**Micro Trace Minerals Laboratory**
40+ years of clinical & environmental laboratory diagnostics

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**MTM Newsletter** **N° 19 - November 2016**



## Laboratory News

### Research Publication

Our paper *EDTA: Ethylene Diamine Tetra Acetic Acid – A Review* was in press in **Occupational Medicine and Health Affairs**, September 14, 2016.

Occupational Medicine & Health Affairs is one of the best open access journals that aims to publish the most complete and reliable source of information on discoveries and current developments.

The article can be accessed in PDF format:
https://microtraceminerals.com/en/chelation-newsarticles

### Evaluation of a treatment plan

During our English Webinar, we discussed the binding ability of the various chelating agents, proper protocols for the treatment of chronic vs acute expositions and evaluated treatment plans. We explained the importance of treatment pauses, which allow metals to diffuse from the difficult to reach centers into reachable systems, the most likely reason why neurological ailments respond to chelation therapy.

This brings us to the evaluation of urine tests.

When we evaluate treatment success with repeated provocation tests, we find patterns such as the one outlined in Table 1, provided the same treatment approach was followed throughout. This means follow-up provocation treatments have to be the same i.e. the same chelator must be used, and the same application and urine collection time must be followed.

**Table 1: Urine Mercury Levels in mcg/g Creatinine following treatment with DMPS (1 Ampule iv)**

| Baseline Urine | Oct 11 2013 | Jan 20 2014 | Apr 18 2014 | Jul 08 2014 | Nov 04 2014 | Mar 04 2015 | Sep 06 2015 |
|---|---|---|---|---|---|---|---|
| 0.80 | 54.13 | 32.50 | 17.25 | 6.01 | 38.40 | 13.25 | 3.75 |

**Patient History:**
Female, 48 years, anxiety attacks out of nowhere, followed by periods of depression starting at age 16. At around the same time, facial dermatitis appeared. Hashimoto was diagnosed at age 32. Patient claims the onset of symptoms was proceeded by either amalgam filling insertion or removal.

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The first provocation test showed a mercury exposure. DMPS was administered intravenously on a weekly schedule. Between treatments the patient was placed on an oral nutritional schedule. After the third treatment, the patient noticed an improvement in skin problems and energy. Shortly after, she complained of heart palpitation after her routine thyroxin intake.

Thyroxin was reduced from 100 mcg/daily to 50 mcg/daily. Heart rate and pulse normalized and returned April2014. Careful evaluation of thyroid function did not show a need to resume medication and the patient was taken off thyroxin. Energy and mental state remained good. Skin problems responded positively to a non-dairy diet.

Patient stopped chelation treatment Jul 2014 and returned Nov 2015 after signs of depression reappeared. Follow-up thyroid function tests were negative, a repeat provocation test showed an increase in urine mercury levels. Patient stated that no mercury exposure had happened. She had turned vegetarian and ate no fish.

DMPS treatment was resumed Nov 2014 with bi-weekly treatments as before and urinary mercury levels dropped as before. The patient was released from care Sep 2015.

**Evaluation of urine provocation results:**
This example demonstrates how metal exposure influences symptoms and how history taking i.e. listening to the patient can help in choosing an effective diagnostic approach. It also demonstrates that using the same diagnostic approach allows us to view the treatment success (see Table 1) and documents how treatment pauses contribute to the redistribution of metals. In this case mercury.

Metals are stored in various organ systems, including fatty tissue. Hydrophilic chelation agents such as DMPS do not reach fatty tissue, but after we have detoxified the more easily-accessed tissues, metal homeostasis sets in, redistributing metals from difficult to reach organ systems into those that are easily accessed.

Skin problems, depression or anxiety, and Hashimoto are symptoms linked to mercury exposure and although the mercury burden of this patient has been reduced, it is unlikely that no more mercury is present in her system. This was understood by the patient.

**Suggestions:**

- Development of a detox program that is focused on an intravenous DMPS treatment protocol with longer intervals between treatments i.e. once monthly, bimonthly or quarterly.
- Development of an oral program (DMPS or DMSA) instead of parenteral application. The bioavailability of either of those oral chelators is considered about 50%.
- Check detoxification enzymes. An ineffective detoxification ability increases the susceptibility to toxins.
  https://microtraceminerals.com/en/diagnostic-humans/detoxification-enzymes
- Provide a nutritional program to support chelation and natural detoxification.
  https://microtraceminerals.com/en/books-by-eblaurock-busch/e-book-gentle-detox

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- **New Urine tubes**

If you or your patients have questions regarding the use of our new urine tubes, check our website for instructions:
https://microtraceminerals.com/en/submission-forms

(At the bottom of the site, you can download the Urine Monovette ® manual.)

## Medical Workshops and Conferences

- **International Conferences & Workshops 2017**

| | |
|---|---|
| 04/01/2017 | **MTM Chelation Seminar Nuremberg**<br>**When, how, how much and how long are chelators needed?**<br>Nuremberg, Germany (German) |
| 05/13/2017 | **MTM Chelation Seminar Cologne**<br>**When, how, how much and how long are chelators needed?**<br>Cologne, Germany (German) |

For future workshops and updates, please visit:
https://microtraceminerals.com/en/workshops

- **Webinars**

This year, we launched several Webinars. Our first English Webinar was aired on October 12, 2016:

**Title:** Use of chelating agents (DMPS, DMSA, EDTA, DTPA) and diagnostic tests to confirm treatment success

The following Webinars are planned for 2017:

| | |
|---|---|
| 01/25/2017 | **Proper use of Chelating Agents (DMPS, DMSA, EDTA etc.) for the treatment of chronic metal exposure**<br>(English) |
| 03/22/2017 | **The Neurotoxicity of Metals and Nanoparticles**<br>(English) |
| 05/24/2017 | **Mental and Elemental Toxins. Diagnosis and Treatment Options**<br>(English) |

For registration and further information, please visit:
https://www.edudip.com/academy/e.blaurock-busch

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Let us know if you have questions. If we don't have an answer for you at hand, we will find it. If we can't find one, we will tell you.

All the best

Your

E.Blaurock-Busch and Team