# Citalo
(Citalopram HBr)

20 mg Tablets

# سیٹالو
(سیٹالوپرام)

۲۰ ملی گرام گولیاں

**Selective Serotonin Reuptake Inhibitor (SSRI)**

**COMPOSITION**
Each film coated tablet contains:
Citalopram (U.S.P. Specs.) ..... 20 mg.
(As Citalopram Hydrobromide)
Product Complies U.S.P. Specs.

**THERAPEUTIC INDICATIONS**
Indicated for treating Depression, OCD (Obsessive Compulsive Disorder) and Panic disorders.

**DOSAGE AND ADMINISTRATION**
**Adults**
Citalo (citalopram HBr) should be administered at an initial dose of 20 mg once daily, generally with an increase to a dose of 40 mg/day. Dose increases should usually occur in increments of 20 mg at intervals of no less than one week. Although certain patients may require a dose of 60 mg/day.

Citalo should be administered once daily, in the morning or evening, with or without food.

**Children**
Not recommended, as safety and efficacy have not been established in this population.

**Special Populations**
20 mg/day is the recommended dose for most elderly patients and patients with hepatic impairment,with titration to 40 mg/day only for nonresponding patients.

No dosage adjustment is necessary for patients with mild or moderate renal impairment. Citalo should be used with caution in patients with severe renal impairment

**CONTRAINDICATION**
Citalo tablets are contraindicated in patients who have shown hypersensitivity to any of its components.

Concomitant treatment with MAOIs (Monoamine Oxidase Inhibitors) including selegiline (selective MAO-B inhibitor) in doses above 10 mg daily is cotra-indicated (see interaction with other drugs).

**SPECIAL WARNINGS AND SPECIAL PRECAUTIONS FOR USE**
**Warning**
Citalo should not be administrated together with MAOIs including selegiline (selective MAO-B inhibitor) in doses above 10 mg daily (see contraindications and interactions with other drugs).

**Precautions**
As described for other psychotropics Citalopram may modify insulin and glucose response calling for adjustment of the antidiabetic therapy in diabetic patients; in addition the depressive illness itself may affect patient's glucose balance.

Rarely, the occurence of "Serotonin Syndrome" has been reported in patients receiving SSRIs. A combination of symptoms, possibly including agitation, confusion, tremor,

myoclonus and hyperthermia, may indicate the development of this condition.

**Use during pregnancy and lactation.**
Clinical experience of use in pregnant women is limited.

Reproduction toxicity studies have not given evidence of an increased incidence of foetal damage or other deleterious effects on the reproductive process.

Information on the excretion of citalopram into breast milk exists but is insufficient for assessment of the risk to the child. **Caution is recommended.**

**Effects on ability to drive or use machines**
Citalo does not impair intellectual function or psychomotor performance. However, patients who are prescribed psychotropic medication may be expected to have some impairment of general attention and concentration either due to the illness itself, the medication or both and should be cautioned about their ability to drive a car and operate machinery.

**Undesirable effects**
Adverse effects observed with Citalo are in general mild and transient. They are most frequent during the first one or two weeks of treatment and usually attenuate subsequently.

**PHARMACOLOGICAL PROPERTIES**
**Pharmacodynamic properties**
Biochemical and behavioral studies have shown that citalopram is a potent inhibitor of the serotonin (5-HT)-uptake. Tolerance to the inhibition of 5HT-uptake is not induced by long-term teatrment with citalopram.

Citalopram is the most selective serotonin reuptake inhibitor (SSRI) yet described, with no or minimal, effect on noradrenaline (NA), dopamine (DA) and gamma aminobutyric acid (GABA) uptake.

In contrast to many tricyclic antidepressants and some of the newer SSRIs, citalopram has or very low affinity for a series of receptors including 5-$HT_{1A}$, 5-$HT_2$, DA $D_1$ and DA $D_2$ receptors, Alpha-2, beta-adrenoceptors, histamine $H_1$, muscarine cholinergic, benzodiazepine, and opioid receptors. A series of functional in vitro tests in isolated organs as well as functional in vivo tests have confirmed the lack of receptor affinity.

This absence of effects on receptors could explain why citalopram produces fewer of the traditional side effects such as dry mouth, bladder and gut disturbance, blurred vision, sedation, cerdiotoxicity and orthostatic hypotension.

Suppression of rapid eye movement (REM) sleep is considered a predictor of antidepressant activity. Like tricyclic antidepressants, antidepressants, other SSRIs and MAO inhibitors, citalopram suppresses REM-sleep and increases deep slow-wave sleep.

Although citalopram does not bind to opioid receptors it potentiates the antinociceptive effect of commonly used opioid analgesics.

The main metabolites of citalopram are all SSRIs although their potency and selectivity ratios are lower than those of citalopram. However, the selectivity ratios of the metabolites are higher than those of many of the newer SSRIs. The metabolities do not contribute to the overall antidepressant effect.

In humans citalopram does not impair cognitive (intellectual function) and psychomotor performance and has no or minimal sedative properties, either alone or in combination with alcohol.

Citalopram did not reduce saliva flow in a single dose study in human volunteers and in none of the studies in healthy volunteers did citalopram have significant influence on cardiovascular parameters. There is some evidence of a possible weak effect on prolactin secretion.

**Pharmacokinetic properties**
***Absorption***
Absorption is almost complete and independent of food intake ($T_{max}$ mean 3 hours). Oral bioavailability is about 80%.

***Distribution***
The apparent volume of distribution (Vd)$_{ss}$ is bout 12-17 L/Kg. The plasma protein binding is below 80% for citalopram and its main metabolites.

***Biotransformation***
Citalopram is metabolized to the active demethylcitalopram, didemethylcitalopram, citalopram-N-oxide and an inactive deaminated propionic acid derivative. Al the active metabolites are also SSRIs, although weaker than the parent compound. Unchanged citalopram is the predominant compound in plasma. The concentrations of demethylcitalopram and didemethylcitalopram are usually 30-50% and 5-10% of the citalopram concentration, respectively. The biotransformation of citalopram to demethylcitalopram is mediated by CYP2C19 (approx, 60%), CYP3A4 (approx. 30%)) and CYP2D6 (approx. 10%).

***Elimination***
The elimination half-life (T ½ $_\beta$) is about 1½ days and the systemic citalopram plasma clearance (Cls) is about 0.3-0.4 L/min, and oral plasma clearance (Cl oral) is about 0.4 L/min. Citalopram is excreted mainly via the liver (85%) and the remainder (15%) via the kidneys; 12-23 of the daily dose is excreted in urine as unchanged citalopram, hepatic (residual) clearance is about 0.3 L/min and renal clearance about 0.05-0.08 L/min.

The kinetics is linear. Steady state plasma levels are achieved in 1-2 weeks. Average concentrations of 300 nomol/L (165-405 nmol/L) are achieved at a daily dose of 40 mg. there is no clear relationship between citalopram plasma levels and therapeutic response or side effects.

***Elderly patients (>65 years)***
Longer half-lives (1.5-3.75 days)and decreased clearance values (0.08-0.3L/min) due to a reduced rate of metabolism have been demonstrated in elderly patients. Steady state levels were about twice as high in the elderly as in younger patients treated with the same dose.

***Reduced hepatic function***
Citalopram is eliminated more slowly in patients with reduced hepatic function. The half-life of citalopram is about twice as long and steady state citalopram concentrations at a give dose will be about twice as high as in patients with normal liver function.

***Reduced renal function***
Citalopram is eliminated more slowly in patients with mild to moderated reduction of renal function with out any major on the pharmacokinetics of citalopram. At present no information is available for treatment of patients of patients with severely reduced renal function (creatinie clearance <20 ml/min).

**PRESENTATIONS**
**Citalo Tablets 20 mg**: Available in blister pack of 1x10's.

**STORAGE**
Store below 30°C in a dry place, protect from light.
To be dispensed on the prescription of a registered medical practitioner only.
Keep out of the reach of children.

**خوراک**: ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔
- دوا کو ۳۰ ڈگری سینٹی گریڈ سے کم درجہ حرارت پر خشک جگہ پر رکھیں، روشنی سے بچائیں۔
- صرف رجسٹرڈ ڈاکٹر کے نسخے پر فروخت کریں۔
- بچوں کی پہنچ سے دُور رکھیں۔

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