

# May Missives: From mental health to misinformation

written by Dr. Ronald Hoffman | May 6, 2022



**Acetyl-l-carnitine (ALC) for depression:** Carnitine is a well-known energy compound. It's responsible for transporting long-chain fatty acids into mitochondria to be oxidized for energy production. As a result, it's a plausible nutrient for supporting the function of the heart and brain, the body's most energy-avid organs.

As an acetylated compound, ALC enjoys better ability to traverse the blood-brain barrier. I remember as far back as when, in medical school back in the 1980s, I referred an article about ALC's potential cognitive benefits to my neuroscience professor. He replied with a lukewarm "interesting".

Fast-forward to the latest research, which shows lowered levels of ALC in the brains of rodents with depressive-like symptoms; when supplemented with ALC, the animals experienced "rapid and lasting antidepressant-like effects". Translated to humans, it was found that the decrease in ALC was larger in patients with a history of treatment-resistant depression. Thus, it's proposed that ALC may be a therapeutic tool for appropriate patients with major depression.

Indeed, a review of 12 published clinical trials revealed that ALC "demonstrated similar effectiveness compared with established antidepressants in reducing depressive symptoms"; moreover, it did so with far fewer side effects.

This year, with the plight of Long Covid patients front and center, an article was published proposing carnitine as a potential treatment. A recent Italian study using simultaneous intramuscular injections and oral ALC showed improvements in exercise capacity and mood in Long Covid patients:

*"We believe that the combination of physical exercise with ALC intake is a promising and effective treatment in the management of post-COVID syndrome, especially for the management of musculoskeletal pain and depression, as well as for improvement of quality of life."*

Typical orally-administered dosages range from 1-3 grams per day.

**Antidepressants and “quality of life”:** Prescription rates for antidepressants have soared during the pandemic as Americans’ mental health declined. From October to December 2020 alone, 20 million prescriptions were written; according to research, “23% more patients received an antidepressant item in the third quarter of 2020–2021 compared to the same quarter in 2015–2016.” Over 17% of adult women take antidepressants, and their use by children and adolescents is soaring.

Aside from offering short-term relief, an unanswered question is whether longer duration adherence to drug treatment makes a difference in terms of “quality of life” (QOL). This is a traditional measure that assesses both mental and physical well-being based on the SF-12 questionnaire.

A recent study concluded that, compared to comparable patients with depression not given anti-depressants, those receiving antidepressants enjoyed *no significant advantage* in terms of QOL at two years post-diagnosis.

The authors conclude that psychotherapy and behavior modification are underutilized in the treatment of depression—which they are. It’s simpler to administer a pill than to coach patients on how to cope with their problems; insurance reimbursement for psychotherapy is meager, often limited to a few sessions.

But missing from the authors’ commentary is a comprehensive bio-medical perspective, comprising diet modification, sleep hygiene, exercise, and targeted nutritional supplementation, as well as appropriate hormone replacement therapy for both sexes. Without these, many patients with depression will languish with unimproved quality of life.

**Time-restricted diets don’t work (REALLY?):** “Scientists Find No Benefit to Time-Restricted Eating” proclaimed the *New York Times* last week, another example of abysmal science reporting that was widely echoed in the mainstream press.

The study in question in the *New England Journal of Medicine* looked at 139 overweight Chinese adults who were assigned to one of two groups: one was administered a calorie-restricted diet without time restrictions on eating; the other group got the same calorie-restricted diet with instructions to reduce their window of eating to just 8 hours, a 16:8 time-restricted eating pattern.

Time-restricted eating has been hailed as a way to promote autophagy—the body’s natural cleanup and restoration mechanism. A respite from dawn to bedtime food consumption is thought to allow the body an opportunity to reset. Many Americans breakfast early before work or school, eat lunch and dinner along with mid-day snacks, and then consume a bedtime nightcap. That’s virtually the reverse of the experimental intervention—an 8:16 ratio of fasting to eating!

During the 12-month study, both groups lost weight. But the difference between the dieters was not deemed “statistically significant”. Hence the headlines. But let’s look at the actual numbers:

- Those on the calorie-restricted diet alone lost 14 pounds.
- Those dieting with both calorie-restriction and time-restriction lost 17 and 1/2 pounds

How's that not different?? Given the opportunity to choose among these options for better results, who'd turn down the additional 3 1/2 pounds of weight loss?

Moreover there were other advantages to the addition of time-restriction—it wasn't just about weight loss:

- **Body mass index (BMI):** -2.9 for time/calorie-restricted vs. -2.3 for calorie-restricted alone
- **Body fat mass:** -13 pounds vs. -10 pounds
- **Waist circumference:** -3 1/2 inches vs. -2 3/4 inches (that could be a belt size!)
- **Body fat percentage:** -4.3% vs. -3.0%

The time and calorie-restricted diet was also superior in lowering abdominal visceral fat and belly fat. There was a trend toward greater reductions in cholesterol, triglycerides, blood sugar, and insulin in the time-restricted dieters—again, as with weight, without attaining statistical significance.

Worthy of note, too, is that the study population—Chinese adults—may not capture the full impact of time-restricted eating because the control group was already limiting their food intake to a 10-hour window. That would mean that they only ate, for example, from 9 AM to 7 PM. Most Americans don't nearly limit meals and snacks to that extent.

One wonders if the study were to be replicated stateside, with typical Americans who graze all day from morning to shut-eye, and if it were to be sustained for a period longer than just one year, would not the impact on weight loss have been more robust? Unfortunately, the medically-illiterate journos at the *Times* and its imitators have done the public a disservice by prematurely dismissing time-restricted eating.

**Banning "Misinformation":** This month's award for legislative idiocy surely goes to California, always in the advance guard of governmental over-reach. Not since the Inquisition has heresy been so flagrantly outlawed. The proposed bill would make it impossible for doctors to advocate any but the

limited number of officially approved therapies for Covid; it would also make it punishable to share truthful information with patients characterizing Covid vaccines as anything but completely “safe and effective”. Silencing debate will suppress the diversity of opinion that’s essential to scientific discourse and hamper medical progress; even many staunch vaccine advocates are appalled at the audacity of the measure. The residents of California deserve better.