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2025.07

## **SOME OF THE STEPS IN UNRAVELLING THE PUZZLE OF AUTISM WITH BIOMEDICAL THERAPY**

Autism is one of the most complex medical puzzles in biological medicine, and almost always it has to be gradually sorted out in an orderly sequence, taking a year or more to implement. Rarely is there a 'quick fix' for autism. Though every child is different, the most common measures I use are as outlined below, more or less in this sequence.

Unfortunately, many families are not able to do all of these steps. Nevertheless, most (but not all) spectrum children show significant benefit when the majority of these interventions are implemented. When these steps for biological treatment are done at the same time as behavioural therapies, there is a synergistic (mutually reinforcing) effect between the two. The younger the child, the more likely biomedical treatment will be successful.

**1. Improve diet and begin basic nutritional supplementation.**

**2. Do laboratory testing** (as appropriate) for basic biochemistry, disturbed bowel flora, food intolerances, metabolic & immune deficiencies, pyroluria, toxic overburdens, genomics.

**3. Remove toxic exposures:** both dietary (allergens, excitotoxins, and other sensitivities) & environmental (mould, chemical, heavy metal).

**4. Begin appropriate dietary management:** Gluten/casein/sugar-free diet to begin with; often requiring more aggressive reduction of fermentable carbohydrates. Sometimes having to implement variations of a GAPS/SCD/Paleo diet. Other food intolerances may need to be addressed: oxalate/ phenol/ salicylate/ nightshades. Dietary therapy has to be individualized, and implemented only as tolerated by the child & family. Malabsorption may need to be addressed.

**5. Restore normal bowel ecology:** through dietary management combined with probiotics, antifungals, biological antimicrobials, and probiotics; all as indicated and as tolerated). Measures to break down intestinal biofilm in more complex cases.

**6. Add in biomechanical treatments where appropriate:** craniosacral therapy, massage therapy, rebounder trampoline, etc.

**7. Begin more aggressive nutritional supplementation** to support detoxification mechanisms (support of methylation, liver detoxification, mitochondrial function; and provide neuroprotective support. Do this carefully, watching for signs of adverse reactions to excessive dosing.

**8. Add in mild detoxification treatments:** clay baths, sauna, observing clinical response. Add intestinal binders to help detoxification.

**9. Begin gradual lowering body burden of heavy metals** (usually using thiolized silica; sometimes adding EDTA in oral or suppository form). I avoid challenge testing for heavy metal overburden, and rely on safer methods of determining effect of a child's body burden: blood testing, sequential hair analysis, and clinical response to treatment. Watch carefully for detoxification reactions.

**10. Address any hidden sources of chronic infection:** some children may harbor a chronic viral load, a high burden of intestinal worms, low grade Lyme disease, or some other low-grade 'stealth' infection.

**11. Add in neurorestorative therapies:** this may include, where appropriate, use of hyperbaric oxygen, physical therapies based on principles of neuroplasticity, or brain training therapies such as neurofeedback.

**12. Continue an ongoing neuroprotective program for life:** This is to avoid development of relapse, or future immune or neurological disease. This is usually based on a modified version of interventions which have previously been most helpful.