged therapy may lead to deposition of pigment in the skin, or more frequently the eyes. Corneal and lens opacities have been observed.
- **Endocrine disorders:** Weight gain, lactation, breast engorgement, mastalgia, menstrual irregularities, amenorrhoea, gynaecomastia, galactorrhoea, impotence, inhibition of ejaculation, increased libido, hyperglycaemia, hypoglycaemia and hyponatremia.
- **Dermatologic reactions:** Urticaria, exfoliative dermatitis, erythema multiforme, contact sensitivity, maculopapular and acneiform skin reactions and isolated cases of photosensitivity and loss of hair. A syndrome resembling systemic lupus erythematosus has been reported.
- **Gastro-intestinal effects:** Anorexia, constipation, diarrhoea, hypersalivation, dyspepsia, nausea and vomiting.
- **Respiratory effects:** Laryngospasm, bronchospasm, and increased depth of respiration.
- **Cardiovascular effects:** Tachycardia, hypotension, hypertension, and ECG changes, particularly Q and T-wave abnormalities, cardiac arrhythmias.
- **Anti-muscarinic action:** Dry mouth, blurred vision, mydriasis and urinary retention. Diaphoresis.
- Various haematological disorders including haemolytic anaemia, aplastic anaemia, thrombocytopenic purpura and a potentially fatal agranulocytosis have been reported less frequently. Agranulocytosis may occur 4 to 10 weeks after starting treatment. Symptoms such as sore throat and fever should be monitored and white cell counts instituted should these symptoms appear.

**Precautions:** Haloperidol should be administered cautiously to patients:

- With severe cardiovascular disorders, because of the possibility of transient hypotension and/or precipitation of anginal pain.
- Receiving anticonvulsant medications, with a history of seizures, or with EEG abnormalities, because haloperidol may lower the convulsive threshold. If indicated, adequate anticonvulsant therapy should be concomitantly maintained.
- With known allergies, or with a history of allergic reactions to drugs.
- Receiving anticoagulants, since an isolated instance of interference occurred with the effects of one anticoagulant.
- Haldol can cause a life-threatening condition called neuroleptic malignant syndrome (NMS).

**Pregnancy:** There are no well controlled studies with haloperidol in pregnant women. There are reports, however, of cases of limb malformations observed following maternal use of haloperidol along with other drugs which have suspected teratogenic potential during the first trimester of pregnancy.

**Nursing mother:** Haloperidol is excreted in breast milk.

**Geriatric use:** The pharmacokinetics of haloperidol in geriatric patients generally warrants the use of lower doses.

**Contraindications:** Haloperidol is contraindicated in severe toxic central nervous system depression or comatose states from any cause and in individuals who are hypersensitive to this drug or have Parkinson's disease.

**How supplied:** Customized as per request.