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Understanding Maltofer Iron Tablets: Safety, Dosage, and Toxicity Concerns

Maltofer tablets contain 100mg of elemental iron as iron polymaltose, which may raise concerns when you've heard that iron supplements over 20mg can be toxic. This comprehensive analysis will help clarify this apparent contradiction and provide you with evidence-based information about iron supplementation safety.

Iron Toxicity: Understanding the Metrics

The toxicity of iron is primarily measured in milligrams per kilogram of body weight (mg/kg), not simply in milligrams. This distinction is crucial for understanding safety thresholds:

- Less than 20mg/kg: Generally asymptomatic[1] [2]
- 20-60mg/kg: May cause gastrointestinal symptoms only[1] [2]
- 60-120mg/kg: Potential for systemic toxicity[1]
- More than 120mg/kg: Potentially lethal[1] [3]

For context, a 70kg adult would need to consume 1,400mg of elemental iron (14 Maltofer tablets) to reach the 20mg/kg threshold where mild symptoms might begin.

Maltofer's Unique Iron Formulation

Maltofer contains iron polymaltose, which differs significantly from other iron supplements:

Controlled Absorption Mechanism

Maltofer's iron polymaltose formulation ensures controlled iron uptake, unlike ferrous iron supplements that can release large amounts of iron at once[4]. This controlled release mechanism means:

1. The body only absorbs the iron it needs when needed[4]
2. There's less likelihood of gastrointestinal side effects like constipation[4]
3. Lower toxicity risk even at therapeutic doses[5]

According to the manufacturer's safety data: "No cases of accidental poisoning with fatal outcome have been reported due to the low toxicity of iron polymaltose and controlled uptake of iron. In case of overdose, intoxication or iron accumulation are unlikely with Maltofer."[5]

Daily Iron Requirements vs. Therapeutic Doses

The recommended daily allowance (RDA) for iron varies by age and sex:

- Men (19+ years): 8mg daily[6]
- Women (19-50 years): 18mg daily[6]
- Pregnant women: 27mg daily[6]

However, treating iron deficiency requires higher therapeutic doses than simply maintaining normal levels. The 100mg dose in Maltofer is within the standard range for iron deficiency treatment[7].

Side Effects vs. Toxicity

There is an important distinction between side effects and toxicity:

Possible Side Effects of Iron Supplements

Even at therapeutic doses, iron supplements can cause:

- Nausea, vomiting, diarrhea, or constipation[8]
- Dark stools[8]
- Abdominal discomfort[8]

These side effects are more common with ferrous iron supplements than with iron polymaltose formulations like Maltofer[4].

Should You Stop Taking Maltofer?

This is a decision that should ultimately be made in consultation with your healthcare provider who prescribed the supplement. However, based on the evidence:

1. The 100mg elemental iron in Maltofer is a therapeutic dose designed to treat iron deficiency[7] [9]
2. The iron polymaltose in Maltofer has a controlled absorption mechanism that reduces toxicity risks[5] [4]
3. The 20mg threshold you've heard about likely refers to either:
    - Daily requirements for maintenance (not treatment)[6]
    - Potential minor side effects with regular ferrous iron supplements[6]
    - The mg/kg toxicity scale (where 20mg/kg would be much higher than a single tablet)[1]

Conclusion

The 100mg of elemental iron in Maltofer tablets, while higher than daily maintenance requirements, is a standard therapeutic dose for treating iron deficiency. The iron polymaltose formulation in Maltofer provides important safety advantages through its controlled release mechanism.

Rather than stopping your supplement, consider discussing any concerns with your healthcare provider. They can assess your specific situation, verify whether you need iron supplementation, monitor your iron levels, and adjust dosage if necessary. If you're experiencing side effects, they might recommend taking Maltofer with food, which can help minimize gastrointestinal discomfort while maintaining its effectiveness[7].

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1. https://litfl.com/iron-overdose/
2. https://www.rch.org.au/clinicalguide/guideline_index/iron_poisoning/
3. https://www.dvm360.com/view/toxicology-brief-toxicity-iron-essential-element
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