

Is it necessary to take Glutathione?

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A diet rich in anti-oxidants is helpful for general health and likely more helpful in conditions of oxidative stress which may include neuro-developmental problems such as Autism and ADHD. The best way to improve health is by adding foods naturally rich in antioxidants, as opposed to taking expensive and at times unpalatable supplements which may be variably absorbed.

Glutathione is very popular right now in autism treatment due to its role in detoxification and as part of the body's natural defense against oxidative stress. It is also relevant to individual with a genetic variation in the MTHFR gene. There are ways to stimulate an increase in the body's own production of glutathione as opposed to taking a supplement. This approach of **dense nutrition** as opposed to supplementation allows us to use food to assist the body with its own natural processes.

The following are foods are all involved in the pathways that the body uses to produce its own glutathione. Also listed are other foods which have antioxidant properties of their own as well:

1. Sulfur rich vegetables – broccoli, cauliflower, onions, garlic
2. Selenium rich foods – brazil nuts, tuna and oats
3. B6 rich foods -
4. Tomatoes – rich in lycopene a powerful antioxidant
5. Berries – of all types are rich in proanthocyanidins which are powerful antioxidants
6. Most colorful fruits and vegetables have significant health benefits in terms of vitamins A and C as well as antioxidant compounds

For those of you who still want to trial glutathione supplementation. Below are some general guidelines. As always check one of the third party consumer watchdog groups to be sure your product is safe and pure. These organizations include: www.consumerlabs.com, www.usp.org, <https://ods.od.nih.gov/> , <https://nccih.nih.gov/> , www.nsf.org are some good sites for more information.

You can also look for products with these seals of approval



There are three ways to increase levels of glutathione, 1) take precursors like whey protein and N-acetyl cysteine (NAC) (quality variations may interfere with raising glutathione levels); 2) get glutathione injections expensive and not enough research to support this 3) take an oral glutathione supplement, particularly [liposomal glutathione](#) that is not destroyed by the digestive process so it can be absorbed 4) apply it transdermally in a lotion 5) eat an antioxidant rich diet as described above.

If you decide to take a supplement it needs to be in the “reduced” or “liposomal” form to be absorbed properly or a good quality lotion. A few reputable glutathione products include include: Redisorb (www.redisorb.com) or glutathione lotion available at www.kirkmangroup.com.

Instructions for Redisorb:

The dosing recommended for children was: 50 mg (1/8th teaspoon) for every 30 lbs twice a day for 5 days; 100 mg (1/4th teaspoon) for every 30 lbs twice a day for 5 days;

150 mg (3/8th teaspoon) for every 30 lbs twice a day for 5 days; 200 mg (1/2 teaspoon) for every 30 lbs twice a day as tolerated thereafter. Participants were instructed to take it on an empty stomach.

Instructions for the lotion:

Kirkman's glutathione lotion is generally dosed at one external application of one gram, two to three times daily. Each gram (one level scoop) of Kirkman Glutathione Lotion contains 180 mg of reduced L-glutathione. The product comes with a one-gram measuring scoop. Product is to be shaken well before each use to ensure uniformity. Because of its oily nature, it is recommended the lotion be applied on areas of the body with a large surface area, such as shoulders, back, upper thighs, etc. The dosing recommended for children was: one-fourth external application of one gram, three times daily for 5 days; one-half external application of one gram, three times daily for 5 days; three-fourths external application of one gram, three times daily for 5 days; one external application of one gram, two to three times daily as tolerated thereafter.

Published research:

1. James SJ. *et al.* Metabolic biomarkers of increased oxidative stress and impaired methylation capacity in children with autism. *The American Journal of Clinical Nutrition*. 2004; 80: 1611-1617.
2. Al-Yafee A. *et al.* Novel metabolic biomarkers related to sulfur-dependent detoxification pathways in autistic patients of Saudi Arabia. *BMC Neurology*. 2011; 11: 139.
3. Main PAE. *et al.* The potential role of the antioxidant and detoxification properties of glutathione in autism spectrum disorders: a systematic review and meta-analysis. *Nutrition & Metabolism*. 2012; 9: 35.
4. Hardan AY. *et al.* A randomized controlled pilot trial of oral N-Acetylcysteine in children with autism. *Biological Psychiatry*. 2012; 71: 956-961.