Eleanor I combined some of my work that is still not fully edited. Please forgive the mess." (Dr. Mark Millar speaking):

It is believed that kidney distress (as assessed by measuring Glomerular Filtration Rate (GFR) and Creatinine clearance) is increased by logarithmic increasing dosages of lithium. The world’s lithium administration expert, the late Dr. Mogens Schou hypothesized that kidney distress would diminish by lowering the lithium dosages from above 200 mg of pure, elemental lithium (EL) /day to levels closer to 100-150 mg of EL/day equivalent to (0.5-0.8 mmol/l). (1)

1. Vestergaard P, Schou M. Kidney morphology and function in lithium-treated patients. Bibl Psychiatr. 1981;(161):104-14. “We hypothesize that lithium-induced changes of kidney function may become less frequent and less pronounced if patients are maintained at serum lithium levels somewhat lower (0.5-0.8 mmol/l) than those commonly employed” i.e., 1.0-2.0 mmol.

2. Schou M. Forty years of lithium treatment. Arch Gen Psychiatry. 1997 Jan;54(1):9-13; discussion 14-5. PMID: 9006394. “At one time it was feared that lithium treatment might lead to a decrease in the glomerular filtration rate, but systematically collected data indicate that even long-term treatment does not induce renal insufficiency.”

All of the available research demonstrates that kidney dysfunction only occurs when dosages exceed 120 mg of pure elemental lithium. Lithium Orotate dosages are 2-8 tabs per day equal to 10-40 mg of pure elemental lithium.

[In a separate email from Dr. Millar, he states that each 120 mg tablet of the Lithium Orotate he sells, a formula by Hans A. Nieper, MD in Germany, contains only 5 mg of lithium, meaning "pure elemental lithium" in the above statement. Therefore, avers Dr. Millar, taking two tablets per day of Dr. Nieper's product delivers 10 mg of lithium, WELL within safe limits.

Here is an excerpt from Dr. Millar's email in which he describes the amount of lithium in each lithium orotate tablet:

The safe maximum daily intake of lithium is 200 mg of pure lithium daily. 200 mg = 1.0 mmol in the blood. Above this level kidney dysfunction becomes common. You would have to take 40 tablets of lithium orotate daily to reach these toxic lithium levels.

With LO the therapeutic doses are 2-8 tabs per day providing 5 mg of pure lithium per tablet. 8 tabs x 5 mg = 40 mg of pure lithium per day. So there you have the difference. 400 mg = 2 mmol and 40 mg = 0.2 mmol.
Dr. Millar's document continues:

In 1995 a study was conducted in which Creatinine clearance was measured in 12 healthy males using 100mg of lithium carbonate and 600 mg of lithium carbonate. Sodium clearance increased by over 50% with the 600 mg dose but no change was noted with the 100 mg dose. **Neither dosage increased the Creatinine clearance** when measured at 3 and 6 hours. The final conclusion of the study was that a 600 mg dose of lithium did not affect the proximal tube of the kidney.(2)

A 600 mg dose of lithium is approximately 120 mg of elemental (pure) lithium. So this study demonstrated no change of Creatinine clearance at 120 mg of pure lithium. So if you are taking 50 mg of pure elemental lithium daily you can rest assured that you are safe as long as you have healthy kidneys.


The possible role of the **proximal tubule** in the natriuresis which follows the administration of small doses of **lithium**, as used in **lithium** clearance studies, was investigated in 12 healthy males on a fixed sodium intake. Subjects were given placebo tablets, or 100 mg or 600 mg of **lithium** carbonate; renal function was assessed 3-6 h later. The 600-mg dose of **lithium** carbonate caused a 50-60% increase in sodium excretion, whereas the 100-mg dose was without effect. **Creatinine clearance, used as an index of glomerular filtration rate, was unaffected by either dose.**

A recent study in France (Presne, et al., 2003) concluded that increasing lithium dosage causes increasing levels of kidney distress, particularly fibrotic disease within the kidney. The researchers concluded that the degree of interstitial fibrosis of the kidney was directly related to the **duration of lithium treatment and the cumulative dose** and that it was a predictor of the diminishing Creatinine clearance.(3) Again these findings are rarely and only present, in patients **taking over 120mg/day of EL for greater than 15 years.**

3. Presne C, Fakhouri F, Noël LH, Stengel B, Even C, Kreis H, Mignon F, Grünfeld JP. Lithium-induced nephropathy: Rate of progression and prognostic factors. Kidney Int. 2003 Aug;64(2):585-92. The degree of interstitial fibrosis on renal biopsy was also **related to the lithium duration and cumulative dose.** It was predictive of the final creatinine clearance.

Due to concerns over potential FDA persecution (for administering Lithium Orotate) most medical doctors have done so, and continue to utilize it, covertly. A notable exception is Dr. Jonathan Wright.
Jonathan Wright, M.D., a well known family practitioner, best selling author of “Guide to Healing with Nutrition” and “Book of Nutritional Therapy”, public speaker and major clinical researcher of Lithium Orotate administration is on record stating that…

“Even at a quantity of two low-dose lithium orotate tablets, three times daily (for a total 30 milligrams of elemental lithium) patient’s serum… (blood) …lithium levels, usually remains in the “non-detectable” or “below therapeutic” range, which means that they are very safe. In my 30 years of practice, I have never had a patient report of lithium excess.” (Jonathan Wright, M.D.) See at end of article (12)

Without lithium excess, there can be no lithium toxicity!

Furthermore, in a recent written communication to me, Dr. Wright, America’s top Lithium Orotate (LO) medical expert, declared, “After decades of clinical research and laboratory testing of LO on my patients, I discovered that administering Lithium Orotate up to 40 mg per day of elemental lithium is completely safe (without side effects or toxicity to the kidneys) and absolutely effective in the treatment of numerous mental, neurological and physical conditions. At these low lithium levels, 40 mg of elemental lithium, no side effects were noted.” (Jonathan Wright, M.D.)

I recommend you review Dr. Wright’s excellent and vital article, “The Misunderstood Mineral”: Part one at: (15) Part two at: (16)

While seemingly rare among mainstream medical doctors, many alternative-minded “integrative” medical doctors are presently administering LO across the U.S. for major mood disorders such as; MDD and bipolar disorder, PTSD, anxiety disorders, sleeping disorders, other neurological disorders, and those with suicidal ideations.

These alternative medical doctors are achieving excellent results without toxicity or side effects with LO, at dosages in the typical range of 10-40 mg of elemental lithium, compared to Pharma-Li dosing of all major mood disorders in the range of 100-400 mg of elemental lithium, thus causing toxic reactions.

Here follows a few of these alternative-minded “integrative” medical doctors administering Lithium Orotate: “The Essential Trace Mineral.”

Emily Deans, M.D., (Harvard trained psychiatrist) author of “Feeling Better: A 6-Week Mind-Body Program to Ease Your Chronic Symptoms” “Could You Have a Lithium Deficiency? Shocking but true Lithium is an essential trace element.” (43) Who is Dr. Deans? (Who is)

Shaheen Lakhan, M.D., author of “Nutritional Therapies for Mental Disorders”: “Another form of lithium called lithium orotate, is preferred because the orotate ion crosses the blood-brain barrier more easily than the carbonate ion of lithium carbonate. Therefore, lithium orotate can be used in much lower doses (e.g. 5 mg) with remarkable results and no side effects.” (18) Who is Dr. Lakhan? (Who is)
Kerry D. Friesen, M.D., author of “Lithium Orotate”: “Lithium is an essential micronutrient with some chemical properties similar to calcium and magnesium.” (7)

Al Sears, M.D. “Lithium itself is not a drug; it’s a naturally occurring mineral salt like potassium, and something you need for proper mental and physical health... Lithium Orotate is a safe and simple way to help beat the blues.” (19) Who is Dr. Sears? (Who is)

Ward Dean, M.D., author of “The Unique Safe Mineral with Multiple Uses”: “The lithium salt of orotic acid (lithium orotate) improves the specific effects of lithium many-fold by increasing lithium bio-utilization.” (Ward Dean, M.D.) (14)

“Lithium orotate has also been used with success in alleviating the pain from migraine and cluster headaches, low white blood counts, juvenile convulsive disease, alcoholism and liver disorders. Lithium Orotate is extremely safe, with no known adverse side effects or drug interactions.” (Ward Dean, M.D.) (14)

Lithium Orotate “…Does not require blood tests to establish a “therapeutic” level, as the prescription forms do, nor is it toxic to the kidneys as the prescription forms are” (Ward Dean, M.D.) (13)

“Prescription lithium is poorly absorbed by the cells, where it needs to be to do its job... Because it is so poorly absorbed, blood levels need to be fairly high to “drive” it into the cells. Unfortunately, these “therapeutic” blood levels are dangerously close to the toxic level. That’s why patients on prescription lithium need to be carefully monitored... Successful dosing with Lithium Orotate is measured by clinical effects on the patient, rather than by blood levels.” (Ward Dean, M.D.) (13)

“Lithium Orotate will not cause weight gain, nor will it cause sedation or sleepiness.” (Ward Dean, M.D.) (13) Who is Dr. Dean? (Who is)

H. E. Sartori, M.D., conducted a Lithium Orotate study titled: “Lithium orotate in the treatment of alcoholism and related conditions.”

“Thirty-six of the 42 patients studied had been hospitalized at least once for the management of their alcoholism...Lithium orotate was given, 150 mg daily... Lithium orotate proved useful as the main pharmacologic agent for the treatment of alcoholism. Ten of the patients had no relapse for over three and up to 10 years, 13 patients remained without relapse for 1 to 3 years, and the remaining 12 had relapses between 6 to 12 months. Lithium orotate therapy was safe and the adverse side effects noted were minor, i.e., eight patients developed muscle weakness, loss of appetite or mild apathy. For these patients, the symptoms subsided when the daily dose was given 4 to 5 times weekly.” (20)

This was an amazing finding; over 50% of the alcoholic patients who completed this study were without relapse for over one year and 25% of them made it over 3...
years without a relapse. NOTE: This finding of mild side effects subsiding once the Lithium Orotate daily dosage was reduced (27) provides further scientific evidence that lithium has no inherent toxicity when taken in smaller reasonable dosages.

C. Norman Shealy, MD, Ph.D. “The Shealy Protocol for Treating Depression and Fibromyalgia” Lithium Orotate Dosage (Page-2) (20-45mg elemental lithium per day) (21) Who is Dr. Shealy? (Who is)

Ray Sahelian, M.D., author of “Lithium supplement and medication”: Available without a prescription: “Lithium orotate has been marketed as an alternative to lithium carbonate. As this natural supplement, lithium is joined with an orotate ion, rather than to a carbonate ion.” See Dr. Ray Sahelian: (22) Who is Dr. Sahelian? (Who is)

Linda Fugate, Ph.D., author of “Lithium’s Potential Role in Preventing Alzheimer’s disease”: “…Lithium Orotate is a highly bioavailable form of lithium that is available as an over-the-counter dietary supplement.” (23) Dietrich K. Klinghardt, M.D, Ph.D., author of “Lyme disease: A Look Beyond Antibiotics”. “Lithium-orotate… in low doses (15 mg/day) has been shown to protect CNS structures from neurotoxin damage” (24) Who is Dr. Klinghardt? (Who is)


Phuli Cohan, M.D., author of “How I am Treating My Lyme”: Lithium Orotate Personal Protocol – “Lithium Orotate (4.8 mg) 2 pills three times/day (this is not the same as lithium carbonate used in bipolar illness) was also helpful.” (26)

Garry F. Gordon, MD, DO, MD(H) “Dr. Gordon’s Personal Daily Protocol” Lithium Orotate – Beyond Lithium (Lithium orotate – 4.8 mg) taken once nightly. (27) Who is Dr. Gordon? (Who is)

Alice R. Laule, M.D., author of “Lithium”: “The form of lithium I have rec-ommended - Lithium Orotate primarily … Lithium is a trace element which has important functions in the brain, including protecting brain cells from various toxins, and reducing the ill effects in particular of an over abundance of certain neuro-excitatory neurotransmitters which are useful in balanced amounts but harmful in large amounts.” (5) Who is Dr. Laule? (Who is)

Jeffrey Dach, M.D., author of “Beating Depression Naturally”: “Lithium Orotate, on the other hand, is more bio-available, and safer than the Lithium Carbonate.” Who is Dr. Dach? (28)
James Howenstine, M.D., author of “How to Enlarge Your Brain and Improve Brain Performance”: (29) Who is Dr. Howenstine? (Who is)
Mark Hyman, M.D., best-selling author of “The UltraMind Solution”: “Lithium is an essential micronutrient... It is present in all organs and tissues in the body.” (4) Who is Dr. Hyman? 5 Time NY Times Best Seller (Who is) You must see Dr. Hyman’s book. (The UltraMind Solution)

Jonathan Wright, M.D., author of “The Importance of Lithium Supplementation”: “In fact, lithium isn’t a drug at all. It’s actually a mineral-part of the same family of minerals that includes sodium and potassium.” (12) Who is Dr. Wright? (Who is)

Lawrence Wilson, M.D., author of “Lithium”: “Lithium is one of the most important elements in the human body.” (6)

All of these doctors, plus many more, report that LO is extremely effective and without significant side effects, when taken in reasonable low-dosages.

These are a few of the courageous alternative-minded medical doctors who are speaking truth to power and there is no doubt that hundreds, if not thousands, more are administering Lithium Orotate covertly to avoid potential FDA persecution. Many Medical doctors have lost their medical licenses for utilizing vitamins and minerals in their practices.

Many alternative medical doctors are now speaking truth to the power of the pharma-cartel and declaring that the elemental mineral, lithium, is an essential trace mineral in defiance of the mainstream medical model that implies that lithium is a drug. Just because you call a trace mineral a “drug” does not make it a drug. Lithium is only mildly irritating when you exceed the maximum safe therapeutic limit of 100 mg of elemental lithium (EL) and is moderately toxic at 200 mg EL, but it becomes severely toxic at 400 mg EL (equivalent to 2.0mmol). (Young 2009) (17)

You may have heard of lithium and believed that lithium is a drug and a dangerous toxic drug as well. It is true the FDA approved the trace mineral lithium as a “drug” for the treatment of bipolar disorder in 1970; but the truth is lithium is neither a drug nor inherently toxic as “they” would have us believe.

While it is true the massive doses of Pharma-Li commonly prescribed to bipolar and depressive patients can cause intolerable even dangerous side effects; the natural organic lithium product that I am about to present to you has no side effects, because the therapeutic doses are 1/10th – 1/20th of the Pharma-Li doses.

Pharma-Li toxicity is due ONLY to massive dosing of lithium being prescribed, exceeding the safe maximum therapeutic limits of lithium.

Furthermore calling an essential trace mineral a “drug” does not change the fact that it is, in reality, a naturally occurring nutritional element. The pharmaceutical’s “lithium
carbonate and lithium chloride” are mined from the ground and sold as is, without the addition of any other active ingredient. Lithium is the only active ingredient. Lithium is not a drug. Lithium is an essential trace mineral.

In 2008 this fact was even stated in an article by the Veterans Administration Research Currents Report. (Some of the doctors at the VA know what is going on!)

“Lithium is NOT technically a drug, but a mineral, similar to salt.” VA Research Currents (February, 2008) (11)

Jonathan Wright, M.D., author of “The Importance of Lithium Supplementation” “In fact, lithium isn’t a drug at all. It’s actually a mineral-part of the same family of minerals that includes sodium and potassium.” (12) Who is Dr. Wright? (Who is)

Medical doctors are now speaking out about the fact that lithium is an essential trace mineral with incredible therapeutic benefits in low doses. Lithium: Essential mineral or drug?

The trace mineral lithium is now considered by many doctors and nutritional experts to be essential for human health. “The available experimental evidence now appears to be sufficient to accept lithium as essential; a provisional RDA for a 70 kg adult of 1,000 microgram/day is suggested.” (Dr. Schrauzer 2002) 1,000 microgram = 1 mg

Study title: Lithium: occurrence, dietary intakes, nutritional essentiality. (Dr. Schrauzer 2002) See Dr. Schrauzer’s full study report at: (Full report) Who is Dr. Schrauzer? See: (Who is)

Emily Deans, M.D., (Harvard trained psychiatrist) author of “Feeling Better: A 6-Week Mind-Body Program to Ease Your Chronic Symptoms” “Could You Have a Lithium Deficiency? Shocking but true Lithium is an essential trace element.” (43) Who is Dr. Deans? (Who is)

Mark Hyman, M.D., best-selling author of “The UltraMind Solution” “Lithium is an essential micronutrient…” See at: (4) Who is Dr. Hyman? 5 Time NY Times Best Seller See at: (Who is)

Alice R. Laule, M.D., “Lithium is a trace element which has important functions in the brain, including protecting brain cells from various toxins…” See at: (5) Who is Dr. Laule? See at: (Who is)

Lawrence Wilson, M.D., author of “Lithium” “Lithium is one of the most important elements in the human body.” See at: (6)
Kerry D. Friesen, M.D., “Lithium is an essential micronutrient with some chemical properties similar to calcium and magnesium.” See at: (7)

Would you be shocked to learn that alternative-minded medical doctors have been secretly prescribing this organic lithium supplement (without a prescription – it’s not necessary) for over 30 years in the U.S., instead of prescribing the poorly absorbed Pharma-Li versions? (I certainly was shocked, when I learned this fact.)

**This is the breakthrough of Lithium Orotate…**

Lithium Orotate “…Does not require blood tests to establish a “therapeutic” level, as the prescription forms do, nor is it toxic to the kidneys as the prescription forms are.” “Prescription lithium is poorly absorbed by the cells, where it needs to be to do its job.” (Ward Dean, M.D.) (13)

While mainstream medical doctors *routinely* prescribe 140-225 mg of elemental lithium (EL) via Pharma-Li *(for treatment of Major Depression)* alternative medical doctors are routinely administering 1/10<sup>th</sup> – 1/20<sup>th</sup> of the elemental lithium dose (5-20 mg of EL), via Lithium Orotate, for treatment of Major Depression (Ward Dean, M.D.) (13). Why? Because Lithium Orotate has been scientifically and clinically proven to be much easier to absorb through the nerve cell membrane; therefore you don't need to take as much. Most importantly, there are no side effects at these minute dosages.

“Because of its high bioavailability, lithium orotate dosages are usually about 1/20 of the dosage of prescription lithium.” (Ward Dean, M.D.) See Dr. Dean’s Q & A comments on Lithium Orotate at: (13)

Also see Dr. Ward Dean’s article titled “The Safe, Unique Mineral with Multiple Uses”. See at: (14)

Again, Lithium Orotate (LO) is significantly more bioavailable *(i.e., absorbable within the brain-cell)* than Pharma-Li. The increased absorption of LO is due to Orotic Acid the body’s supreme mineral transporter. (More on Orotic Acid later)

**MOST IMPORTANTLY, LOW DOSE LITHIUM OROTATE CAUSES NO SIDE EFFECTS!**

Medical doctors have found that doses of Lithium Orotate, **80-90% lower** than the orthodox Pharma-Li dosage for MDD patients have shown fair to excellent response in **60-70% of patients in the treatment of depression.** (Jonathan Wright, M.D., Ward Dean, M.D., Shaheen Lakhan, M.D., Stanley Olsztyn, M.D., C Norman Shealy, MD, Ph.D.)
It is believed that kidney distress (as assessed by measuring Glomerular Filtration Rate (GFR) and Creatinine clearance) is increased by logarithmic increasing dosages of lithium. The world’s lithium administration expert, the late Dr. Mogens Schou hypothesized that kidney distress would diminish by lowering the lithium dosages from above 200 mg of elemental lithium (EL) /day to levels closer to 100-150 mg of EL/day. (1)

3. Vestergaard P, Schou M. Kidney morphology and function in lithium-treated patients. Bibl Psychiatr. 1981;(161):104-14. “We hypothesize that lithium-induced changes of kidney function may become less frequent and less pronounced if patients are maintained at serum lithium levels somewhat lower (0.5-0.8 mmol/l) than those commonly employed” i.e., 1.0-2.0 mmol.

4. Schou M. Forty years of lithium treatment. Arch Gen Psychiatry. 1997 Jan;54(1):9-13; discussion 14-5. PMID: 9006394. At one time it was feared that lithium treatment might lead to a decrease in the glomerular filtration rate, but systematically collected data indicate that even long-term treatment does not induce renal insufficiency.

A recent study in France (Presne et al., 2003) concluded that increasing lithium dosage causes increasing levels of kidney distress, particularly fibrotic disease within the kidney. The researchers concluded that the degree of interstitial fibrosis of the kidney was directly related to the duration of lithium treatment and the cumulative dose and that it was a predictor of the diminishing Creatinine clearance. (3) Again these findings are only present and rarely, in patients taking over 120mg/day of EL for greater than 15 years.