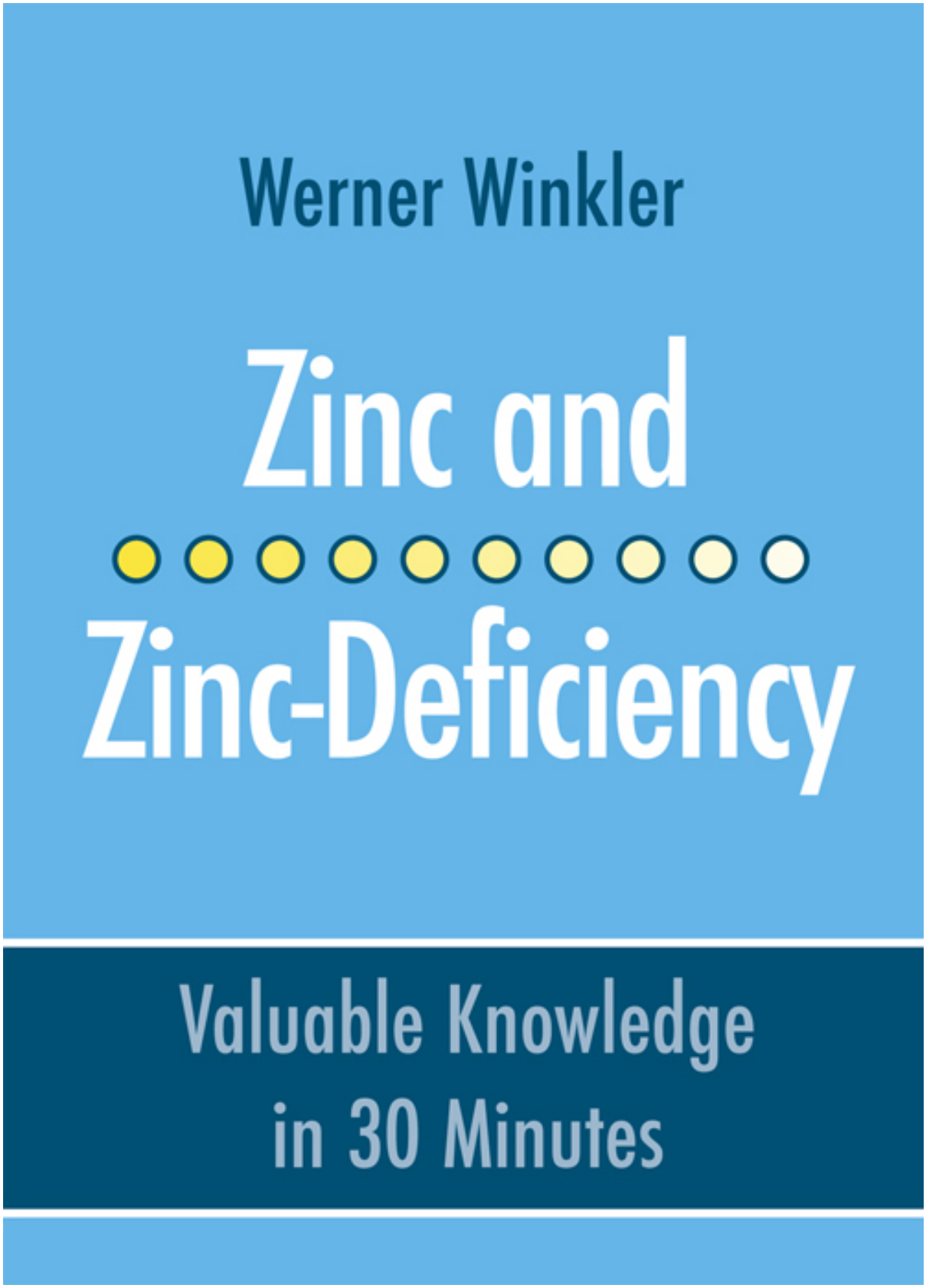
Werner Winkler

Zinc and Zinc Deficiency

Valuable Knowledge in 30 Minutes



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About the Author

Foto: Daisuke Schneider

The author came across the topic of this booklet in 1996. He observed a significant and quick improvement of a patient's discomforts due to an increased zinc intake, and then he started acquiring information from all accessible sources (back then without the internet). In 1999, he developed a free zinc deficiency risk test, which has been used many times since, together with Dr. med. Monika Schwarz, a dermatologist at the University Hospital in Tübingen (Germany).

Werner Winkler was born in Stuttgart in 1964. After training to become an advertising technician, he specialized in calligraphy; at the same time he opened and ran a book shop. That was until he began his psychosocial services due to a voluntary activity, and then started involving himself more deeply into psychological and health issues in special training and studies. Later, he taught at healing practitioner schools all over Germany for many years, conducted research work in his special fields and then started writing books. Since 1996, he has been working as an author, consultant and calligrapher. Website: www.wernerwinkler.de
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Summary

The recommended daily zinc intake is 10-25mg. The lowest daily intake (10mg) is achieved by consuming approx. 10g oysters, 200g beef liver, 200g sunflower seeds, 250g cashews, 250g cocoa, 300g beef tenderloin, 300g peanuts or 400g sweet corn. Among other things, the body requires zinc for the proper functioning of over 200 enzymes; furthermore, zinc is required for the immune system, the transport of hormones, cognitive thinking, memory (also names), as well as for hair, skin, nails, fertility and, last but not least, for good eyesight.
The most common zinc deficiency symptoms are: sleep disorders, depression, anxiety, acne, suicidal thoughts, skin problems, wound healing problems, a weak immune system, loss of hair, disorders in smell, taste and touch, white spots on fingernails and dark circles under the eyes.
Possible reasons for the deficiencies are: low meat consumption, pregnancy, alcohol and drug consumption, anesthesia, chemotherapy, high stress level, deep mourning, diets, sports, sauna sessions, computer workstation activity, malnutrition.
Please note: The publisher and the author assume no liability for any consequences which result from following these tips. If you choose a supplement, please always make sure that you read the package information leaflet or the information on the package. If you take medication regularly, it is necessary to consult your doctor about your personal therapy approach.

More Information about Zinc

There are many countries in which people cannot cover their average daily requirement of the essential mineral zinc through food, neither permanently, nor temporarily. This applies in particular to vegans or people, who live on a diet without meat or seafood.
Stress, alcohol and drug consumption, pregnancy and breastfeeding are further risk factors for zinc deficiency. Even operations performed under general anaesthesia or chemotherapy for cancer can reduce the zinc level in the body. Some people also experience skin problems or sexual aversion in addition to a weak immune system. Restlessness, poor concentration and high irritability can turn into obvious mental disorders such as anxiety attacks, light to severe changes in personality, lethargy or even psychosis. In my view, many of the so-called "mental" disorders are also – or even exclusively – based on nutrient deficiencies; in many cases due to a lack of zinc, which can be treated with little effort and at low cost.

If zinc deficiency is one of the main causes for mental health complaints, then a psychotherapy treatment is usually ineffective, as the cognitive thinking capacity is reduced due to the shortage of zinc. Despite numerous references in literature (e.g. Pfeiffer 1970, Holtmeier/ Kruse-Jarres 1991, Wagner 1998), this connection is still ignored to a large extent. And still, only a few milligrams of zinc could prevent suffering from an illness (which could even end in suicide) over many years. If the vital

zinc requirement of the body is not normalised, then other therapy treatments prove to be useless; from this point of view, this is even a normal, healthy reaction of the body, as it sends out a signal that something is wrong, that cannot be merely cured with psychological interventions.

First signs of a possible zinc deficiency could be:
- sleeping and waking problems
- changes in the handwriting
- frequent colds
- failing memory (names)
- dark circles or bags under the eyes
- white spots on the fingernails

Photo: white spots on fingernails indicate a possible zinc

deficiency. By the time zinc deficiency was suspected, this woman had carried out five pregnancies and had experienced most severe stress in her life.
Please note: in case of mental disorders (depression, suicidal thoughts, anxiety), deficiencies of vitamin B6, iodine, lithium or magnesium may be considered besides the lack of zinc; however, these deficiencies are easily detected by a doctor in a laboratory test, and that is not so easy in the case of zinc deficiency.

History of the Discovery

Although zinc had already been used 5000 years ago in Egypt for skin care and wound treatment, it took until 1869 for modern science to start realizing the importance of this ordinary element for the human organism.

At first, it was discovered that zinc had a direct influence on the growth of microbes. In 1877, zinc was found in the human liver and in the following decades the recognition arose that zinc is essential for many enzymes and metabolic processes. In 1958, Doctor A. Payza examined patients in Canada, who reacted to the drug LSD with an artificial psychosis and excretion of a substance called "crypto pyrrole" in their urine, which was unknown until then. This turned out to be an evidence of a huge loss of zinc and then became the first observation which documented the connection between zinc deficiency and mental disorders. In 1963, Dr. Prasad studied village communities in Egypt and

Iran, in which the young people were predominantly of short height and sexually underdeveloped; he identified zinc deficiency as the cause, resulting from an unbalanced diet. In 1976, psychiatrists from Columbia, South Carolina, reported the case of an 18-year old student, who obviously developed a sudden schizophrenia because of zinc deficiency. After a short zinc therapy, the young man recovered to his full health. A similar healing story was documented by the German natural scientist and philosopher, Gustav Fechner, who had no idea whatsoever that zinc played an important role in it: a female friend healed him from his serious mental illness by forcing him to consume ham with lemon juice and wine on a daily basis. In this case, vitamin C from the lemons seems to have enhanced the absorption of zinc from the ham.

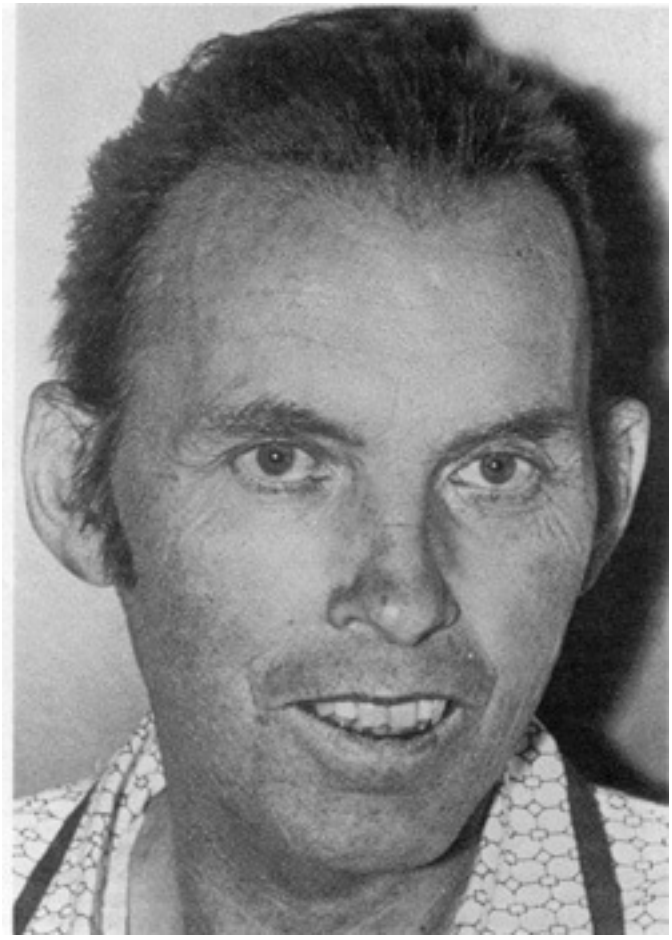
How can you recognize a zinc deficiency?

Zinc deficiency manifests in a variety of complaints, as you can tell from the test questions stated in two chapters later. As zinc is found in each body cell, and our body does not "stock" it (like calcium or iron), even the slightest zinc deficiency often shows up in typical discomforts – for example sleep disorders, declined mental performance, weakened immune system or skin problems.

Slight or moderate zinc deficiency is often not discernible in the blood. For this reason, experts recommend to take an "ex-juvantibus test", which is a zinc treatment, as described later, and to observe if the complaints improve due to the increased zinc intake. "If zinc helps, then it was a zinc deficiency" is the rule of thumb, according to Dr. H. P. Bertram (Münster, Germany)!

A skillful doctor will recognize severe zinc deficiency in the blood (at corresponding laboratory analysis costs) or based on the obvious state of the person, as shown in the following pictures:

(1) Patient with zinc deficiency resulting from enteral nutrition; by mistake, the nutrition was prepared low in zinc (1,5mg instead of 15mg per day). The patient shows mental symptoms besides physical problems. As far as I know, these are the only pictures that document what happens if zinc is drastically reduced, whereas all other nutrients are supplied sufficiently.



(2) The same patient after several weeks of substituting zinc. (from: Holtmeier/Kruse-Jarres: Zink - Wissenschaftliche Verlagsgesellschaft Stuttgart, 1991.) With the friendly permission from Prof. Dr. Seeling, Ulm (Germany), to use the photos.

History of the Photos:
In 1982, Prof. Dr. med. Wulf Seeling and colleagues at the University Hospital in Ulm reported (in: MedWelt, volume 33, issue no. 11, 1982, Schattauer Verlag, Stuttgart) about a patient with a small intestinal infarction, whose state was gradually getting worse after four months of artificial nutrition. The symptoms included, among other things, diarrhea, skin problems,

partial hair loss, strong itching, lack of thirst and appetite, general immune deficiency as well as obvious mental disorders (anxious-depressive, seclusion, passive behavior). As soon as the patient's extremely low zinc level was noticed (merely by happy coincidence, a scientist analyzed the zinc values of all patients in the ward), the daily zinc intake was increased from 1,5mg to approx. 20mg. Not only did the above mentioned physical discomforts improve just after a few weeks, his mental condition did, too: he started being talkative, stopped secluding himself and became active. His mood was enhanced and he showed cooperative behavior. This development led to the 'ex-juvantibus' conclusion (diagnosis after successful treatment), that the increased zinc supply was the main reason for the improvement. The follow-up examinations of the causes revealed that the infusion solution contained only 10% of the required daily intake of zinc.

The Zinc Treatment Program

During the course of a so-called zinc treatment, the body receives more zinc than the daily requirement over several weeks (at least three, twelve are recommended). By this means, possible existing deficits can be balanced. A prior "zinc deficiency" diagnosis is not necessary. Zinc is a natural mineral which is constantly ingested with food. The objective of a zinc treatment is to increase the zinc intake on purpose, however in the range of the natural level. Some helpful foods are e.g. oysters, beef and beef liver; vegetarians can chose cashew nuts or dark chocolate. Yet, there are some very good and cheap zinc supplements available in pharmacies and drugstores, which only supply zinc, without additional calories. A daily additional zinc intake of 15-25mg is advisable.

Please pay attention to take the supplements either one hour before or three hours after a meal. Zinc is absorbed in the small intestine and therefore it should be "empty". Large amounts of whole grain, calcium, iron and magnesium prevent zinc absorption. If other minerals are taken, it is recommended to ingest them four hours later. Vitamins do not hinder zinc absorption; some of them even support it (A, C, B). It is worthwhile to carry out a zinc treatment in case of all discomforts, which could occur due to zinc deficiency. A "small zinc treatment" with a good zinc supplement over a period of three weeks costs approx. 5-10 Dollars (status 2014). If the discomforts improve, then you can extend the period

by another 100 days to be on the safe side. In addition to the daily zinc consumption through foods, oral mineral tablets, soluble tablets and zinc lozenges are available, too. In this case, zinc is absorbed through the oral mucosa to avoid problems with intestinal absorption. Furthermore, zinc infusions through which zinc enters the bloodstream directly are also available and are administered at a doctor's or healing practitioner's office. Here is an example of the effect of a zinc treatment (excerpt from a letter I received many years ago, which represents many other reports):

Hello Mr. Winkler,
In my research on the topic of zinc and depression, I came across your homepage. By pure chance, I found out that my inexplicable fears and depression (acne etc.) can be treated with zinc (…). However, even after the long-term treatment, the symptoms returned as soon as I stopped taking the supplements. For this reason, I would like to know the real cause, but up to now I have hit a brick wall with all doctors ("there is no zinc deficiency in Germany", "placebo effect" etc.). I myself am a veterinarian and feel that I trigger fierce resistance from to some degree ordinary doctors, because I have an adequate level of expertise. Furthermore, I have spent three years in psychotherapy, which did not heal my suicidal thoughts and ordinary doctors came to believe that I could not be "taken seriously". Zinc tablets have "fixed" me within two months. Funny, don't you think?
...

Kind regards,
(name is known to the editorial staff)

Possible Reasons for Failure of a Zinc Treatment Program:
- dose of intake/supplements is too low. A daily dose of 15-25mg is reasonable and may be considerably higher in case of a strong zinc deficiency (please consult your doctor).
- intake along with "antagonists", which hinder absorption (calcium, magnesium, iron, copper).
- intake with a meal. It is more appropriate to take the supplement one hour before a meal.
- the zinc compounds in the supplement do not reach the bloodstream – then try out another product.
- enteritis, absorption disturbance (then try lozenges or intravenous administration).
- There is no (not only a) lack of zinc, but (also) of iodine, magnesium, manganese, lithium or the B vitamins.
- vitamin B6 deficiency (indicated e.g. by poor memory of dreams).
- loss of zinc is higher than the intake (e.g. due to stress or poisoning).
- water, with a high level of calcium or magnesium, is used to dissolve an effervescent tablet.
- another "A-Z supplement" is taken at the same time (it’s the “antagonist” problem).
- intake along with muesli, dairy products or whole grain bread.
- the reason is a poisoning by copper, lead or amalgam

– these causes can be tested.
- low self-perception – the effect may not be recognised as such.

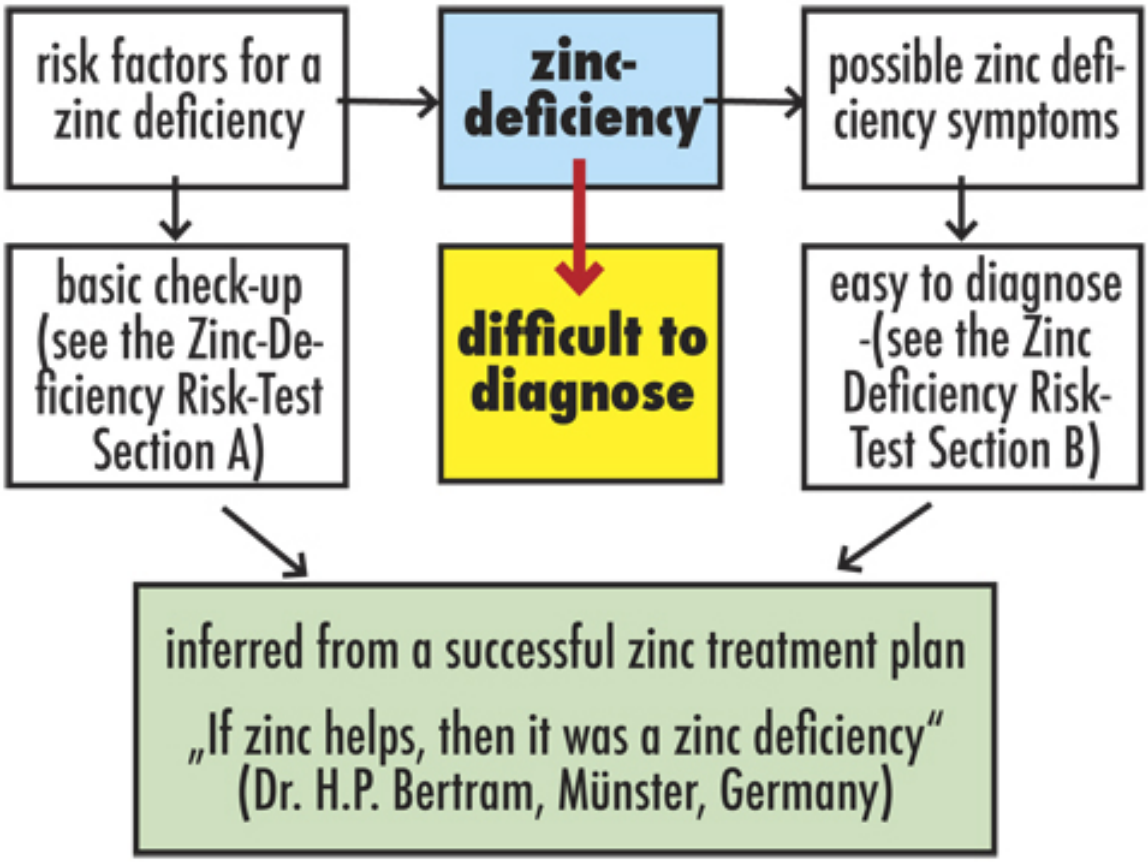
Zinc Deficiency Risk-Test

In order to detect possible risks at an early stage, we advise taking the following Zinc Deficiency Risk-Test and, if necessary, to follow a special zinc treatment plan.

This test and special treatment does not replace medical treatment or psychotherapy. In case of doubt, please consult your doctor, therapist or pharmacist for further information.

How does the Zinc Deficiency Risk-Test work?

A severe zinc deficiency can be detected by blood testing. Blood serum contains approximately a mere 0.2% of the body's zinc requirement. The organism attempts maintaining it at consistent levels; minor deficiencies, therefore, are difficult to detect. Typical symptoms and risk factors are, on the other hand, recognizable without great expense. The test is based on the following considerations:



In order to test your personal zinc deficiency risk, note the amount of points personally applicable per item. The number listed after the parentheses is the maximum amount of points you can give for each item. If the risk is low; for example, a diet that is only occasionally low in meat, you may attribute less than the maximum amount of points.

Zinc Deficiency Risk-Test: Section A

Risk factors for possible zinc deficiency:

( ) 5 a diet low in meat consumption (e.g. beef, liver)
( ) 5 pregnancy, breast-feeding

( ) 5 cancer, tumors
( ) 5 heavy alcohol consumption
( ) 5 drug consumption (e.g. cocaine, hashish)
( ) 5 recent anesthesia
( ) 5 eating disorders, anorexia, bulimia
( ) 5 chemotherapy or radiotherapy

( ) 4 continuous stress, including mental stress
( ) 4 zinc deficient intravenous feeding
( ) 4 frequent fasting or dieting
( ) 4 malnutrition, deficient diet

( ) 3 cortisone or penicillin intake
( ) 3 sports causing profuse sweating, professional athletes
( ) 3 regular sauna visits
( ) 3 mourning of loved ones
( ) 3 men: strong sexual activity
( ) 3 women: hormonal contraceptives (the pill)

( ) 2 office work at a VDU
( ) 2 computer as a hobby
( ) 2 regular smoker
( ) 2 recent substantial weight loss
( ) 2 frequent use of laxatives
( ) 2 high intake of calcium (e.g. milk)
( ) 2 heavy physical labour

( ) 1 high intake of magnesium (e.g. bananas)
( ) 1 high intake of copper or iron
( ) 1 high intake of phytates (beans and cereals)

Zinc Deficiency Risk-Test: Section B

Possible zinc deficiency symptoms and physiological changes

( ) 5 weakened immune system
( ) 5 depression, anxiety, phobias
( ) 5 postnatal depression
( ) 5 suicidal thoughts or attempted suicide
( ) 5 schizophrenia, personality change
( ) 5 aggressiveness, irritability
( ) 5 extreme loss of hair
( ) 5 persistent skin problems

( ) 4 taste and olfactory disorders
( ) 4 poorly healing wounds or scars
( ) 4 frequent colds and/or influenza
( ) 4 fingernail and toenail changes (e.g.white spots)

( ) 3 allergies, hay-fever
( ) 3 cravings, e.g. for meat, chocolate, nuts, marzipan, cocoa, cashews
( ) 3 sudden hearing loss, tinnitus, hearing problems
( ) 3 men: impotence, diminished sex drive
( ) 3 women: premenstrual syndrome

( ) 2 overweight, eating binges
( ) 2 night blindness, sight impairment
( ) 2 persistent insomnia
( ) 2 waking up problems

( ) 2 lack of concentration, reading disinterest
( ) 2 mental disorder
( ) 2 inability to remember dreams

( ) 1 changes in handwriting, e.g. illegibility
( ) 1 inability to remember names
( ) 1 fever blisters, herpes labialis

Evaluation of the Zinc Deficiency Risk-Test:

Number of points for Section A: …
Number of points for Section B: …

Total amount of points:

Up to 10 points:
A zinc deficiency is rather unlikely. If you have symptoms listed in Section B, a trial zinc treatment plan can be administered.

11 to 20 points:
A slight zinc deficiency is likely. A zinc treatment plan should be followed by paying particular attention to symptom changes. Attempt minimizing the risk factors.

Over 20 points:
A zinc deficiency is very likely. A zinc treatment plan should definitely be followed as a preventive measure.

Consulting your doctor and minimizing your risk factors is advised.

Family members and others in your personal circle (similar diet, similar risk factors) probably have a zinc deficiency. A test should be made.

Questions and Answers

Which foods provide good zinc absorption?
Zinc is found in many foods, yet often in combination with substances which hinder absorption or assimilation. These are good sources of zinc: oysters, cashews, dark chocolate (cocoa is full of zinc), hazelnuts, almonds, beef liver and meat.

Can I get zinc poisoning, if I take it over a long period of time?
In some medical treatments, a 200mg zinc dose is given on a daily basis; 100g oysters contain approx.150mg of it. Reports on side effects start at 275-550mg zinc consumption per day. In case of long-term intake, the copper level in the blood should be tested.

Is it appropriate to give children an additional intake of zinc?
Breast milk contains 3-5mg zinc/liter, depending on the mother's diet. Especially when it comes to children which consume little meat or organ meat, feeding an additional intake of zinc (e.g. with a soluble tablet or lozenge) can help to replenish the amount required.

It is possible that aggressive behavior is a consequence of zinc deficiency?
There are some highly credible observations in youth social work on young people with disciplinary problems, who largely turned back to "normal" after having consumed zinc supplements. The necessity to take zinc was emphasized with the note that zinc often cures

acne and pimples (which is really often the case). If young people consume substances (alcohol, marihuana or other drugs) on a regular basis, which cause a high zinc excretion, zinc deficiency will occur within very short time.

Is there a connection between zinc deficiency and suicidal tendencies?
It is quite obvious that many people who suffer from severe zinc deficiency have suicidal thoughts to put an end to their suffering. This leads to the conclusion that zinc should be considered if these kinds of thoughts or tendencies are evident. In this view, a temporary increase in zinc intake deserves to be supported, even though it obviously cannot improve certain difficult life situations. Nevertheless, it is common that a healthy mental state is more capable of solving problems than a brain which is extremely limited due to zinc deficiency.

Can zinc deficiency be detected in the blood?
The blood serum contains less than 1% of the zinc content in the body. As our organism is evidently trying to maintain a high zinc level in the blood, clear indications are only noticed in case of a severe zinc deficiency. Normal blood profiles do not include a zinc value.

What are the risks of deficiency in case of low-meat/low-fish diets?
Besides zinc, particular attention should be paid to iodine, iron, vitamin B12 and vitamin B6 as well as

Vitamin D in winter or in times with less sunshine.

Can I supply zinc by taking homeopathic products or „Schuessler salts“?
In no case because these products do not contain any zinc, or just slightest traces of it; a glass of tap water contains more zinc than this type of product. So, if there are any effects, they surely cannot come from traces of zinc.

Why has my doctor/healing practitioner/therapist not told me about zinc?
Knowledge about the effects of zinc has just recently developed and is gradually beginning to reach the doctors' awareness. Even though there are many studies proving the effects of zinc, the costs for the investigation of zinc's effects in individual cases of complaint are extremely high and therefore scientific research is rarely conducted. Furthermore, it would not be ethical to give one part of the test people zinc and only a placebo to the other part, thus accepting life-threatening consequences. Zinc supplements are usually very cheap and cannot finance the millions of Euros required for research studies. Complex examinations to determine zinc deficiency in a reliable way diminish attention to this problem. On top of all of this, health insurance companies only pay for a zinc treatment in rare cases, although they could save enormous amounts of money by acting otherwise, according to my opinion. A major zinc campaign in Bangladesh and other countries, for instance, reduced

the death rate of children with diarrhea extremely.

How can I give zinc to a person, who cannot/does not want to take it?
If a person is not able to understand that zinc can clearly and quickly improve a discomfort, then I believe it is acceptable to administer small amounts of zinc without the person's knowledge – such as small children, dementia patients or people with strong psychological stress, who are not capable of having a clear thought. As there is no apparent reason not to feed these people 1-2 oysters per day, there is also no apparent reason not to give them 15-25mg zinc from other sources (zinc soluble tablets, dissolved in water and served with fruit juice or in a soup).

What are the side effects of a zinc treatment?
A zinc treatment as described here, supplies the body with a natural amount of zinc – therefore exceptional side effects are not to be expected, apart from those which appear automatically on account of a healthy supply of zinc. These effects include the ability to have clear thoughts, be articulate and have a good memory, to experience regular sleep with easy awakening in the morning, good wound healing and a properly functioning immune system – just to mention a few phenomena which appear due to an appropriate supply of zinc. Some people, who start a zinc treatment, are amazed about the effects of a normalized zinc level. They are very surprised, for example, about their unusual mental activity or strong drives (such as cleaning up, sorting

things as well as sexual desire); these are "normal" consequences, but cannot be considered as "side effects" in the common, negative sense.

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