Liver Life-NDF Heavy Metal Provocative Challenge

Please read thru these directions twice before starting.
Note these instructions are for a Provocative Challenge test, not daily usage.

Which do I use; NDF™ or NDF Plus™?

If you have a solid constitution, or are generally good health; NDF™ will be your challenge agent. *If you have a Low Battery Focus[i] or a compromising condition; i.e. chronic symptoms, constantly fatigued or could use a nap daily, ASD, G.I., and bowel issues; NDF Plus™ is going to be your challenge agent due to its ability bring the cellular potential up and enable you to remove heavy metals more efficiently.

Preparation for Challenge

1. For the duration of the challenge period, enforce strict dietary and lifestyle guidelines that include: no seafood, no exposure to chlorinated water either bathing or in foods, no use of commercial hygiene products, no inorganic foods containing pesticides, hormones or genetic modification, no change in supplement protocol.
2. Start with the minimum dose of Liver Life™ and ramp up per brochure instructions. Stay on Liver Life™ for two weeks before beginning NDF™ or NDF Plus™. This is to support and open Phase 1 and 2 liver detox pathways as much as possible. You will stay on Liver Life during the entire Challenge period.
3. If you have amalgams still in your the teeth, you must brush, rinse, and spit with 10 drops of NDF™ prior to each dose[ii].
4. Begin ramping up the dose of NDF™ or NDF Plus* per Dosage Guidelines in NDF/NDF™ Plus brochure. Take first thing in the morning on an empty stomach immediately following the first urination of the day.
5. Adults ramp up to at least 1-2 ml of NDF™ twice per day. Children up to 8 years old use 1-2 drops and Children 9 to 15 years old use 4-5 drops of NDF™ or NDF Plus™ two times per day. Stay at that dose for at least 5 days prior to the challenge to insure the removal of organochlorides.

Day of Challenge Dose and Specimen Collection

1. On the sixth day, void first morning urine.
2. Immediately after voiding, Adults take a 4 ml dose of NDF™ or NDF Plus™ sublingually follow with 3 droppers full of Liver Life, and a 10 ounce glass of water. For Sensitive Children give 26 drops (1 ml) of NDF Plus™ and 10 drops of Liver Life™. For Children who are currently using and have ramped up their dose of NDF™ or NDF Plus™, give 52 drops (2 ml) of NDF™ or NDF Plus™ sublingually and 20 drops of Liver Life™ followed by 6 ounces of water.
3. Give activated charcoal as preventative 45 minutes to 1 hour after dose of NDF™ or NDF Plus™.
4. Continue to drink good, clean water, 3 – 6 ounces every ½ hour. Collect the next two urinations in containers provided by the lab.
5. Send urine in containers to the lab of your choice for Toxic Elements analysis.

Lab Results Interpretation

If the results come back showing no metals in the urine, and you suspect that the person is heavy metal toxic, do other lab tests to rule out the possibility that other chemical toxins are being eliminated first. Another possibility is to use the DMPS or DMSA / NDF Challenge. As a reference, 2 ml (52 drops) of NDF provokes roughly 20% as much metal excretion as a DMPS IV drip.

DMPS or DMSA with NDF Heavy Metal Provocative Challenge

Picture 1 is a DMSA baseline urine challenge:

Lead	4.6	< 15
Mercury	1.6	< 3

Picture 2 is 60 days later, and is a follow up DMSA urine challenge with the inclusion of NDF™:

Lead	87	< 15
Mercury	11	< 3

Patient followed same DMSA protocol through out 60 day period. The lab data clearly shows the massive increase in urinary elimination that occurs when NDF is added to a detoxification protocol.

Preparation for DMSA or DMPS with NDF Challenge

1. During the week prior to the baseline DMSA or DMPS** challenge continuing through the completion of the DMSA/DMPS post challenge, enforce strict dietary and lifestyle guidelines that include: no seafood, no exposure to chlorinated water either bathing or in foods, no use of commercial hygiene products, no inorganic foods containing pesticides, hormones or genetic modification, no change in supplement protocol. **Neither DMSA nor DMPS should be taken by pregnant or lactating women, or if amalgam fillings are present in teeth. Use this protocol under a licensed practitioner's supervision.

2. Start with the minimum dose of Liver Life™ and ramp up per brochure instructions. Stay on Liver Life™ during the entire Challenge process.

3. On day 7 take either chelator. If your practitioner recommends a different dose please use that one:

DMSA:

- **Adults** (generally good constitution) take a 300 mg bolus dose of DMSA on an empty stomach, after having voided the bladder. Collect urine for the next 6 hours.
- **Sensitive Adults** take an oral dose of 100 mg of DMSA every 6 hours 3 times per day. Collect urine on the 4th day for 6 hours.
- **Children** take an oral dose of 50 mg of DMSA, every 6 hours for 3 days and collect the urine 4th day for 6 hours.

DMPS:

- **Adults** take an oral bolus dose of 300 mg of DMPS on an empty stomach, after having voided the bladder. Collect all urine for the next 6 hours. Send to lab for Toxic Elements analysis.
- If you opt for DMPS with your **child**, use your practitioners' recommendation.

4. Give activated charcoal 45 minutes to 1 hour following doses of DMSA or DMPS to prevent aggravations. You want to have an organic coffee enema standing by to relieve headache caused liver burden.

5. Send urine sample in container provided to lab for a urine Toxic Elements analysis.

Follow up Challenge for DMSA / DMPS with NDF Challenge

6. In 4 to 6 weeks begin taking 2 ml of NDF™ or NDF Plus™ twice a day *per protocol* for 3 days. If ramping up to this dose is required, be at this dose for three days before doing the post challenge. If the person has amalgams still in the teeth, they must brush, rinse, and spit with 10 drops of NDF™ prior to each dose.

7. The next morning, repeat your Adult or Child DMSA or DMPS dosage as in step 3 above AND include - **(Adults)** 4ml NDF™ or NDF Plus™ **(Children)** 2 mls. of NDF™ or NDF Plus™ **(Sensitive Children)** 1 ml of NDF™ or NDF Plus™.

8. Give activated charcoal as preventative 45 minutes to 1 hour after dose of NDF/NDF Plus™.

9. Continue to drink good, clean water, 3 – 6 ounces every ½ hour. Collect urine for the next 6 hours and send to lab for Toxic Elements analysis.

Lab Results Interpretation

Because both DMPS and DMSA are metal specific (meaning – go after only specific heavy metals), the lab results are also more specific than when using NDF™ as the provocative agent. Due to NDF's broad spectrum anti-toxin behavior (NDF binds to heavy metals in addition to organochlorides, dioxin[iii], pesticides, neurotoxins, mycotoxins, free chlorine, plaque and exotoxins) it can be used up on these other toxins before it goes after the metals.

DMPS is 60% bio-available whereas DMSA is less so, however both sweep the interstitial spaces, into which NDF pulls the heavy metals, quite effectively. Please use the same challenge agent for both pre and post tests.
So far the only failsafe method of determining the NDF™ mediated elimination of heavy metals has been to:
1) Do either a DMPS or DMSA baseline and treat with NDF™ or NDF Plus™. Follow up with same chelating agent used in baseline test.
2) Ramp up the dose of NDF™ until the patient is able to consume 2 ml (52 drops) at a time with no 'healing crisis' for at least 3 days.
3) Repeat either the DMPS or DMSA challenge while the patient is still taking NDF™ or NDF Plus™. Follow up with same chelating agent used in baseline test.

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[i] Low Battery Focus By Dr. Timothy Ray © 2001 Published in Explore! For the Professional. https://www.bioray2000.com/uploads/LowBatteryFocus.pdf

[ii] Mitigation of Mercury Vapor Inhalation and Exhalation in People with Dental Amalgam Fillings © Dr. Timothy Ray, L.Ac., OMD Published in: Townsend Letter for Doctors and their Patients, November 2002, Issue #232 https://www.bioray2000.com/uploads/MitigationofMercuryVapor.pdf

[iii] Maternal-Fetal distribution and transfer of dioxins in pregnant women in Japan, and attempts to reduce maternal transfer with Chlorella (Chlorella Pyrendoisa) Supplements. https://www.bioray2000.com/uploads/Maternal-fetal%20distributionOfDioxin.pdf