

## **SUMMARY OF PRODUCT CHARACTERISTICS**

### **1 NAME OF THE MEDICINAL PRODUCT**

Fersamal 140mg/5ml Syrup

### **2 QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each 5ml of syrup contains approximately 140mg ferrous fumarate BP (45mg elemental iron).

### **3 PHARMACEUTICAL FORM**

Syrup

### **4 CLINICAL PARTICULARS**

#### **4.1 Therapeutic indications**

Prophylaxis and treatment of iron deficiency states.

For prophylaxis during pregnancy, a combination of iron and folic acid is usually recommended.

#### **4.2 Posology and method of administration**

##### Adults and the elderly:

- a) Iron deficiency anaemia- Fersamal syrup two 5 ml spoonfuls twice a day
- b) prophylaxis- Fersamal syrup one 5 ml spoonful twice a day.

Children: Full term infants and young children-half to one 5ml spoonful twice a day.

Premature infants: 0.6ml/kg/ day to 2.4 ml/kg/day.

Method of administration: Oral

##### Rationale:

Taking into account the content of elemental iron and the referenced recommended daily doses of the same in deficiency states and for prophylaxis, the Fersamal dosing is in need of revision.

Each 5 mls of Fersamal syrup contains 140 mg Ferrous Fumarate which approximates to 45 mg of elemental iron – section 2 SmPC.

##### Recommended doses:

- (a) Iron deficiency anaemia: 100 to 200 mg elemental iron per day – reference (1) BNF (2) G&G. This equates most closely to Fersamal syrup two 5 ml spoonfuls twice a day.
- (b) Prophylaxis: ferrous sulphate 200 mg once or twice a day (reference BNF) i.e. 60 to 120 mg elemental iron per day. This equates most closely to Fersamal syrup one 5ml spoonful twice a day.

#### **4.3 Contraindications**

Known hypersensitivity to any of the ingredients of the product. Paroxysmal nocturnal haemoglobinuria. Haemosiderosis, haemochromatosis. Active peptic ulcer. Repeated blood transfusions. Regional enteritis and ulcerative colitis. Must not be used in anaemias other than those due to iron deficiency.

#### **4.4 Special warnings and precautions for use**

Some post-gastrectomy patients show poor absorption of iron. Care is required when treating patients with iron deficiency anaemia who have treated or controlled peptic ulceration.

Duration of treatment of uncomplicated iron deficiency anaemia should not usually exceed 6 months (3 months after reversal of the anaemia has been achieved).

Because anaemia due to combined iron and Vitamin B12 or folate deficiencies may be microcytic in type, patients with microcytic anaemia resistant to treatment with iron alone should be screened for Vitamin B12 or folate deficiency.

Fersamal syrup should be kept out of the reach of children.

Long-term treatment with Fersamal syrup may increase the risk of dental caries. Adequate dental hygiene must be maintained. Since Fersamal syrup contains sugar, care must be exercised when using in patients with diabetes mellitus.

#### **4.5 Interaction with other medicinal products and other forms of interaction**

Iron reduces the absorption of penicillamine, bisphosphonates, ciprofloxacin, entacapone, levodopa, levofloxacin, levothyroxine (thyroxine) (give at least 2 hours apart), moxifloxacin, mycophenolate, norfloxacin, ofloxacin, zinc.

Absorption of both iron and antibiotic may be reduced if Fersamal 140mg/5ml is given with tetracycline. Absorption of oral iron is reduced by calcium salts, Magnesium salts (as magnesium trisilicate), Trientine.

Chloramphenicol delays plasma iron clearance, incorporation of iron into red blood cells and interferes with erythropoiesis. Some inhibition of iron absorption may occur if it is taken with cholestyramine, tea, eggs or milk.

Avoid concomitant use of iron with dimercaprol.

Oral iron antagonises hypotensive effect of methyldopa.

#### 4.6 Pregnancy and lactation

Administration during the first trimester of pregnancy may be undesirable.

#### 4.7 Effects on ability to drive and use machines

None known.

#### 4.8 Undesirable effects

The commonest side effects relate to gastrointestinal irritation (nausea, epigastric pain, constipation or diarrhoea). In the event of these ADRs, it may be helpful to reduce the dose or switch to an alternative iron salt.

Darkening of stools, black discoloration of the teeth and allergic reactions (due to metabisulphite in the syrup vehicle) may also occur

#### 4.9 Overdose

Symptoms:

Ingestion of 20 mg/kg elemental iron is potentially toxic and 200-250 mg/kg is potentially fatal. No single method of assessment is entirely satisfactory - clinical features as well as laboratory analysis must be taken into account. The serum iron taken at about 4 hours after ingestion is the best laboratory measure of severity.

Serum Iron	Severity
< 3 mg/L (55 micromol/L)	Mild toxicity
3-5 mg/L (55-90 micromol/L)	Moderate toxicity
> 5 mg/L (90 micromol/L)	Severe toxicity

Early signs and symptoms include nausea, vomiting, abdominal pain and diarrhoea. The vomit and stools may be grey or black. In mild cases early features improve but in more serious cases there may be evidence of hypoperfusion (cool peripheries and hypotension), metabolic acidosis and systemic toxicity. In serious cases there can be recurrence of vomiting and gastrointestinal bleeding, 12 hours after ingestion. Shock can result from hypovolaemia or direct cardiotoxicity. Evidence of hepatocellular necrosis appears at this stage with jaundice, bleeding, hypoglycaemia, encephalopathy and positive anion gap metabolic acidosis. Poor tissue perfusion may lead to renal failure. Rarely, gastric scarring causing stricture or pyloric stenosis

(alone or in combination) may lead to partial or complete bowel obstruction 2-5 weeks after ingestion.

Management:

Supportive and symptomatic measures include ensuring a clear airway, monitor cardiac rhythm, BP and urine output, establishing IV access and administering sufficient fluids to ensure adequate hydration. Consider whole bowel irrigation. If metabolic acidosis persists despite correction of hypoxia and adequate fluid resuscitation, an initial dose of 50 mmol sodium bicarbonate may be given and repeated as necessary, for adults guided by arterial blood gas monitoring (aim for a pH of 7.4). Consider the use of desferrioxamine, if /the patient is symptomatic (other than nausea), serum iron concentration is between 3-5 mg/L (55-90 micromol/L) and still rising. Haemodialysis does not remove iron effectively but should be considered on a supportive basis for acute renal failure as this will facilitate removal of the iron-desferrioxamine complex.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Iron is an essential constituent of the body, and is necessary for haemoglobin formation and for the oxidative processes of living tissues. Iron and iron salts should be given for the treatment or prophylaxis of iron deficiency anaemias. Preparations of iron are administered by mouth, by intramuscular or intravenous injection.

Soluble ferrous salts are most effective by mouth. Ferrous fumarate is an easily absorbed source of iron for replacement therapy. It is a salt of ferrous iron with an organic acid and is less irritant to the gastro-intestinal tract than salts with inorganic acids.

### **5.2 Pharmacokinetic properties**

In the acid conditions of the gastric contents, ferrous fumarate is dissociated and ferrous ions are liberated. These ions are absorbed in the proximal portion of the duodenum.

The ferrous iron absorbed by the mucosal cells of the duodenum is oxidised to the ferric form, and this is bound to protein to form Ferritin.

Ferritin in the mucosal cells releases iron into the blood, where it is bound to transferrin and passed into the iron stores - liver, spleen, and bone marrow.

These stores are a reserve of iron for synthesis of haemoglobin, myoglobin, and iron containing enzymes.

Iron is lost from the body through loss of cells in urine, faeces, hair, skin, sputum, nails, and mucosal cells, and through blood loss.

Ferrous fumarate has the same pattern of absorption and excretion as dietary iron.

### **5.3 Preclinical safety data**

No further data.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Nipastat GL 75  
Methylcellulose 20 BP  
Liquid glucose BPC  
Granulated sugar BP  
Granular lecithin (97% A1)  
Elderberry flavour (Bush C7529)  
Sodium metabisulphite BP  
Purified water BP

### **6.2 Incompatibilities**

None.

### **6.3 Shelf life**

24 months.

### **6.4 Special precautions for storage**

Protect from light. Store below 25°C.

### **6.5 Nature and contents of container**

Amber glass bottle with polypropylene cap and melinex/pulpboard/aluminium wad containing 200 ml of Fersamal 140mg/5ml syrup.

### **6.6 Special precautions for disposal**

None.

## **7 MARKETING AUTHORISATION HOLDER**

Goldshield Pharmaceuticals Limited  
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**8     MARKETING AUTHORISATION NUMBER(S)**

PL 12762/0223

**9     DATE OF FIRST AUTHORISATION/RENEWAL OF THE  
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02/12/1993

**10    DATE OF REVISION OF THE TEXT**

05/08/2010