

Essential Lithium Supplementation in Children

Essential Background Information for Parents and Preparation for the Initial Medical Consultation

Purpose and Practical Value of This Document

Depending on the country, low-dose lithium may be available only by prescription, through a pharmacy-compounded preparation, or as a dietary supplement. Where no prescription is required, parents may still wish to inform themselves carefully about dosage, product quality, laboratory values, and expected effects. Medical involvement becomes particularly important when a child has neuropsychiatric, developmental, or chronic health problems, or is already receiving medication. In such cases, correcting an underlying micronutrient deficiency may change the child's clinical condition and may therefore require adjustment of an existing treatment plan.

Consultations on micronutrients such as lithium are often not part of routine medical care and may not be covered by public or private health insurance. As a result, physicians may need to bill such consultations separately, which can involve considerable time and cost. This document is intended to make any initial medical consultation as efficient and well-informed as possible by giving parents a solid orientation in advance—covering relevant areas of use, dosage, mechanisms of action, laboratory values, safety considerations, and effects observed in clinical practice.

This allows a medical consultation, when needed, to focus on the child's individual situation: whether and how essential lithium supplementation could be integrated into an existing treatment plan, whether medication may need to be adjusted as deficiencies are corrected, what laboratory monitoring may be useful, and what changes should be watched for over time. In this way, parents can prepare more effectively, physicians can make more targeted decisions, and unnecessary time and costs can often be reduced.

General Background

The scientific basis for lithium's essentiality and mechanisms of action is presented in detail in the book *The Conspiracy Against Lithium*. Yet despite the compelling evidence collected and presented there – and despite the serious consequences of widespread lithium deficiency – this trace element has not yet been officially recognized as essential. As a result, there is still no official recommendation for daily intake from the authorities that claim to have the final say on this matter. Epidemiological, clinical, and evolutionary evidence does, however, provide a reasonable basis for estimating the natural lithium requirement of an adult at approximately 1 mg per day. This estimated adult requirement can then serve as a reference point for deriving age- and body-weight-adjusted requirements for children.

In addition to the overdue recognition of its essentiality, regulatory access to lithium varies widely from country to country. In many places, including the European Union, lithium is not authorized as an ingredient in dietary supplements. Accordingly, even essential trace amounts are often available only by medical prescription—apart from the currently tolerated, but unregulated, gray market. The United States is an important exception: there, low-dose lithium orotate is commercially available as a dietary

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supplement. Where such restrictions apply, natural sources such as certain lithium-containing mineral waters are generally not affected, although they may come with drawbacks related to other constituents, limited dosage control, and cost.

Lithium deficiency is widespread. It plays a decisive contributory role in many neuropsychiatric developmental disorders and mental health conditions, as well as in most diseases of civilization. Clinical experience shows that although lithium is of great importance for brain health, mental performance, and psycho-emotional stability, almost all children tested show an insufficient lithium supply, in some cases to a serious degree.

1. Areas of Application

Correcting a lithium deficiency is associated with healthier, nature-aligned brain development. Adequate lithium supply is associated with fewer psychological problems, a reduced likelihood of disease, and a longer life expectancy—effects that have been demonstrated in animal studies.

Targeted correction of a lithium deficiency often leads to noticeable improvements, especially in the following symptom patterns:

- Emotional instability and irritability; low stress resilience
- Difficulty falling asleep or staying asleep
- Anxiety, school refusal, and a tendency toward social withdrawal
- Learning difficulties
- Developmental delays, especially in language, cognition, or concentration
- Behavioral problems, such as tantrums and ADHD
- Long COVID and chronic fatigue
- Autistic behaviors, such as stereotyped speech and social isolation
- Epilepsy and neuronal overexcitability

Despite its positive health effects, lithium is not a cure-all and does not replace other vital nutrients that are often deficient, such as vitamin D, marine omega-3 fatty acids, and others. Ideally, lithium supplementation should therefore be embedded in a systemic, nature-aligned therapeutic approach that takes all areas of life and all essential nutrients into account.

Lithium in essential or low-dose amounts can generally be combined with existing pharmacological medications. In such cases especially, however, individualized medical supervision is required.

2. Dosage

Lithium is an element that always occurs in the form of a salt. Among the various lithium salts, we recommend lithium orotate monohydrate. Because orotic acid—formerly known as vitamin B13—has

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a relatively high molecular weight compared with lithium itself, approximately 26 mg of lithium orotate monohydrate are required to provide 1 mg of elemental lithium.

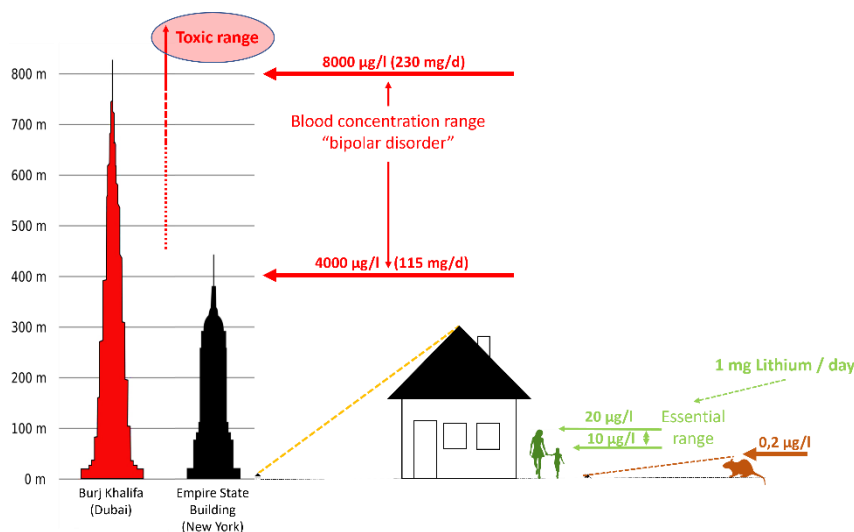
For children weighing between 10 and 20 kg, half this amount may be appropriate due to the higher relative requirement in children—approximately 0.5 mg of elemental lithium per day, corresponding to about 13 mg of lithium orotate monohydrate.

For children with a lower body weight, a daily amount of approximately 0.25 mg of elemental lithium—corresponding to about 6.4 mg of lithium orotate monohydrate—may be considered.

Breastfed infants should naturally receive an adequate supply as long as the mother herself ensures sufficient lithium intake.

3. Blood Levels

The target range is a lithium level of approximately 10 to 20 $\mu\text{g/L}$; see figure. It should be noted that the reference value—the average level in the population without additional lithium supplementation—is approximately 1 $\mu\text{g/L}$, and therefore far below this target range. In children, values below 0.5 $\mu\text{g/L}$ are not uncommon; the lower limit of detection is approximately 0.2 $\mu\text{g/L}$. These values are therefore far below the target range of approximately 10 to 20 $\mu\text{g/L}$.



As also shown in the figure, the target range for trace-element supplementation is far below the therapeutic serum lithium range used in psychiatric treatment, which is approximately 4,000 to 8,000 $\mu\text{g/L}$ and is associated with known, sometimes serious side effects.

Most laboratories are designed to measure these much higher lithium concentrations.

For trace-element assessment, especially with daily doses of up to 5 mg of elemental lithium—corresponding to approximately 128 mg of lithium orotate monohydrate—specialized high-sensitivity testing is therefore required. Only a few laboratories offer this type of testing, such as IMD Berlin, Medical laboratory Bremen, or Biovis.

In individual cases, such higher intakes may be necessary for a short period of time, for example to help overcome neuroinflammation. This can result in lithium levels in the range of 75 to 80 $\mu\text{g/L}$. As the figure also shows, even these lithium levels remain far below those targeted in the treatment of bipolar disorder.

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4. Risks and Side Effects

As was the case with correcting widespread iodine deficiency in the early to mid-20th century, efforts to correct lithium deficiency today are often overshadowed by concerns—unfortunately often raised by physicians and entirely unnecessarily—about dangerous side effects. This concern prevents the use of preventive and root-cause-oriented medicine.

Yet such concerns are justified only in the case of therapeutic high doses—hundreds of milligrams per day—not with the intake of essential amounts. The amounts used in supplementation, for example 0.5 to 1 mg of elemental lithium per day—provided as approximately 13 to 26 mg of lithium orotate monohydrate—correspond to naturally occurring levels found in certain medicinal waters or foods such as shellfish, the original evolutionary source for the development of the human brain; see: [The Conspiracy Against Lithium](#). From a toxicological perspective, these amounts are considered safe.

According to the European Chemicals Agency ([ECHA](#)), a 70-kg adult can consume up to 85 mg of lithium per day over the long term without adverse effects. This corresponds to 85 times the estimated daily requirement of an adult. Lithium is therefore considerably more difficult to overdose than many other trace elements, such as selenium or zinc. Put differently, it is by far the safest essential trace element.

In some countries, including the United States, low-dose lithium orotate providing 5 mg of elemental lithium per daily serving has been commercially available without prescription as a dietary supplement.

5. Observed Effects in Clinical Practice

5.1 Sleep Quality

- Marked improvement in sleeping through the night, with less frequent nighttime waking
- Less restlessness in children with developmental disorders
- In individual cases, more vivid dreams at first, possibly due to improved deep sleep

5.2 Emotional Stability

- Increased emotional resilience, such as less frequent and shorter tantrums
- Reduced frequency and severity of tantrums, for example from daily episodes to weekly episodes
- Greater self-reflection, insight, and frustration tolerance
- Improved ability to engage in conversation, even in children with developmental delays
- Lithium has a stabilizing, not sedating, effect

5.3 Anxiety and Withdrawal

- Children report greater inner calm, confidence, and courage
- More initiative in everyday life

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- Positive effects on social competence at school and within the family

5.4 Epileptic Symptoms

- Reduced seizure frequency and intensity, even in cases already being treated pharmacologically
- Fewer emotional escalations
- Better integration into everyday life, for example in residential care settings
- Possible mechanism: reduction of neuroinflammatory processes underlying epilepsy

5.5 Social Behavior and Self-Regulation

- Greater willingness to communicate, improved social adaptation, and increased self-awareness
- Lithium supports the “mental immune system” against overstimulation and loss of control
- Adults, too, often show greater calmness and improved conflict-resolution skills

5.6 Effects on the Family System

- Parents report better sleep, clearer thinking and focus, and feeling less overwhelmed
- Positive effects on the overall family atmosphere

5.7 Depression and Chronic Stress in Adults

- Case examples show marked remission of symptoms within a few days
- Effects also observed in treatment-resistant cases in which conventional antidepressants had failed
- Reported experience: “a reset of my life”

6. Practical Notes

- Rapid onset of effects: In most cases, noticeable changes occur within 2 to 6 days after starting supplementation.
- Reliability: When supplementation is paused, the original symptoms often return.
- Side effects: At appropriately low, essential-dose levels, no relevant side effects are known; long-term tolerability appears to be good.
- Cost-benefit ratio: Lithium is very inexpensive compared with conventional psychotropic drugs, especially since such medications often only mask symptoms of an underlying deficiency rather than correcting the cause. In many cases, that cause may lie in a lack of essential micronutrients, which is why lithium should be considered within a broader systemic approach that takes multiple causes of developmental disorders and therapy resistance into account.

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- Distinction from pharmacotherapy: This is the correction of a micronutrient deficiency, not a drug-based therapy.

7. Diagnostics and Laboratory Monitoring

- Have a micronutrient analysis performed for yourself and/or your child. This makes it possible to identify individual deficiencies and correct them in a targeted way.
- Recommended testing as part of a systemic approach includes: a whole-blood trace element profile, including lithium, selenium, zinc, and magnesium; the omega-3 index for marine omega-3 fatty acids, for example through Omegametrix; 25-hydroxyvitamin D3; iron stores, especially ferritin; vitamin B12; and other relevant markers.

8. Lithium in Practice: How to Implement It in Everyday Life

- **Speak with a physician you trust if you feel that your child might benefit from lithium supplementation.**
- Be prepared for the fact that lithium as a trace element is not yet recognized in current medical guidelines. If you encounter skepticism or are even warned about toxicity, this is usually due to a lack of familiarity with microdose use—many physicians know lithium only as a high-dose treatment for bipolar disorder—not due to actual risks at essential-dose levels.
- You may wish to share [my free article summarizing the available evidence](#) with your physician.
- Avoid purchasing products from abroad or online products without clear sourcing and professional guidance. In Germany, many pharmacies now provide quality-tested lithium orotate on medical prescription.

Conclusion

Low-dose lithium supplementation can help correct a widespread deficiency and may lead to noticeable improvements within a short period of time in many neuropsychiatric and developmental challenges—often with the additional benefit that less medication may be needed.

Long-term use can help maintain these positive changes, ideally as part of a holistic approach that also identifies and specifically corrects other deficiencies and takes into account the broader principles of a nature-aligned human lifestyle.

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