

35+ years of clinical & environmental laboratory diagnostics Roehrenstrasse 20 91217 Hersbruck, Germany

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## MTM Newsletter

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## Laboratory News

### Lung cancer 'overtaking breast cancer in European women'

For years, epidemiologists predicted this trend. Now, the point has been reached and for the first time breast cancer is no longer the number one cause of cancer death in females. Lung cancer is - and not only in Germany but in all European countries reports the German Cancer Research Center on the World Cancer Day 2015.

### Before you treat, diagnose

Says an old proverb and it is particularly true when it comes to detoxification therapies. As soon as we identified the main toxin (or toxins), we are able to select the most appropriate chelating agent.

Our statistics, involving substantial data, demonstrated that the DMPS provocation test is a most suitable for the diagnosis of a metal burden. DMPS binds well with most toxic metals, and thus allows a comprehensive assessment of the patient's metal burden. Compared to other chelating agents, the application of DMPS saves time. It is applied intravenously or in a short infusion within 10-15 minutes. A one hour urine collection time is sufficient.

The DMPS provocation test is a most cost effective diagnostic tool when it comes to prove a metal burden.

### Also see:

http://www.microtraceminerals.com/en/chelation-newsarticles

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While the test values of a provocation test allow us to select the most appropriate chelating agent for a most effective and successful treatment, we must also consider important criteria such as patient age, condition, and symptoms. Here some important points to consider:

- 1. For the diagnosis and treatment of pediatric patients, the use of intravenous DMPS or EDTA is not appropriate. Oral DMSA is a better choice.
- 2. For the treatment of circulatory disorders, which are commonly associated with nickel, cadmium and lead exposure, NaMgEDTA is best used not NaCaEDTA. Why? NaMgEDTA has a vasodilating effect, NaCaEDTA does not.
- 3. DMSA and DMPS are the best choice for the treatment of arsenic and mercury intoxication or (over)exposure. When using oral DMPS or DMSA, we need to consider the compounds bioavailability, which is, at best, 50%. Our DMPS Orientation Range (OR) is based on DMPS iv. (1 amp.); our Orientation Range for oral DMSA is based on 500mg DMSA, applied orally.
- 4. We frequently asked about the detoxification potential of Algae or Chlorella products.
  - There is no question that algae when living in water bind metals.
  - The Algae or chlorella supplement we ingest are already bound to essential, nonessential and potentially toxic metals. A study of herbal kelp supplements led by University of California (UC) public health expert Marc Schenker concludes that its medicinal use may cause inadvertent arsenic poisoning and health dangers for consumers, especially when overused. Schenker and two researchers evaluated nine over-the-counter herbal kelp products and found higher than acceptable arsenic levels in eight of them.(Science Daily, April 2007)
  - In humans, the detoxification with algae seems difficult to achieve. It could potentially happen when during the digestive process molecules release algae-bound metals. During this process of separation, the algae's amino acids may be able to bind with 'new' metals or toxins i.e. an exchange happens. If this happens, the exchange occurs in the digestive tract. Thus algae may, at best, detoxify the digestive tract. To set an example, we set an experiment. We selected an algae product, weighed and tested the tablets. One person (me) ingested a specific amount of that product, and we tested urine and stool before, during and after intake at various time intervals. Stool results showed that the amount of metal ingested was almost totally excreted over a 24hr period. Urine was not affected. In lieu of the UC study, we consider this good news.
- 5. Natural chelating agents are an alternative. Most effective are the sulfur-containing amino acids, including glutathione, vitamin C and other antioxidants. For more information see the book, Gentle Detox The Natural Detoxification Program:

http://www.microtraceminerals.com/en/books-by-eblaurock-busch/e-book-gentle-detox



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- 6. Following is a list of commonly used chelating agents and their main mode of metal binding:
  - DMPS, iv and oral: good binding with many heavy metals and their compounds, i.e. lead, organic and inorganic mercury, arsenic and many others. Shows strong copper binding.
  - **DMSA**, oral: functions like oral DMPS, but has a slightly lower binding capacity and is usually better tolerated with fewer side effects. The copper binding ability of DMSA is considerably less than that of DMPS.
  - NaCaEDTA and NaMgEDTA: Good binding with lead, chromium, cobalt, vanadium, zinc, cadmium, iron, radioactive metals including uranium. One significant difference between NaMgEDTA and NaCaEDTA is the calcium binding.
  - **NaMgEDTA** shows a strong calcium binding. NaCaEDTA does not. It is already bound to calcium.
  - Deferoxamin (Desferal® (iv), Ferriprox® (oral)): Almost exclusively used for cases of iron overload (i.e. repeated blood transfusions or Hemochomatosis), and aluminum overload (i.e. after repeated dialysis)
  - DTPA (ZnDTPA or CaDTPA) is chemically similar to EDTA. The DTPA complexing agents are principally used for the detoxification of the heavy metal radionuclides Americanum-241, Californium-252, Cobalt-60, Plutonium-239. The commonly used contrasting agent Gd-DTPA is DTPA complexed with gadolinium.

This information is based on proposals of international poison centers and the statistical analysis of the MTM Database 2001-2014.

### Notes regarding chelating agents and supplements

- 1. Oral chelating agents and nutritional supplements may contain titanium dioxide, a whitening agent. Elevated titanium concentration in urine or blood samples may have resulted from using these.
- 2. DMPS ampules:

In the past, we tested the metal content of various chelating agents, including DMPS. Recently, a Belgian doctor submitted two ampules of for testing of the active substance DMPS. Since we are not set up for this type of analysis, we forwarded the samples to another laboratory, specialized for this type of test. The results were surprising. Ampule 1 contained 20% of active DMPS; Ampule 2 even less, namely 10%. These DMPS ampules did <u>not</u> come from the official manufacturer Heyl, Berlin.

### Blood Metal Analysis

To confirm a current exposure, blood is more suitable than urine or hair. We test serum, plasma, whole blood and erythrocytes, and 3-5ml of blood are sufficient for single element or multi element testing. For blood metal analysis, we recommend the submission of whole blood, because the more extensive handling of serum, plasma or erythrocytes is a source of contamination, especially for aluminum or nickel. Our Laboratory partner Friedle is a reference laboratory, confirming the measurement quality of our tests.

Below are the results of a German environmental survey, which evaluated the Lead, Cadmium and Mercury in Blood of a German population in a 1998 survey of human bio monitoring by the German Environmental Agency. (Authors: K. Becker, S. Kaus, C. Krause, P. Lepom, C. Schulz, M. Seiwert, B. Seifert)



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<u>Table 1</u> shows lead, cadmium and mercury levels in the blood of an 18 to 69 year old German population, which we compared to our statistical data. Table 1 shows that MTM statistical values are similar for the metals lead and cadmium. For mercury, MTM's data are considerably higher. None of the samples came from industrially exposed people, though samples were submitted by doctors engaged in preventive or environmental medicine. Table 1 demonstrates that blood testing is well suited for monitoring heavy metal exposure.

Lead in Blood	Ν	P95	Max-Value	AA
Germany	4646	71.40	380.00	35.60
Western states	3768	70.70	307.00	34.90
Eastern states	877	79.50	380.00	38.30
MTM 2007-2014	1647	41.77	353.00	17.74
Cadmium in Blood	N	P95	Max-Value	AA
Germany	4645	2.34	16.00	0.70
Western states	3768	2.37	16.00	0.70
Eastern states	877	2.24	6.17	0.70
MTM 2007-2014	1647	1.25	5.01	0.50
Mercury in Blood	N	P95	Max-Value	AA
Germany	4645	2.32	12.30	0.86
Western states	3766	2.40	12.30	0.87
Eastern states	879	2.10	7.32	0.83
MTM 2007-2014	1647	12.29	57.15	3.64
All Values in meg/				

### All Values in mcg/L

N = sample size; P95 = percentile; AA = arithmetic average;

### Laboratory Information

Contact us and we provide you with our e-mail or paper version of our laboratory brochure and sampling kits.

As alternative, you can use our online content, and this 24h per day: <u>http://www.microtraceminerals.com/en/contact</u>

There you can Order Laboratory Supplies, too: http://www.microtraceminerals.com/en/contact/order-laboratory-supplies



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### New Book Release

### Allergies and Food Addictions - no more

Food allergies are on the rise. Researchers are trying to discover why food allergies are on the rise in developed countries worldwide. More than 17 million Europeans have a food allergy, and hospital admissions for severe reactions in children have risen seven-fold over the past decade, according to the European Academy of Allergy and Clinical Immunology (EAACI).



The eBook will be published on:

### April 15, 2015

The print edition will follow shortly afterwards.

This book provides answers. The authors explains why food allergies are on the rise, but also how this trend can be stopped. The author explains the connection between nutrition and allergies. Case histories show how health problems such as dermatitis, asthma, rheumatoid arthritis, migraines etc. started- and how health was restored through simple changes in diet. Best of all, the reader learns how to select a fun diet that is appropriate for him or her. Recipes are included.

http://www.microtraceminerals.com/en/books-by-eblaurock-busch/e-book-allergies-and-food-addictions



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# Medical Workshops and Conferences

### International Conferences & Workshops 2015

03/07/2015	Medical Seminar, Diagnosis and Treatment of a Chronic Multiple Metal Burden Nuremberg, Germany (German)
03/14/2015	Nonmedical Seminar, Diagnosis and Treatment of a Chronic Multiple Metal Burden Nuremberg, Germany (German)
05/19/2015 - 05/21/2015	<b>28th International meeting of Orthomolecular Medicine, nutrigenomics and longevity</b> Sao Paulo, Brazil (English/Portuguese)
08/22/2015	Clinical Toxicology Workshop (Applied for Accreditation by German Medical Board) Nuremberg, Germany (English)
Details under:	

http://www.microtraceminerals.com/en/workshops

Contact us for more information. We would be happy if we can help you.

We wish you all the best.

Your

E.Blaurock-Busch and Team