

Supplement table

The following giant table of supplements is based on research Mara’s done. Mara, Pat, and team Farmstrong are continually converting much of the info in this section into an ingredient list for daily blended shakes and for daily shot-glasses full of supplements (see the latest at [Daily smoothies](#)).

[About Mara’s supplement research](#)

[Changes to this supplement table](#)

Disclaimer! Mara is not a doctor, nutritionist, pharmacist—just a tech writer on a crusade against ALS.

Supplement	Description	How/when to take	Notes/okay to take with	Protocols used in	Safety info
alpha-ketoglutarate (aka AAKG and alpha ketoglutaric acid)	Many uses per WebMD , including preventing muscle breakdown after surgery (intravenously), help with ammonia toxicity.	Kirkman pill bottle says 300 mg per day. Now Sports pill bottle says 10.5 grams per day not to exceed 60 days. Cameron says 21 grams per day.	Kirkman bottle says can take with food. Now Sports pill bottle says not to take with food.	Deanna and Cameron	
Alpha-linolenic acid (ALA)	A type of omega-3 fatty acid found in plants. It is found in flaxseed oil, and in canola, soy, perilla, and walnut oils. Can only ingest it, bodies can’t produce. Differs from the other ALA described below, Alpha Lipoic Acid.	1 to 2 g per day per PSU Flaxseed, 2.2 g per tbsp. Canola oil, 1.3 g per tbsp. Flaxseed oil, 8.5 g per tbsp. English walnuts, .7 g per tbsp. Don’t heat the oils.		Fatty acids article	
Algenol	Can’t find much info on this other than this PDF , which sorta says it’s a type of spirulina.	Can’t find but similar to spirulina.	Can’t find.	Stephen Sherry	Can’t find

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Astaxanthin	Antioxidant used for treating Alzheimer's disease, Parkinson's disease, stroke, high cholesterol, age-related macular degeneration (age-related vision loss), and preventing cancer. A reddish pigment that belongs to a group of chemicals called carotenoids.	Mara says: 5 mg every day WebMD says small studies say between 2 mg and 24 mg daily.	Can take with other vitamins and carotenoids. 2 of the Jarrow krill oil pills contain .13 mgs of Astaxanthin.	Stephen Sherry	WebMD : used safely by itself in doses of 4 to 40 mg daily for up to 12 weeks. Used safely in combination with other carotenoids, vitamins and minerals at 4 mg daily for up to 12 months.
B-12 VeganSafe with Methylcobalamin Adenosylcobalamin	Needed for growth at cellular level. This type is not synthetic. See Dr. Edward description .	While the recommended daily amount of vitamin B-12 for adults is 2.4 micrograms, you can safely take higher doses. Your body absorbs only as much as it needs, and any excess passes through your urine. Mayo Clinic	Best taken without food and without vitamin C (Ben Greenfield Fitness) Taking vitamin B-12 with vitamin C might reduce the available amount of vitamin B-12 in your body. To avoid this interaction, take vitamin C two or more hours after taking a vitamin B-12 supplement. Mayo Clinic	Medical Medium	
B-Strong (a B complex)	Bs are great (help convert our food into fuel) but too much B6 can cause nerve damage. B1, B2, B3, B5, B6, B7, B9,B12	Mara says half a dropper once a week. One nutritionist in 2016 said to take 4-5 droppers daily.	Take with food (Ben Greenfield Fitness) and w/o vit C. Greasy food taken with Bs can interfere with B absorption. C reduces effectiveness of niacin—take C 2 hrs after B complex.		

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C		High dosage is recommended by several protocols. RDA is 90 mg per day	(Ben Greenfield Fitness : take with food. Greasy food taken with C can interfere with absorption. Mayo : Taking C can increase absorption of aluminum from meds containing aluminum, such as phosphate binders. Can be harmful for people with kidney problems. C might reduce the effect of some antiviral drugs.	Stephen Sherry, Medical Medium, and Cameron	C can cause kidney stones. Long-term use of oral C over 2,000 milligrams/day increases risk of signif side effects. Tell doctor you're taking C before having any medical tests. High levels of C might interfere with results, such as stool tests for occult blood or glucose screening tests.
choline	Key to nerve and brain health per Dr. Axe . Acupuncture Integrated says a combination of phosphatidylcholine and phosphatidylserine is used in China to restore neural cell membrane functions. More in annotation.	Dr. Axe recommends 550 mg per day.			
CoQ10 (aka CoEnzyme Q, coenzyme Q10, Ubiquinol)	Case Western study : slows down ALS in mice. http://alsworldwide.org	Per Rosenfeld , might want to try 3000 mg daily. Per WebMD , typical		Cameron, Dr. Wilson	Unfair advantage is worth more investigation https://blog.bulletproof

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	<p>g/care-and-support/article/supplements-and-vitamins study</p> <p>Per WebMD, prelim studies show benefits for various conditions (helps liver, etc.) Used for MD and Parkinsons and cell damage. A substance that your body normally makes.</p>	dose is 100-200 mg daily.			f.com/13-nootropics-to-unlock-your-true-brain/
Creatine-- Alpha Lipoic Acid – L-Carnitine (ALA)	antioxidant that delayed impaired motor performance in SOD-1 mice delayed symptom onset and prolonged motor function in SOD-1 mice	Creatine—Rosenfeld says 5 to 10 mg/day ALA—Rosenfeld says 250 mg, 3x/day L-Carnitine – Rosen says 4-8 grams (4000-8000 mgs.) daily in divided doses, preferably on an empty stomach		Rosenfeld (ALA – Medical Medium too)	
curcumin (turmeric)	Prelim studies show it reduces inflammation and has other health benefits.	Pill bottle says 1 per day Cameron says take 2 per day	Pill bottle says take with food. If turmeric, make sure label says curcumin is included.	Cameron Dr. Wilson	Some supplements contain harmful impurities/additives.
D and D3	An early Harvard study cited by Rosenfeld found that ALS patients taking at least 2,000 IU	Rosenfeld: D 2,000 IU daily D3, 2,000 to 3,000 IU daily, taken with	Per The Globe and Mail , you can take D with or without food.		WebMD for D: Steroid medications such as prednisone can interfere with vitamin

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	daily of Vitamin D experienced a slower decline in ALSFRS symptoms. Here's a similar study.	food			D metabolism. If you take steroid drugs regularly, discuss vitamin D with your doctor. The weight loss drug orlistat -- brand names include Xenical and Alli -- may cut absorption of vitamin D. So does the cholesterol-lowering drug cholestyramine (sold as Questran, LoCholest, and Prevalite). People taking these drugs should discuss vitamin intake with their doctors. WebMD for D3: a ton of drugs
E	A study says it slows ALS progression. Rosenfeld says so too!	Rosenfeld says 500 mg twice daily Dr. Weil : must take it with fat in order for it to absorb.		Rosenfeld, Medical Medium	Study that says 5000 mg per day is safe for PALS.
GABA	Calms down nervous system but also is a neurotransmitter that blocks impulses	Mara: thinking we don't use this one or use it sparingly.		Not sure but pretty sure Cameron approved it in	According to WebMD , there's almost no evidence of GABA being useful.

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	between nerve cells in the brain.			Clark'	
ginkgo	WebMD : Ginkgo improves blood flow to the brain and acts as an antioxidant.	WebMD says start low. Mara says 40 ml daily provided Pat doesn't take more than the RDV of any other vitamin (see Livestrong for vitamin interactions).	No evidence avail on whether to take with food or not. Bottle says to take with water or juice. Note that the bottle we have 4/18/18 has a ton of other stuff in it (rosemary, alcohol, etc.)	Medical Medium	Livestrong : Troubles getting blood to clot or have epilepsy, avoid ginkgo. Ginkgo can interfere with some antidepressants, blood pressure meds, diabetes drugs
krill oil (omega 3)	Improves glucose management, helps liver respond to challenges, brain nutrition, lipid management (from Jarrow pill bottle)	Pill bottle says 1.3 mg daily (2 pills) Cameron says 3.9 mg per day (6 pills)	Bottle says take with meal	Cameron	
lemon balm	A perennial herb from the mint family. Used for tons of stuff, including sleep aid.	Mara: 1 dropper before bed or just after dinner (best with food).	Study that says to take it with food: https://draxe.com/lemon-balm/	Medical Medium	Interacts with sedative medications and thyroid meds. It's been used safely in research for up to 4 months.
L-Serine	Amino acid needed to create phosphatidylserine, a component of the membrane of brain cells.	Phase 2a study is doing 15 grams orally twice a day. Package says 2000 mg per day.	Institute for EthnoMedicine recommends it for ALS (see Netflix <i>Toxic Puzzle</i> — NaturalHealthyConcepts summarizes it).		GRAS per Phase 1 study (NaturalHealthyConcepts summary) and Institute for EthnoMedicine.
magnesium powder					
melatonin	WebMD : A hormone found naturally in the body that helps you	Mara and Rosenfeld: 5 mg per night 1-10 mg per night	Take before bed	Rosenfeld, Stephen Sherry,	

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	sleep.	(but don't do 10 mg past 10 days, take breaks) Stephen says 1 mg each night, Cese/Matt say 10 per night over short term)		suggested by Kelly the LLU nutritionist, Cese Viti, Matt McGrath	
NAC	Livestrong : N-acetylcysteine, supplement form of the amino acid cysteine, which converts to glutathione, a powerful antioxidant. WebMD says used for ALS.	Mara: take less than recommended because it prevents clotting (like heparin). U of Maryland Med Center says start w/ 500 mg daily and increase w/ dr. supervision.	Betternutrition.com : Like other amino acid supplements, NAC should be taken either 30 minutes before, or two hours after, eating to avoid competing with protein for absorption.	Medical Medium	WebMD : Bad interactions with Nitroglycerin and activated charcoal Doses higher than 7,000 mg could cause toxicity.
Neuromaster (coffee fruit extract)	increases brain-derived neurotrophic factor (BDNF) levels – even more than exercise. BDNF is a crucial neuroprotein that helps increase neuroplasticity and create new neurons, resulting in better memory and focus.		https://blog.bulletproof.com/13-nootropics-to-unlock-your-true-brain/		
probiotic (20 billion)		Mara: 1 every other day Cameron: 1 every day			

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PQQ	Supports mitochondria.				
Saw Palmetto berry extract	Commonly used to prevent complications from prostate surgery and for treating certain types of prostate conditions	Pill bottle: 1 every day Cameron: 1 every day			
Vinpocetine	Rosenfeld	Rosenfeld: suggested dosage of 10 to 20 mg daily after a morning meal but start off with 5 mg daily for a few days first.		Rosenfeld	

About Mara's supplement research

Mara (who's not a doctor, just a writer who's done some research) met with several nutritionists and a dietician in the local area. They all have different takes on what to do, but all agreed that salmon and organic avocados and almonds are good to eat. Only one advocated for use of any sort of supplements.

Changes to the supplement list

Fall 2018

- Removed spirulina per Netflix documentary Toxic Puzzle, which stated that BMAA sometimes is in spirulina, because spirulina providers don't differentiate as well as they should among the different types of green algae.

Summer 2018

- No more B-Strong or take in very small doses. Issues with it:
 - It has too much B6. One dropper contains 50 mg of B6, which is 2500% of your recommended daily allowance (RDA). RDA is 1.3 milligrams for adults under age 50 and 1.7 for over 50. UL (tolerable upper intake level--highest amount you can take, per day, without a significant risk of toxicity) is 100 mg. **According to [Livestrong](#), B-6 toxicity can cause nerve damage.** Also, it interacts with 35 drugs.
 - One dropper contains 60 mg of Niacin, which is almost double the UL (35 mg). The RDA is 16 mg. It also comes in chicken—we may be ODing on this.
 - It contains almost no choline (5 mg per dropper), but choline is key to nerve and brain health per [Dr. Axe](#). Recommended dosing is 550 mg per day.
 - B-Strong contains PABA.
- Instead of B-Strong, take B12 2.4 mcg (per [Mayo Clinic](#)) and choline 550 mg per day. Note, all vitamin Bs are water soluble, but B12 can be stored in the liver, up to 5 years' worth. B12 supports the lining of your nerve cells. B12 take 13 mcg per day.
- Take a small amount of vitamin E with fat twice a week. It's easy to get too much of this supplement.
- Make sure vit C is being taken daily.
- Melatonin before bed.
- Magnesium when cramps are bad and before bed (up it as needed)
- Nitric oxide-suppressing agents
- Consider peroxynitrite scavengers such as lipoic acid, Coenzyme Q10, carnosine, ginkgo biloba, N-acetyl cysteine (Vitamin C and Vitamin E are also peroxynitrite scavengers)

Foods with vitamin E

Almonds 1 oz: 7.3 mg (27% DV)

Spinach 1 bunch: 6.9 mg (26% DV)

Sweet Potato 1 Tbsp: 4.2 mg (15% DV)

Avocado 1 whole: 2.7 mg (10% DV)

Wheat germ 1 ounce: 4.5 mg (17% DV)

Sunflower seeds 2 Tbsp: 4.2 mg (15% DV)

Palm Oil 1 Tbsp: 2.2 mg (11% DV)

Butternut squash 1 cup, cubed: 2 mg (7% DV)

Trout 3 oz: 2 mg (7% DV)