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# A relationship for life: Iron and the woman of today

Do you sometimes feel listless? Are you often tired, forgetful or lacking in concentration? Have you ever thought that it might be due to a lack of iron? If so, you wouldn't be alone: this affects about two billion people on the planet. Iron deficiency is one of the most common nutritional problems.

But this doesn't have to be the case, as studies have shown that a shortage of iron can easily be remedied by a targeted plan of supplementing the diet with this essential trace element. Why not give it a try? The fact is that few people are aware that they don't have enough iron in their bodies. The tricky thing is that iron deficiency isn't exactly easy to detect. The associated decrease in physical performance creeps up on you quietly. Who would think that a deficiency in this vital substance is behind the fact that they can't get out of bed in the morning and fall asleep exhausted on the sofa every night?

Women should pay particular attention to their iron needs, as their daily food intake may not provide enough of this essential element. Scientists in Switzerland have discovered the extent of this phenomenon in women: **85% of women aged 18 to 55 complaining of tiredness and participating in a study had very low concentrations of iron in their blood.**

**"Iron deficiency is one of the leading risk factors for disability..., affecting an estimated 2 billion people."**

(M. B. Zimmermann, R. F. Hurrell; in: Lancet, 2007)

It is mainly women who suffer from an iron deficiency because they regularly lose blood during menstruation, and therefore iron. The need for iron is particularly high during pregnancy and breast-feeding, as there has to be enough iron in the woman's body for two during these periods.

It's reassuring to know that dietary supplements are available to top up the reserves of iron in the body in an uncomplicated way. Do your body a favour and give it an extra dose of health when it needs it!





## As important as the air we breathe

At three to four grammes, iron is the biggest trace element in the body of the adult person. As many milligrammes of iron are lost via the intestine, nerves and skin, and via menstruation in women, the body requires a regular top-up supply via food or dietary supplements. Pregnant and breastfeeding women need a particularly high level of iron.

This trace element is essential to our bodies, as it is required for many metabolic processes. Our body mainly needs iron for the production of blood. As the building block for the pigment in the red blood corpuscles, it helps to feed our cells and organs with oxygen. Two thirds of the iron in the body can be found in the red blood corpuscles. Iron is also part of myoglobin, which is essential for the transport of oxygen to the muscles. Iron deficiency leads to a lack of oxygen in the muscle cells and loss of performance. Even the immune system can't work properly without iron.

This trace element is also a building block for many enzymes, and involved in the regulation of many cell processes essential to life, the most important being the body's energy metabolism. As the central constituent of the enzyme catalase, moderate amounts of iron also help to neutralize harmful hydrogen peroxide produced by cell metabolism and turn it into harmless substances, water and oxygen.

Iron is just as important for mental function, being the building block for enzymes that are required to produce neurotransmitters in the brain. One of these is the calming serotonin and the happiness hormone, dopamine. So, being in a happy mood and experiencing healthy sleep also depend on a good supply of iron. Who would have guessed it!?

### Typical symptoms of iron deficiency:

- Listlessness
- Constant tiredness
- Increased irritability
- Reduced physical performance
- Reduced mental powers
- Weak concentration
- Pale colour to the face
- Sallow, dry skin
- Brittle hair
- Extensive hair loss
- Brittle nails
- Grooves forming in the nails
- Prickling hands, feet, arms and legs
- Loss of appetite
- Cold hands and feet
- Palpitations
- Shortness of breath

# Iron and oxygen

## A very special relationship

Blood is a power source: the heart pumps up to six litres of this life-giving red fluid tirelessly through our veins. 25 billion red blood corpuscles carry out a task essential to life. They mainly consist of haemoglobin, a protein, which gives blood its colour. This red blood pigment takes up oxygen in the lungs and transports it via the circulatory system to the furthest corners of the body. To fulfil this function, haemoglobin needs iron, a scarce resource in the blood of modern man.

If the body does not get enough iron the consequences are far-reaching. Too little iron means that too little haemoglobin can be made. This then means that insufficient oxygen is carried to the cells. Oxygen is a matter of life and death. Without it, no nutrients can be metabolised in the mitochondria, the power stations in our cells, and no energy can be produced. The human “engine” will start to splutter. Without iron, the body will soon be out of fuel, in the truest sense of the word.

“More people suffer from iron deficiency than is commonly accepted. Women, adolescents, the elderly, sportsmen and vegetarians all belong to this group of people”

You have the choice:

Life at a stand still or engine running at full tilt?



Iron deficiency

Plenty of iron

Insufficient haemoglobin produced

Sufficient haemoglobin present in blood

Too little oxygen in the cells

Optimal supply of oxygen to the cells

Restricted energy production  
in the cell power stations

Cell power stations produce enough energy

Life at a stand still

Your engine running at full tilt

# Pregnant?

## The need for iron increases during pregnancy

Feeling a life growing inside your body is extremely special for every woman. With pregnancy, the expectant mother embarks upon a period in her life where she is not only responsible for herself, but for her child as well. In order not to spoil the joy of bringing a little one into the world, it is important to take care of yourself. This includes avoiding stress in everyday life and eating healthy.

During nine months of togetherness, the need for vital substances is often stretched to the limit. The need for calories in the first months of pregnancy is not as high as is generally thought, however the need for essential vital substances is greater. There must be sufficient intake of iron to ensure the good health of the mother and fetus. During pregnancy, the already high requirement in women for this vital trace element increases, since iron is needed for the placenta and the mother's increased blood volume. In addition, the fetus needs this trace element to grow and increase in weight.

Estimates show that about 50% of all pregnant women have lower than adequate iron levels during pregnancy for a temporary or extended period. Therefore, it is very important to check the iron levels in the blood regularly, and to make iron available as required through dietary supplements.

# Following pregnancy

## Mother and child are doing well!

New mothers must ensure they get enough iron after they have given birth. Women lose a lot of blood during childbirth. It is therefore a good idea to replace the iron that the body loses in this process. Nursing mothers also need more of the trace element as the infant will obtain the iron it needs from the mother's milk. In the first few months, newborn babies continue to consume the "iron reserves" that they obtained from their mother towards the end of the pregnancy, provided that enough of the trace element was made available – such reserves are used up within about four months.

As vital substances like iron are required for the physical and mental development of the fetus and infant child, it is not only pregnant women who need to have their iron levels checked, but nursing mothers also. If required, the reserves in the body can be topped up with dietary supplements.





## Are you a woman?

### Then watch your iron levels!

For women trying to keep up with day to day life in terms of work, leisure time and family affairs, it is important to stay fit. But it is so often not the case. Women of childbearing age often feel tired, overburdened and without any zest for life. Often, it's not due to daily pressures, but a lack of iron. This deficiency occurs because iron is lost in the blood during menstruation every month. For this reason, women need up to 30% more iron than men. It is estimated that about 50% of women of childbearing age do not get the ideal amount of this essential element.

With the help of iron supplements, women can replenish the store of iron lost through menstruation. It is important not to take high-dose products, as too much iron can damage long-term health, especially the gastrointestinal tract. Iron preparations with a dosage far higher than is recommended by nutrition experts don't actually deliver more of the trace element to the body. This was established by research in the US, based on data from more than 5,900 people.

## Vital in the growth phase

Adolescents come home stressed from school, do their chores and their homework and then they're off again straight to their sports club, music lessons or to see their friends. So every evening they bolt down their food so they can escape as quickly as possible into their own special world, and the madness starts again early the next morning.

Stress, and the excessive demands on them, often pushes children to their physical and mental limits. So it's important to see that young people get enough iron, because their bodies need a sufficient amount of this trace element while they are growing. This is particularly important for young women, who lose a lot of iron through menstruation.

The numbers speak for themselves. In a Swedish study of 15 and 16 year-olds, 40% of all girls and 15% of all boys showed an iron deficiency. Their lack of physical activity means that they need less energy, so they eat less, and they can fail to get enough iron. Studies in Australia, Canada and the USA also back up this theory.

# More energy for physically active people

Playing a sport regularly is much healthier than being a couch potato. But the fact is that activity uses up energy and vital substances at a higher rate. The need for oxygen is also great during physical activity, leading to the creation of more red blood corpuscles and a higher level of haemoglobin compared to an inactive person.

Because iron is a building block for haemoglobin, people who play sports need a particularly high amount of iron. Only when the body has enough iron on board can the cells and tissues get enough oxygen from the blood helping to achieve peak athletic performance.

Myoglobin, found in the muscles, also needs iron. This is the only way oxygen can be processed sufficiently so that the power stations in the cells can produce the energy to give our muscles the power they need. Sports people need about twice as much iron as people who don't do any sport at all.



# Senior citizens need iron, too



Managing a balanced iron level is a lifelong concern. The problem of insufficient uptake of this trace element in older people is underestimated. Most older people eat less, and therefore consume fewer vital substances like iron.

In addition to this, iron is not transported from the gut throughout the body so easily as the years advance, as the digestive glands don't work so well. The trace element is often taken up very poorly by the body of the older person, due to a lack of stomach acid.

In many cases, this leads to a deficiency, which in turn causes tiredness and a drop-off in physical and mental performance. A regular intake of iron can help prevent the deficiencies and related complications from occurring.

# Vegetarians and iron

## A unique perspective...

### Do vegetarians really live a healthier life?

People who go through the torture of crash diets or who have an unbalanced diet must pay close attention to their iron levels. And even nutrition specialists like vegetarians and vegans often end up plundering their reserves. Yes, plant-derived foods do contain enough iron, in the form of  $\text{Fe}^3$ , but, unlike the haem iron ( $\text{Fe}^2$ ) found in meat, it is not easily processed by our bodies.

Many studies have shown us this interrelationship. Australian scientists have discovered that, although male vegetarians consume much more iron than meat eaters, they still only have half the amount of iron in their blood on average.

### Absorption of iron in food from the intestine into the body

Plant-based food:	1 to 8%
Iron from animal sources	5 to 23%
Varied diet	10%

### These substances block iron intake

Many plant-derived foods, and even healthy dairy products, contain substances that block the body's iron uptake.

#### A few examples:

Polyphenols	in tea, coffee, red wine and grapes
Phytates	in cereal products, legumes, nuts and soya products
Oxalates	in spinach and rhubarb
Phosphates	in many popular drinks (Cola...)

### So, should we eat lots of meat?

So is eating more meat the only alternative to vegetarianism? This cannot be taken into serious consideration by nutritional scientists, as high meat consumption is associated with many health risks. Even a varied diet, containing a balanced amount of vegetable and animal products, can fail to meet an increased need for iron. So it may be preferable to top up your iron reserves with the help of dietary supplements.



# IronVital F<sup>®</sup>

The superior choice for  
all your daily iron needs!

IronVital F<sup>®</sup> contains iron in bivalent form (Fe<sup>2+</sup>) that is particularly easy to absorb by the human body and rich in vitamin C. This vitamin strengthens the body's natural resistance and prevents colds. In fact, this vital substance substantially promotes the uptake of iron, as vitamin C helps to prevent the formation of insoluble iron compounds in the digestive tract, thereby boosting the availability of iron in the body. The B vitamins in IronVital F<sup>®</sup> serve to enhance the effects of the iron. Even the fructose helps to make the trace element easier to assimilate.



Fruit  
flavour with  
Vitamins  
C + B

Fruit  
flavour with  
Vitamins  
C + B

Fruit  
flavour with  
Vitamins  
C + B  
Goût fruité avec des  
vitamines  
C + B

# IronVital F<sup>®</sup> Extras

## Vital B vitamins

Apart from easily absorbed bivalent iron, IronVital F<sup>®</sup> contains a whole range of active ingredients: health giving plant-based substances and other components, which are of vital importance in terms of nutritional physiology. This includes the following essential B vitamins:

- Vitamin B1 improves memory, energy and learning capacity.
- Vitamin B2 is important for physical fitness and the formation and breakdown of red blood corpuscles. This vital substance controls detoxification processes and is essential for healthy skin and mucous membranes.
- Niacin (vitamin B3) is a constituent of more than 200 enzymes, and works with them in the cells in nearly all metabolic processes. For example, Niacin has a positive effect on blood sugar and cholesterol levels in the blood.
- One of the things vitamins B6 and B12 do is help to keep the nerves strong. Vitamin B12 is of special importance to vegetarians, as it is present in foods of animal origin, but rarely in plant-based foods.
- Pregnant women especially need more folic acid (vitamin B9), as this B vitamin is essential for fetal development. A sufficient supply of folic acid during pregnancy significantly reduces the risk of spinal problems ("Open back") in newborn infants.
- Pantothenic acid (provitamin B5) promotes cell growth and regeneration and is helpful for many skin and hair problems.

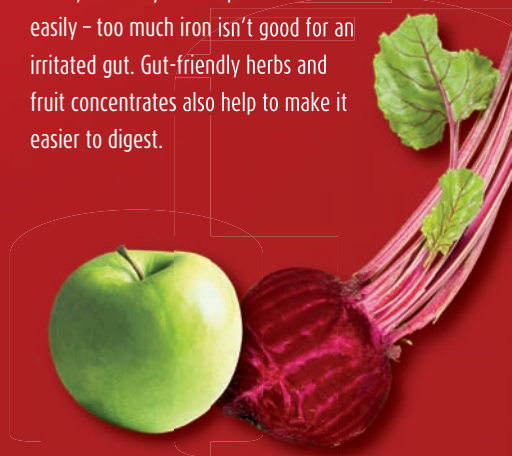
## IronVital F<sup>®</sup> tastes good

IronVital F<sup>®</sup> is not only easy to digest, it also tastes incredibly good. The aroma is fruity and fresh, but not too sweet, and the iron doesn't linger heavily for hours in your mouth. Kids love the naturally sweet taste of fruit. Iron Vital is also excellent for pregnant women, whose sense of taste can be extra sensitive at this special time.

## IronVital F<sup>®</sup> is reliable, with no risk of overdosing

IronVital F<sup>®</sup> places the emphasis on a balanced dosage, so that the risk of an excess of iron and any associated problems for the user can be excluded. But there is no need to worry that it will have no effect at all, as many studies have shown that even a low dose of dietary supplements will impact on our iron reserves.

What's more, by consuming small amounts, there will not be the same risk of problems as there is with high doses. In smaller, appropriate doses, the body takes up the trace element easily – too much iron isn't good for an irritated gut. Gut-friendly herbs and fruit concentrates also help to make it easier to digest.



# “I’m myself again!”

Jana B. from London felt tired and listless for a whole year after she gave birth to her daughter. Now, she starts her day full of energy and enjoys life again. Here, she talks about her experience with IronVital F®.

## The first steps of my new life.

A few years ago, I worked as a managing editor and went cycle racing in my free time. After my little daughter Luisa was born, my whole world turned upside down. Hardly a minute’s peace, no more relaxing shopping trips, loads of housework and little sleep. And our reward for these sacrifices? My husband and I were able to watch in wonder as our little girl developed, charmed us with her first smile, said “mummy” and took her first wobbly steps.

## The tough road back to reality.

After a year of a mainly relaxed time with the baby, I threw myself back into my old working life part-time. I worked several hours a week as editor, and regularly went cycling because I knew that the physical activity would be good for me. But I soon noticed that I was constantly tired and listless. I literally felt empty. Not even my daily cycle training could compensate for feeling so drained.

## A visit to the sports physician.

My sports physician said that my problem was quite common so soon after childbirth. He gave me a blood test and told me: “You have an iron deficiency – it showed up in your test results. You were probably already suffering from iron deficiency when you were breastfeeding.”

## My completely fresh start.

To keep my iron reserves continually topped up, I began taking a plant-based supplement: IronVital F®. After only three weeks, I could feel my rough skin getting softer again, and my hair was more luxuriant. After a couple of months, I felt that I had more energy and was looking forward to each day full of hope.

All my powers of concentration came back at work, and after six months, even my trainer was sure that I was back to my old levels of endurance. Now, three years later, I’m completely back to my old self again. Twice a year, I take IronVital F® for two to three months, and don’t feel tired any more. Quite the opposite: I feel as fit as I was before I gave birth.

My friends are always surprised at how I manage: “You’re a mother, wife, housewife, editor, athlete – how do you do it all?!” Then I tell them my little secret, and would advise any woman who feels tired and lacking in concentration to have their iron levels checked – it’s worth it! Supplementing your diet with iron every day costs little, but the rewards are huge.



IronVital F® is a light, refreshing and delicious solution for getting your daily dose of iron.



# Anton Hübner – A German tradition of quality

With over 70 years of experience in creating natural medicines, dietary supplements and body care products, the traditional German company, Anton Hübner GmbH & Co. KG, whose success story began in the Black Forest in the 1930's with the legendary 'Tannenblut', has grown into an internationally successful enterprise.

## Quality through high standards

Only the best products are good enough for us – and your health. Decades of expertise combined with modern scientific know-how are the basis of our success. Highly qualified and responsible pharmacists, chemists and nutrition experts ensure that our products are made the Hübner way. We manufacture according to specifications laid down in current EU Good Management Practice guidelines. Naturally, Hübner has ISO, kosher and organic certification.

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