# Mevulak® MR Capsule
## (Mebeverine HCl)

### QUALITATIVE AND QUANTITATIVE COMPOSITION
**Mevulak® MR 200mg Capsule**
Each capsule contains:
Mebeverine hydrochloride modified release pellets MS
eq. to Mebeverine hydrochloride..... 200mg

### PHARMACEUTICAL FORM
Capsule.

### CLINICAL PARTICULARS
**THERAPEUTIC INDICATIONS:**
For the symptomatic relief of irritable bowel syndrome.

**POSOLOGY AND METHOD OF ADMINISTRATION:**
**Posology:** One capsule of 200mg twice daily, to be given one in the morning and one in the evening.
**Paediatric Population:** Not recommended for use in children and adolescents below 18, due to insufficient data on safety and efficacy. Duration of use is not limited.
If one or more doses are missed, the patient should continue with the next dose as prescribed; the missed dose(s) should not be taken in addition to the regular dose.
**Special Population:** No posology studies in elderly, renal and/or hepatic impaired patients have been performed. No specific risk for elderly, renal and/or hepatic impaired patients could be identified from available post-marketing data. No dosage adjustment is deemed necessary in elderly, renal and/or hepatic impaired patients.

**Method of administration:**
***Adults (including the elderly):*** The capsules should be swallowed with a sufficient amount of water (at least 100ml water). They should not be chewed because the coating is intended to ensure a prolonged release mechanism.

**CONTRAINDICATIONS:**
Hypersensitivity to the active substance.

**SPECIAL WARNINGS AND PRECAUTIONS FOR USE:**
Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrose-isomaltese insufficiency should not take this medicine.

**INTERACTION WITH OTHER MEDICINAL PRODUCTS AND OTHER FORMS OF INTERACTION:**
No interaction studies have been performed, except with alcohol.
In vitro and in vivo studies in animals have demonstrated the absence of any interaction between mebeverine hydrochloride and ethanol.

**FERTILITY, PREGNANCY AND LACTATION:**
**Fertility:** There are no clinical data on male or female fertility; however, animal studies do not indicate harmful effects of mebeverine.
**Pregnancy:** There are no or limited amounts of data from the use of mebeverine in pregnant women. Animal studies are insufficient with respect to reproductive toxicity. Mebeverine is not recommended during pregnancy.
**Breastfeeding:** It is unknown whether mebeverine or its metabolites are excreted in human milk. The excretion of mebeverine in milk has not been studied in animals. Mebeverine should not be used during breast-feeding.

**EFFECTS ON ABILITY TO DRIVE AND USE MACHINES:**
No studies on the effects on the ability to drive and use machines have been performed. The pharmacodynamic and pharmacokinetic profile as well as post marketing experience do not indicate any harmful effect of mebeverine on the ability to drive or to use machines.

**UNDESIRABLE EFFECTS:**
The following adverse reactions have been reported spontaneously during post marketing use. A precise frequency cannot be estimated from available data. Allergic reactions mainly but not exclusively limited to the skin have been observed.
**Immune system disorders:** Hypersensitivity (anaphylactic reactions).
**Skin and subcutaneous tissue disorders:** Urticaria, angioedema, face oedema, exanthema.

**OVERDOSE:**
Theoretically CNS excitability may occur in cases of overdose. In cases where mebeverine was taken in overdose, symptoms were either absent or mild and usually rapidly reversible. Observed symptoms of overdose were of a neurological and cardiovascular nature. No specific antidote is known and symptomatic treatment is recommended.
Gastric lavage should only be considered in case of multiple intoxication or if discovered within about one hour. Absorption reducing measures are not necessary.

### PHARMACOLOGICAL PROPERTIES
**PHARMACODYNAMIC PROPERTIES: Pharmacotherapeutic group:** Synthetic anticholinergics, esters with tertiary amino group. **ATC-Code:** A03AA04
Mebeverine is a musculotropic antispasmodic with a direct action on the smooth muscle of the gastrointestinal tract, without affecting normal gut motility. The exact mechanism of action is not known, but multiple mechanisms, such as a decrease in ion channel permeabilities, blockade of noradrenaline reuptake, a local anesthetic effect, changes in water absorption as well as weak anti-muscarinergic and phosphodiesterase inhibitory effect might contribute to the local effect of mebeverine on the gastrointestinal tract. Systemic side-effects as seen with typical anti-cholinergics are absent.
**Clinical efficacy and safety:** All formulations of mebeverine were generally safe and well tolerated in the recommended dose regimen.
**Paediatric population:** The efficacy and safety of the product has only been evaluated in adults.

**PHARMACOKINETIC PROPERTIES:**
**Absorption:** Mebeverine hydrochloride is rapidly and completely absorbed after oral administration of tablets. The modified release formulation permits a twice daily dosing scheme.
**Distribution:** No significant accumulation occurs after multiple doses.
**Biotransformation:** Mebeverine hydrochloride is mainly metabolised by esterases, initially splitting the ester bonds into veratric acid and mebeverine alcohol. The main metabolite in plasma is demethylated carboxylic acid. The steady state elimination half-life of demethylated carboxylic acid is 5.77h. During multiple dosing (200mg b.i.d.) the $C_{max}$ of demethylated carboxylic acid is 804ng/ml and $T_{max}$ is about 3 hours. The relative bioavailability of the modified release capsule appears to be optimal with a mean ratio of 97%.
**Elimination:** Mebeverine is not excreted as such, but metabolised completely; the metabolites are excreted nearly completely. Veratric acid is excreted into the urine; mebeverine alcohol is also excreted into the urine, partly as the corresponding carboxylic acid and partly as the demethylated carboxylic acid.
**Paediatric population:** The safety and efficacy of the product has only been evaluated in adults.

### SHELF LIFE
See expiry on the pack.

### AVAILABILITY
**Mevulak® MR** 200mg capsule in a pack of 10's

### INSTRUCTIONS
**Dosage:** As directed by the physician.
To be sold on the prescription of a registered medical practitioner only.
Keep out of the reach of children.
Do not store over 30°C, and protect from heat and moisture.
Improper storage may deteriorate the medicine.

Manufactured by:
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Mfg. Lic. No. 000072

## میوولیک® ایم آر کیپسول
(میبیورین ہائیڈروکلورائیڈ)

### ہدایات:
**خوراک:** ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔
صرف رجسٹرڈ ڈاکٹر کے نسخے کے مطابق فروخت کریں۔
بچوں کی پہنچ سے دور رکھیں۔
دوا کو ۳۰ ڈگری سینٹی گریڈ سے زیادہ درجہ حرارت پر نہ رکھیں،
گرمی اور نمی سے محفوظ رکھیں ورنہ دوا خراب ہو جائیگی۔