

IronCatch™



The Product

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IronCatch™ the only oral supplement so **quick** and **effective**:

- **30** days to increase **ferritinemia** and **syderemia** to **+50%** [90 - 120 days with common oral supplementation with iron].
- After 1 week the subject will get dynamism and energy back.
- Results have been obtained **in all patients affected by syderopenia**
- The only iron oral treatment recommended in:
 - Chron's disease
 - gastric and intestinal ulcers
 - serious hepatopathies and nephropathies
 - rheumatoid arthritis
 - chemotherapy to treat cancer
 - celiac diseasefor which current oral iron supplements are contraindicated
- Also recommended during pregnancy and lactation
- **IronCatch** increases even 5 times more the absorption of dietary iron, **no matter what the diet is** [meat, fish, fruits, vegetables, milk products, eggs, grains] and the form of iron [heme or non-heme iron].
- The mechanism of action was demonstrated using the model of the Caco2 intestinal mucous cells.

- Not containing iron, **IronCatch** is free from side effects typical of the iron supplementation
- With **IronCatch**, **no other form of iron supplementation is required**, not even in low quantities « in case of possible lacks in foods ». In fact iron is present in food in a sufficient quantity which generally corresponds strictly to calorific supply: approx **7 mg of iron/1000 Kilocalories**, with small individual variations.
- **Two clinical studies** are available; one was carried out on sideropenic subjects who were otherwise normal and the other on subjects suffering from Crohn's disease and ulcerous colitis.
- **IronCatch** cannot cause any form of iron overdose! Syderemia, ferritinemia and hemoglobin won't increase if they are present at normal quantities. Iron is absorbed according to the needs of the organism.
- The current package contains 20 tablets. The suggested dosage is: 2 tablets each day for 2 months; then 1 tablet a day for the maintenance before main meals.

- A pediatric version in packets is also available, but not yet in the market
- The current price in Italy and France for the **30 tablets pack** is between €12,50 and € 15.

" Classic concept marketing "

Due to the presence of many competitors, oral iron market includes a lot of products with low prices. The reality is that in the market **no innovation** is present among this wide range of products.

«**My iron is a little more bioavailable and better tolerable compared to the others**». This is the competitors' current marketing "plus".

Actually the problems related to oral iron absorption and its **oxidative and irritant action of the mucosa** have never been solved.

IronCatch *is the solution.*

IronCatch™

We are is going to revolutionize this market with a new patented product. This product is the result of scientific advanced research



The “Meat factor”

- It is well documented that heme iron present in meat is absorbed better than non-heme iron.
- In any case, it has been shown that meat also promotes the absorption of **non-heme** iron present in other foods.
- The factor that promotes the absorption of non-heme iron consists of the **carbohydrates** present in the **extra-cellular matrix** of the muscular fibres of **meat**.
- This has been demonstrated in vitro **using Caco-2 cells**.

“The **IronCatch** factor”

Mechanism of action

Using the same model of Caco-2 cells in vitro, it has been shown that some **fish** glycosaminoglycans, which are a source of a special type of **oligosaccharides**, are able to make the intestine absorb **3 to 5 times more iron than the “meat factor”** is able to do.

The fact that this increase relates predominantly to **non-heme** iron is particularly important.

Biochemical and Molecular Actions of Nutrients

Carbohydrate Fractions from Cooked Fish Promote Iron Uptake by Caco-2 Cells¹

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ABSTRACT The objective of this study was to isolate and characterize the meat factor(s) that enhances nonheme iron bioavailability using various analytical and in vitro cell culture techniques. Nonheme iron bioavailability was measured via radiolabeled iron uptake or ferritin formation in Caco-2 cells. Fish haddock fillet was cooked and the muscle tissue of choice because of its low iron content was used as the source of meat factor. The meat factor was purified through Sephadex G-25 size exclusion increased Caco-2 cell iron uptake approximately 9-fold. Subsequent chromatography of these fractions via C18 reverse-phase HPLC were conducted, and enhancing activity was observed only in the “injection peak.” This observation coupled with protein measurement and amino acid composition analysis revealed that the active fractions contained negligible amounts of proteins or amino acids. Active fractions were highly enriched with carbohydrates. Subsequent chromatography via high performance anion exchange chromatography with pulsed amperometric detection yielded 3 active peaks that increased Caco-2 cell iron uptake 3.4- to 4.9-fold. Our results indicate that specific carbohydrates contribute to the enhancing effect of meat on iron uptake by the enterocyte. These carbohydrates may be oligosaccharides originating from glycosaminoglycans in the extracellular matrix of muscle tissue.

KEY WORDS: • meat factor • iron • in vitro digestion • Caco-2 cells • oligosaccharides

Formulation strategy:

The main active ingredients : the “**IronCatch** factor”

- **Shark Cartilage selected and standardized in *glycosaminoglycans***
- These form the basic raw ingredient from which Medestea, following a production process developed by its own technicians, has succeeded in **isolating and purifying** a fraction of **low molecular weight** carbohydrates, corresponding to the **oligosaccharides** responsible for the absorption of non-heme iron.

Formulation strategy:

The “catalyst” components:

- **Vitamin C:** known for its ability to facilitate iron absorption.
- **Vitamin E:** antioxidant, along with vitamin C protects Fe⁺⁺
- **Folic acid:** necessary to prevent megaloblastic anemia and anomalies in the **fetal nervous system, vital during pregnancy.**
- **Zn and Cu:** act in different mitochondrial systems depending on cytochromes and contribute to the use of iron by the biological system. Zinc is involved in iron absorption, and together with copper, acts in various metallic enzymes (for example, superoxide-dismutases) necessary for the detoxication process.

Oral administration of iron: problems (1)

VERY LIMITED ACTIVITY

Efficacy: very modest

the increase of syderemia and ferritinemia is usually in the range of 10 - 30%.

Results: very slow

90-120 days to see some evident results
only in a limited % of subjects

Oral administration of iron: problems (2)

BIOLOGICAL SIDE EFFECTS

Oral administration of iron causes an **increase** in oxygen **free radicals** which leads to:

- a) Increase in **proinflammatory cytokines**
- b) Interference with the function of macrophages and TH1 cells, **aggravating inflammation**
- c) **Lipid peroxidation** in the colon
- d) Iron administered orally is not absorbed; it reaches the ileum and the colon, **aggravating the situation of ulcerated areas**
- e) Possible recrudescence of **rheumatoid arthritis**

Proinflammatory cytokines

They are stimulated by iron supplementation

The following pro-inflammatory cytokines
can cause anemia:

IL-1, IL-6, GAMMA INF, TNF-A, IL-3, IL-4

They cause a reduction in erythropoiesis

Oral administration of iron: the problems (3)

CLINICAL SIDE EFFECTS OF IRON THERAPY

Oral administration

- diarrhea
- nausea/vomiting
- hyperchromia of feces.

Parenteral administration:

- Allergic reaction leading to anaphylactic shock
- myalgia
- tachycardia
- "dysgeusia" (alteration in taste)
- Strong perspiration.

CHRONIC INFLAMMATORY INTESTINAL DISEASES (Inflammatory Bowel Disease : IBD)

In IBD, chronic anemia is caused by **blood loss** and **reduced iron absorption** resulting from intestinal inflammation.

Even in apparently normal mucosa, during periods of disease remission, a reduction in iron absorption is observed.

Administration of iron aggravates these diseases, due to the resulting oxidation and inflammation.

IronCatch™ offers the ideal solution.

IronCatch™ : The solution

- Very Effective + 50-70% of syderemia and ferritinemia
- Very Fast: 30-60 days to achieve optimum results
- No Side Effects
- For all patients
- Full effective no matter which the diet is.

IronCatch™ The only solution.

For all those patients suffering from diseases for which iron supplementation is contraindicated

- **Patients undergoing anti-cancer chemotherapy**
- **Patients suffering from:**

Cirrhosis

Renal insufficiency

Gastric ulcer

Rheumatoid arthritis

Gastritis

Hemolytic anemia

Diabetes

IBD Inflammatory Bowel Disease :

Colitis, Ulcerative recto colitis, Celiac disease, Chron's disease

IronCatch™ The solution

Further elective indications

- Ideal during pregnancy
- Indispensable for vegetarians
- Ideal for participants in endurance sports

INCOMPATIBILITY

IronCatch is active in acid environment, therefore it is not advisable to take it during a meal if an anti acid product is administrated at the same meal.

In this case **IronCatch** would lose part of its efficacy.

Clinical Studies

UNIVERSITY OF PAVIA, ITALY
Endocrine-Nutritional Service



This study was conducted on 49 patients of fertile age, suffering from sideropenia.

Study objective:

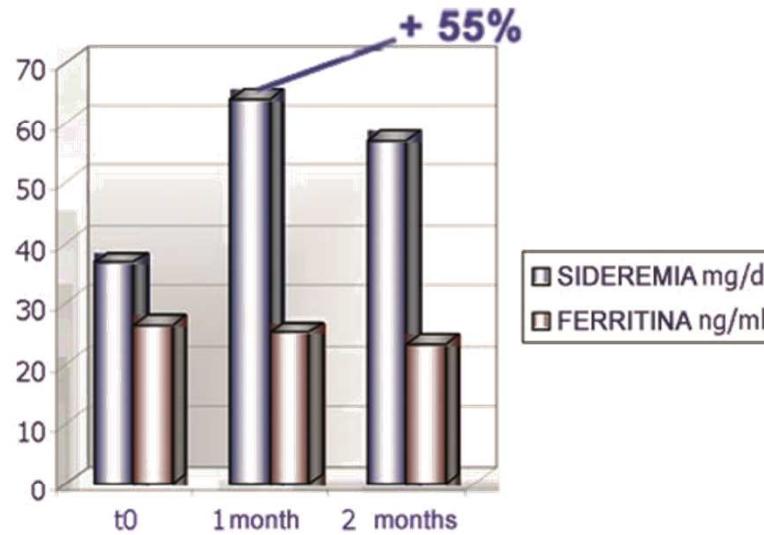
to demonstrate that the use of Captafer is a valid alternative to oral treatments which are commonly used in cases of sideropenia, and which are often poorly tolerated by patients.

Results:

after 1 month: Sideremia and ferritinemia **+55%**

Please note: A rapid increase in ferritinemia and sideremia occurs only if the initial values are low.

Pavia Study



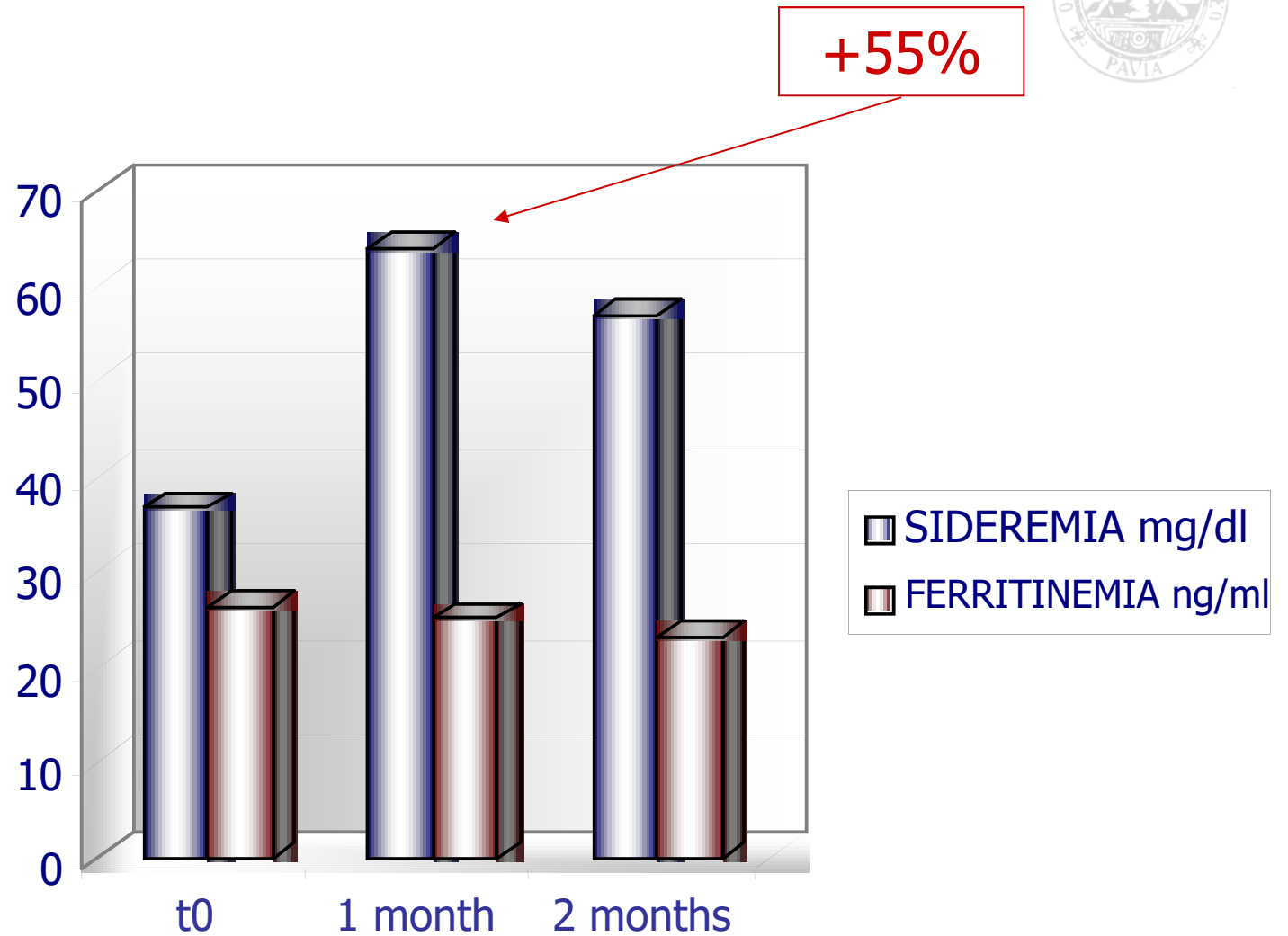
**NO SIDE
EFFECTS**



Pavia Study



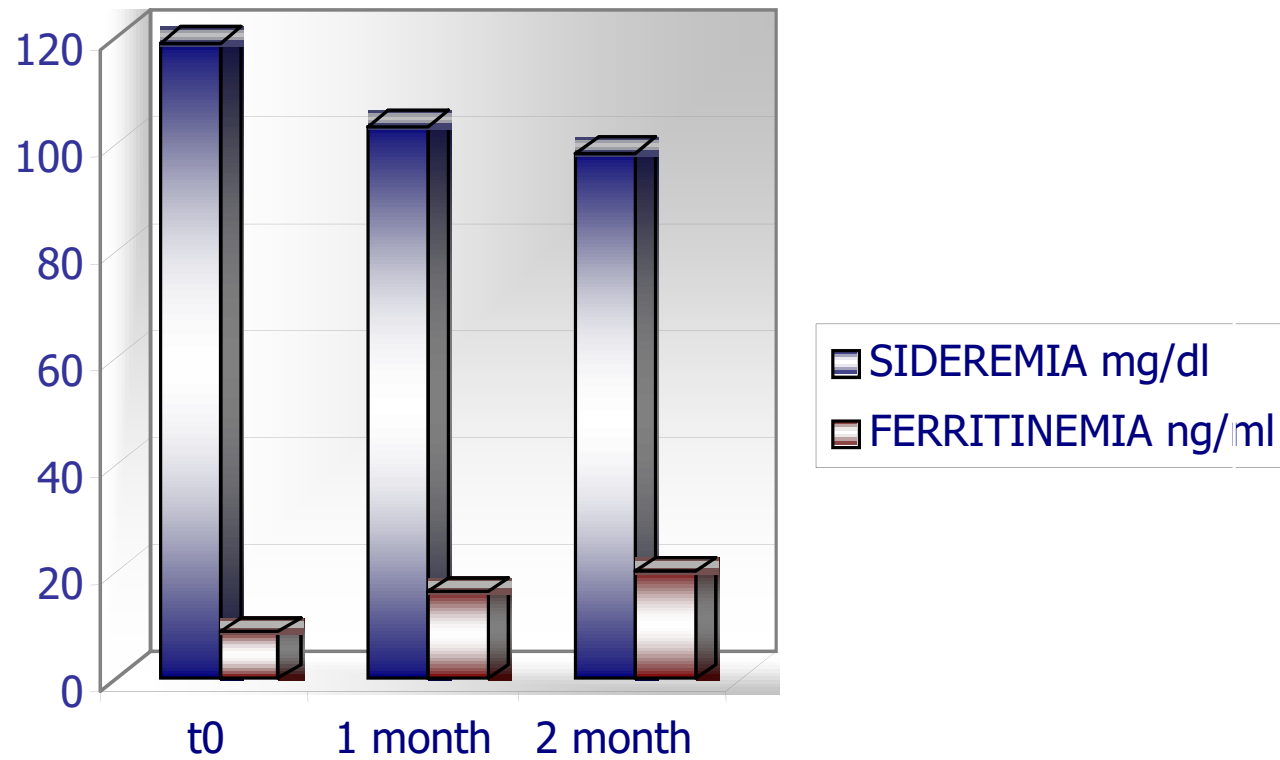
Subjects with a sideremia level <60



Pavia Study



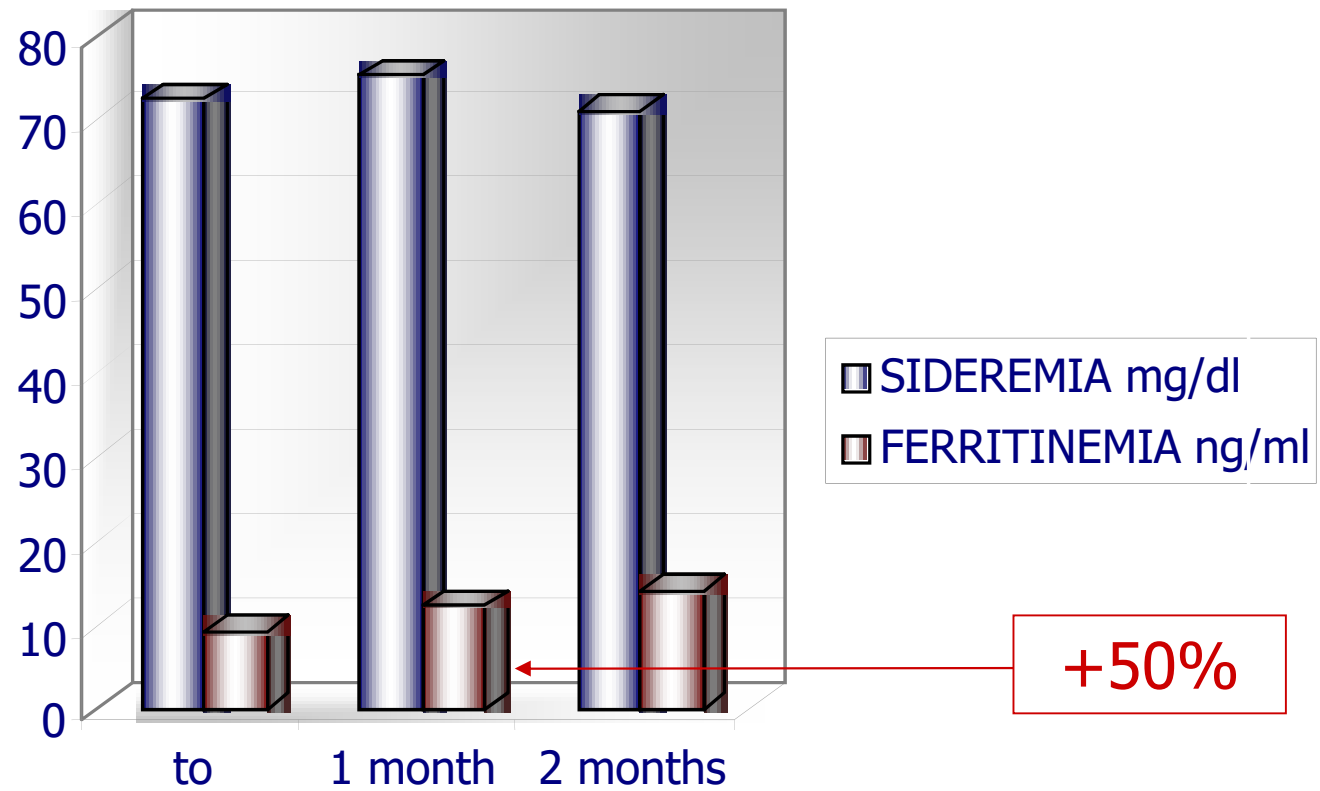
- Subjects with a sideremia level >60



Pavia Study



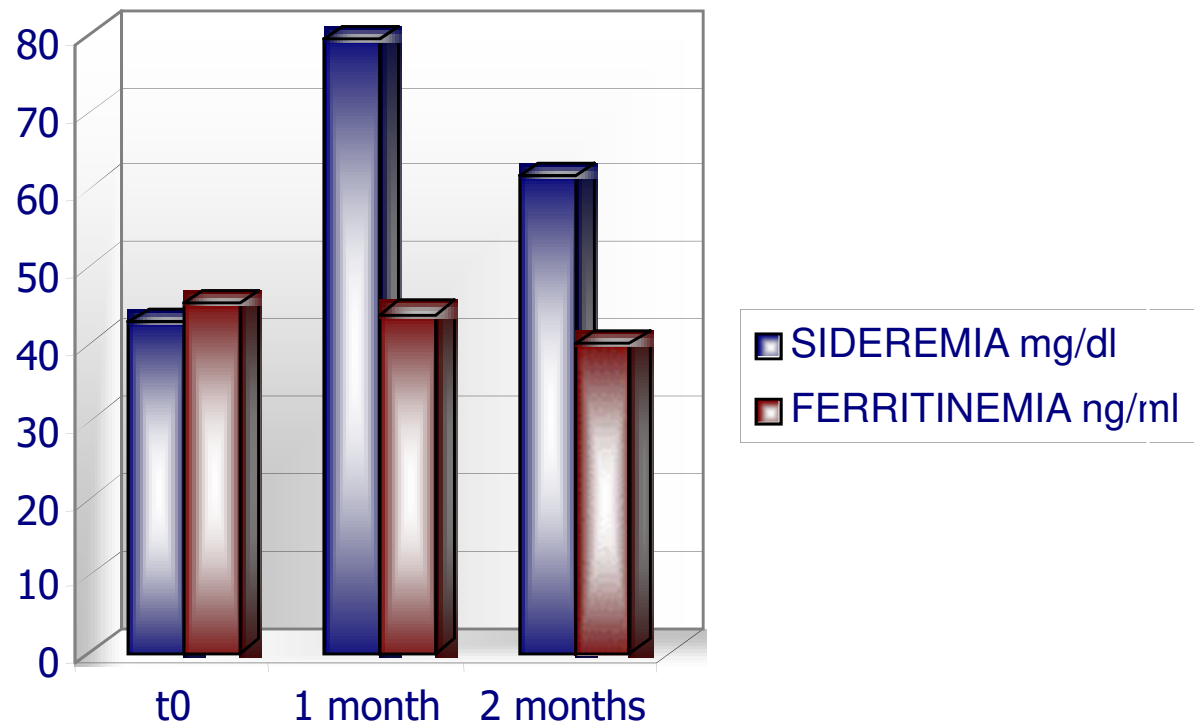
- Subjects with a ferritin level <20



Pavia Study



- Subjects with a ferritin level >20



IronCatch™



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Did you mean: **captaifer** (73 items)

Display: AbstractPlus 20

All: 1

Effect of treatment with food supplement (containing: selected sea fish cartilage, vitamin C, vitamin E, folic acid, zinc, copper) in women with iron deficiency: double blind, randomized, placebo-controlled trial.

Rondanelli M, Opizzi A, Andreoni L, Trotti R.
Unita Endocrino-Nutrizionale, Azienda Servizi alla Persona, Istituzioni Assistenziali Riunite di Pavia, Pavia, Italy.

AIM: The term iron deficiency is used to indicate a condition in which the content of iron (Fe) in the organism is low, even before the consequent reduction in erythropoiesis comes about. This clinical situation is very frequent in patients in fertile age. The therapy commonly used (Fe salts) is often poorly tolerated. The use of a food supplement containing nutrients useful for improving the bioavailability of Fe and that is well tolerated can represent a valid alternative to iron therapy. METHODS: The present study examines 49 fertile women with iron deficiency, of normal weight and not undergoing estrogen treatment. The patients underwent 3 assessments: basal, after 30 and after 60 days to determine their complete

Related Links

- ▶ [Trace nutrients in total enteral nutrition: the basal status a [Minerva Gastroenterol Dietol.1993]
- ▶ The effect of long-term calcium supplementation on indices of [Br J Nutr.1996]
- ▶ Treatment for iron deficiency anaemia with a combined supplementator [Eur J Clin Nutr.1999]
- ▶ The impact of intensive serial plasmapheresis and iron supplementation or [Transfusion.2003]
- ▶ Effect of intravenous ascorbic acid in hemodialysis patients w [Am J Kidney Dis.2006]
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**Publication on
"World Journal of Gastroenterology"**



UNIVERSITY OF BOLOGNA, ITALY
ST ORSOLA HOSPITAL

This study was carried out on 25 patients suffering from IBD (Crohn's disease and Ulcerative Colitis).

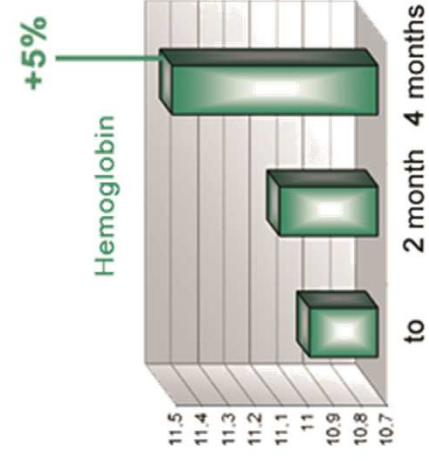
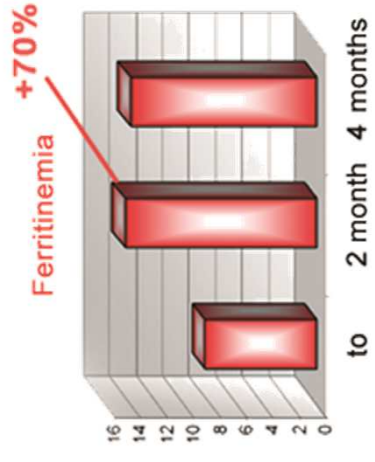
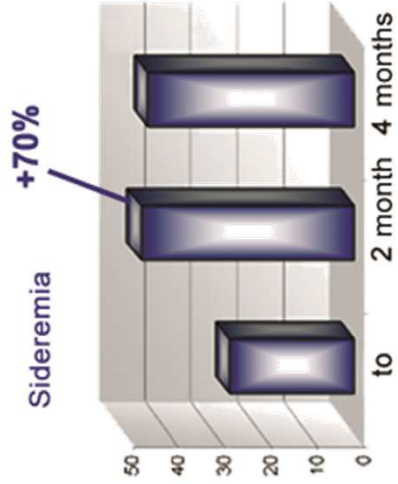
Study objective:

to assess the role of Captafer in cases of iron deficiency and chronic anemia, which commonly occur in **patients suffering from IBD.**

Results:

after 2 month: **Sideremia and Ferritinemia +70%**

after 4 months: a significant increase in Hemoglobin

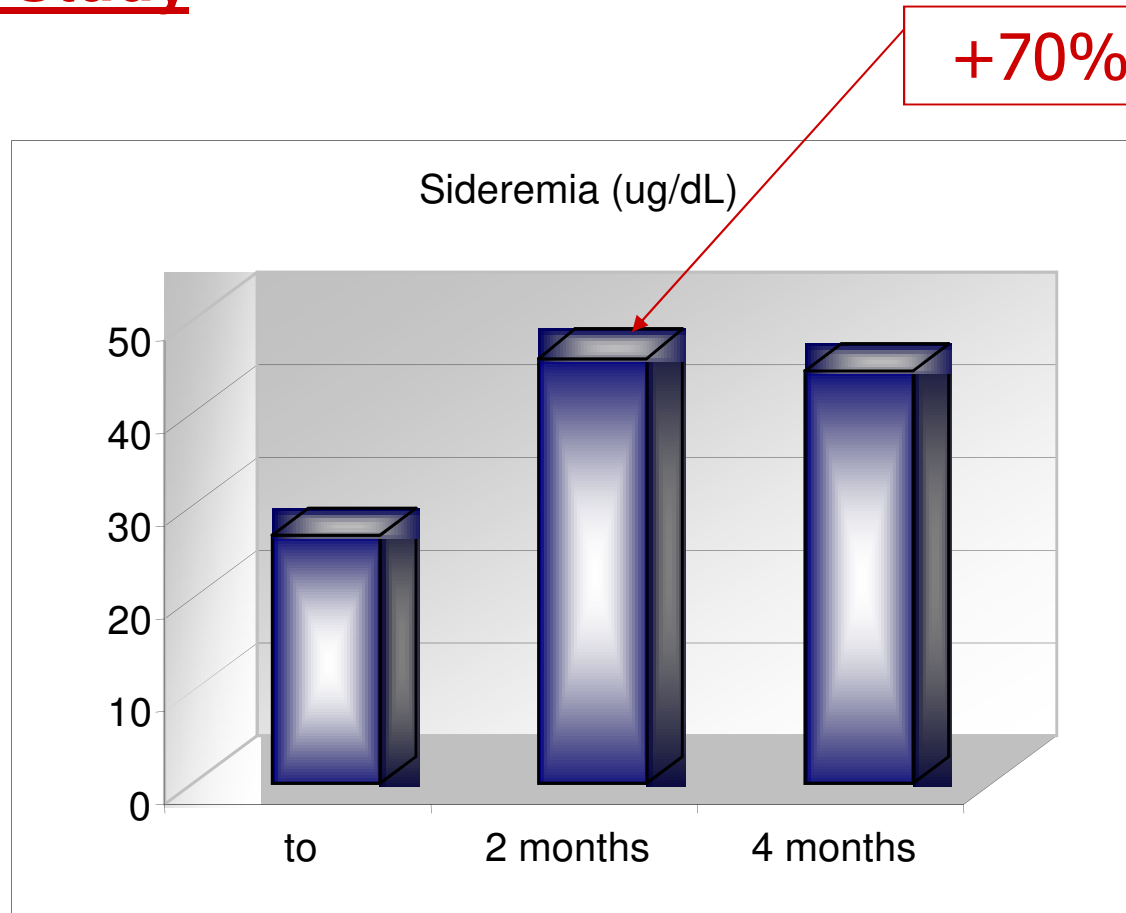


NO SIDE EFFECTS

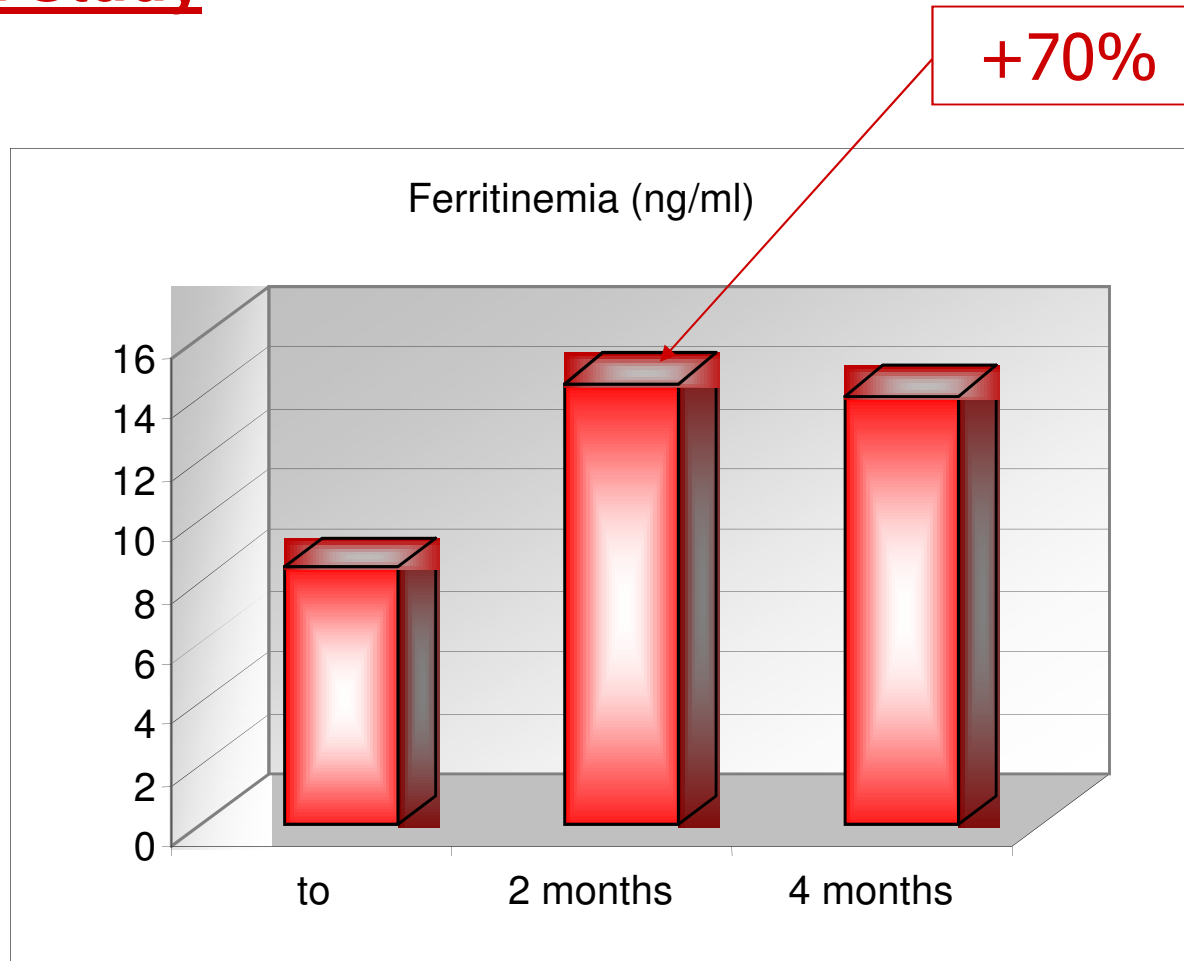
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1. Andrews NC, Disorders of iron metabolism. The New England Journal of Medicine. December 23, 1999; 341 (26): 1986-1995
2. Iron and You. BCHealthFiles - British Columbia, Ministry of Health. Nutrition series - Number 68c, April 2003.
3. Eun Chul Huh, Hotchkiss A, Brouillette J, Glahn RP. Carbohydrate Fractions from Cooked Fish Promote Iron Uptake by Caco-2 Cells. J Nutr. July 2004; 134 (7): 1681-1689.

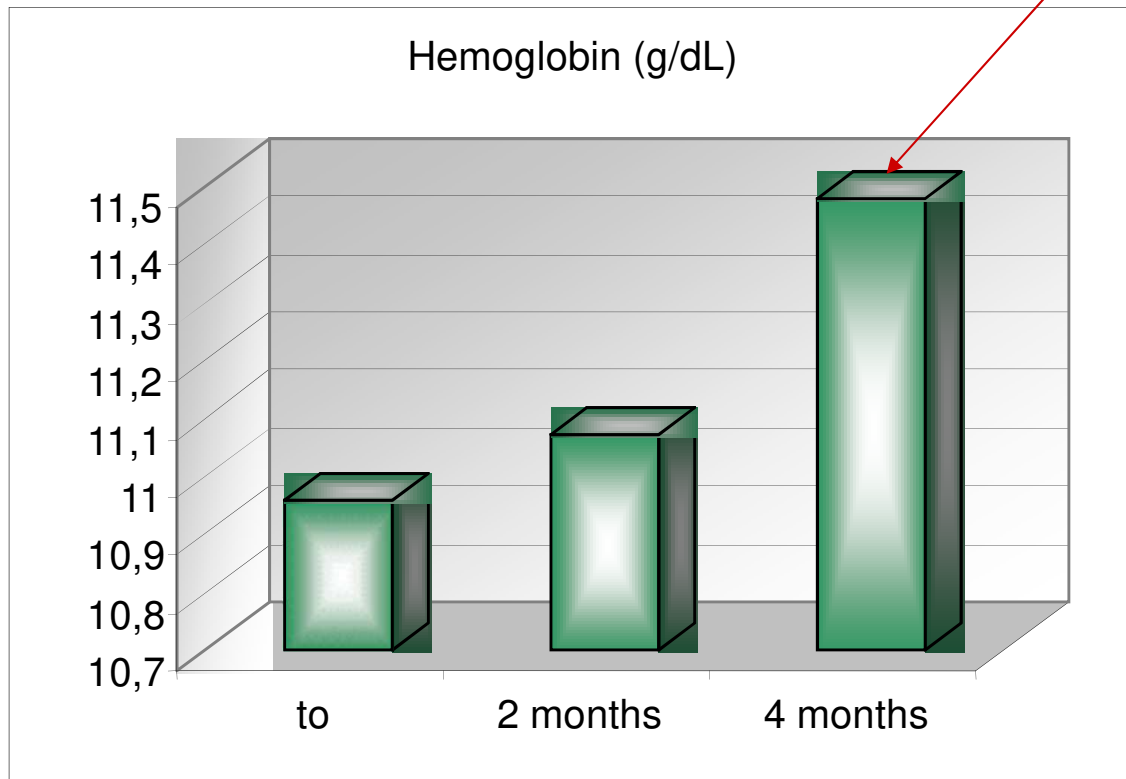
Bologna Study



Bologna Study



Bologna Study



SUMMARY

- Very fast action: fully effective within just 30 days.
- Significant increase in hemoglobin, ferritin and hemoglobin.
- There is no alteration to these values if they are normal. Impossible to overdose
- An iron food supplement that does not contain iron.
- Active no matter which the diet is.
- Active on all the subjects
- A product that is free from all the side effects associated with products containing iron
- Ideal in all cases where oral treatment with iron is contraindicated.
- Indispensable during pregnancy, for endurance sports and in vegetarian diets.



The key phrase to learn by heart:

IronCatch™

The first iron-free iron supplement with a faster action and perfect tolerability, no matter which the diet or the patients are.

It is for everybody and indispensable in all cases where **oral iron therapy is contraindicated**.

Also effective for vegetarians and recommended during pregnancy.



IronCatch™



IronCatch™

The first **iron-free iron fixative** effective in **30 days**.

Free from **all side effects** associated with oral ingestion of iron.

Dosage: 2 tablets each day for 2 months and then 1 tablet daily to be taken during meals.