

# Ferronomic

Lactoferrin 100 mg and Disodium Guanosine 5-Monophosphate 10 mg Tablets

## Description

Ferronomic consists of Lactoferrin and Disodium Guanosine 5-Monophosphate. Lactoferrin is a non-haem iron-binding protein that is a part of the transferrin protein family and differs from transferrin by its higher affinity for iron which is 300 times greater and its ability to retain iron at a pH lower than 4 such as exist in the gastrointestinal tract or inflammatory lesions.

## Indication

Ferronomic is indicated for the management of Iron Deficiency (ID) and Iron Deficiency anemia (IDA) during pregnancy.

## Mechanism of Action

Ferronomic works by the following mechanisms –

1. Decreases Hepcidin levels by regulating the Ferroportin Hepcidin Axis
2. Increases iron efflux in the systemic circulation by Macrophage M1 to M2 phenotype conversion
3. Reduces ferritin bind iron stores
4. Reduces inflammatory pathways further affecting Hepcidin
5. Improves Ferroportin stabilization via GMP

## Dosage & Administration

2 Tablets a day or as suggested by Health care Professional.

## Advantages of Ferronomic

1. Effective increase of Haemoglobin and systemic iron levels
2. No adverse events due to iron overload
3. Low or No Side effects such as nausea, constipation etc. arise due to Iron Supplementation
4. Restoration of Iron Homeostasis
5. A valuable alternative for sensitive populations such as the elderly, children and pregnant women



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(A Subsidiary of La Renon Healthcare Pvt. Ltd.)

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Anemia in pregnancy is a major public health problem, where it has been estimated that 41.8% of pregnant women worldwide are anemic. The majority (at least half) of this burden is due to iron deficiency. It is estimated that about half of the global maternal deaths due to anemia occur in South Asian countries and India alone contributes to 80% of the maternal deaths due to anemia in South Asia.

Increased risk during pregnancy is due to increased maternal iron needs and demands from the growing foetus and placenta, increased erythrocyte mass; and in the third trimester expanded maternal blood volume. To meet the accelerating physiologic iron requirements, both dietary iron absorption and the mobilization of iron from stores need to increase.

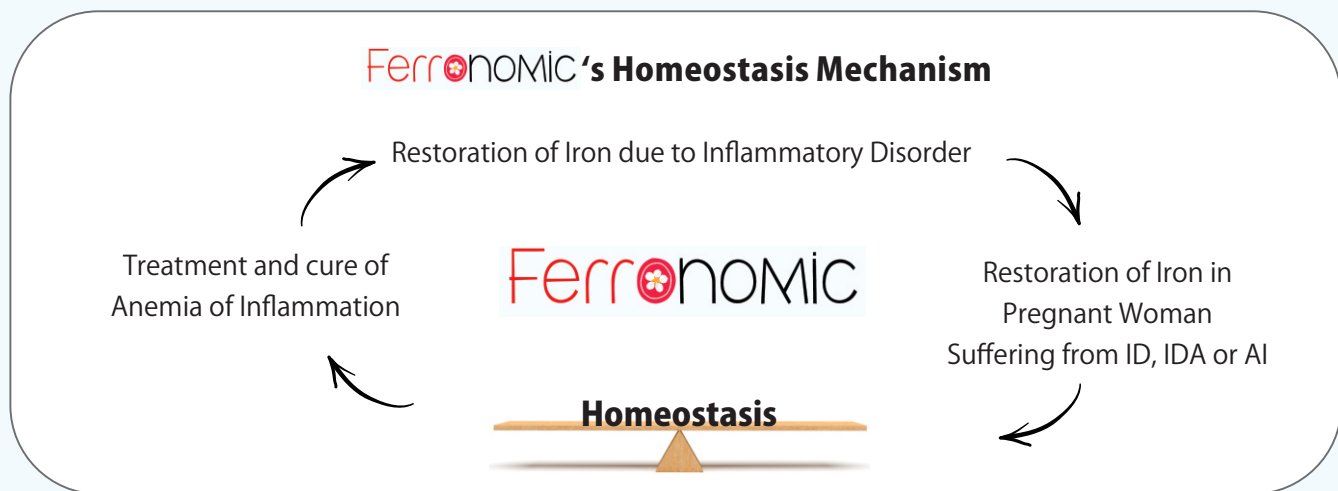
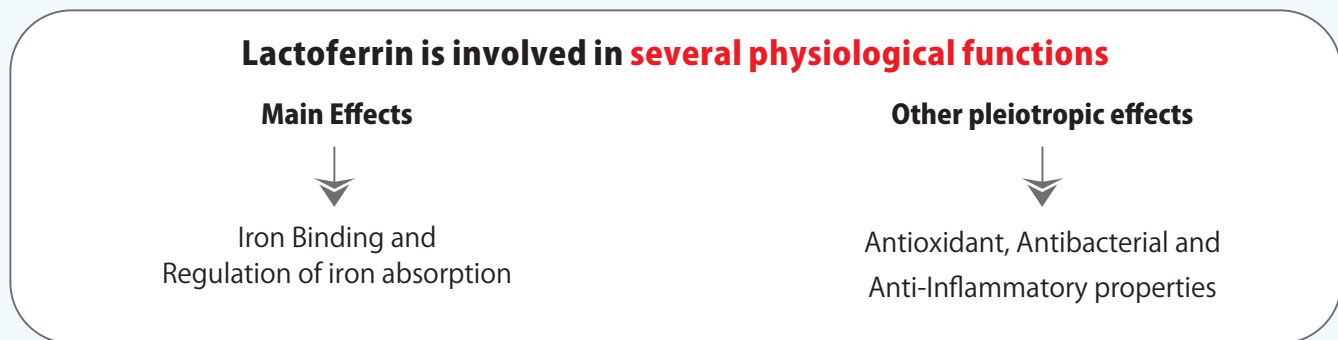
Rewriting The Iron Economics  
**Ferronomomic**

Ferronomomic is a patent applied product approaching Iron Deficiency Anemia, is a composition of Lactoferrin and Disodium Guanosine-5 monophosphate to counter the condition of Iron Deficiency Anemia in Pregnant Women.

Ferronomomic's Lactoferrin (Lf), is a multifunctional cationic glycoprotein constitutively synthesized by exocrine glands and by neutrophils following infection and inflammation and is one of the most important regulator of systemic iron homeostasis.

Ferronomomic's Lactoferrin contains a non-haem iron-binding protein that is a part of the transferrin protein family, whose function is to transport iron in blood serum.

Ferronomomic's Lactoferrin differs from transferrin by its higher affinity for iron is 300 times greater and its ability to retain iron at a pH lower than 4 such as exist in the gastrointestinal tract or inflammatory lesions.



References: 1) Gebre A, et al. Journal of Nutrition and Metabolism Volume 2015, Article ID 165430, <http://dx.doi.org/10.1155/2015/165430> | 2) Euro J Zool Res, 2014, 3 (1):32-36  
 ID= Iron Deficiency | IDA= Iron Deficiency Anemia | AI= Anemia of Inflammation



**Oral lactoferrin versus ferrous sulphate and ferrous fumarate for the treatment of iron deficiency anemia during pregnancy**

- A prospective, randomized, parallel-group, multicenter study : Total 300 pregnant women in the second trimester were diagnosed with iron deficiency anemia (IDA)
- Group 1 (Lactoferrin group):** included 100 pregnant women who received lactoferrin 250 mg capsules once daily for 8 consecutive weeks.
- Group 2 (Sulphate group):** included 100 pregnant women who received 150 mg of dried ferrous sulphate capsules once daily for 8 consecutive weeks.
- Group 3 (Fumarate group):** included 100 pregnant women who received 350 mg of ferrous fumarate capsules once daily for 8 consecutive weeks.
- The primary efficacy parameter was the amount of increase in hemoglobin concentration by 4 and 8 weeks, the adverse effects related to iron therapy and the patient compliance to the treatment.

**Changes in hemoglobin (Hb) concentration after treatment**

	Group 1	Group 2	Group 3
Hb at enrollment (g/dL)	8.03 ± 0.70	8.15 ± 0.58	8.03 ± 0.70
Hb after 1 month (g/dL)	8.65 ± 0.71	9.33 ± 0.37	8.65 ± 0.71
Hb after 2 months (g/dL)	10.41 ± 0.33	9.41 ± 0.35	9.14 ± 0.6
Total increase in Hb (g/dL)	2.28 ± 0.56	1.16 ± 0.42	1.21 ± 0.22

**Adverse effects of treatment**

	Group 1	Group 2	Group 3
Gastric Upset	10	63	60
Abdominal Pain	20	65	60
Constipation	17	55	60
Dark Stools	0	35	30
Vomiting	7	40	30

According to the results obtained in this clinical trial, oral lactoferrin was better tolerated and more acceptable with higher increase in mean hemoglobin when compared to oral iron therapy over two months treatment.

**Oral lactoferrin was as effective as oral iron supplementation with significant less side effects and hence should be used as a good substitute to oral iron therapy in mild to moderate IDA.**

Reference: Journal of Advanced Nutrition and Human Metabolism 2015; 2: e740