

Before Taking N-Acetylcysteine Read This!

Posted by Diana Driscoll

Can we do better than N-acetylcysteine(NAC)?

There has been a great deal of talk about N-acetylcysteine and its importance in boosting cellular immunity, inhibiting virus replication, and supporting immune function. But can we do better than N-acetylcysteine alone? Yes we can!



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damage, tissue and organ damage, and changes in brain chemistry) can be minimized.

What does research tell us?

Research and clinical trials into the effects of NAC are vast, but its ability to support immune function is receiving quite a bit of attention lately. Why is that?

N-acetylcysteine (NAC) **increases glutathione levels** and research shows that even moderate improvements in glutathione levels have dramatic effects on lymphocytes (immune cells).¹ This has been the most studied in cases of human immunodeficiency virus (HIV)-infected patients, who responded with a significant increase in all immunological functions tested, including natural killer cell activity.

Interestingly, NAC has been shown to inhibit the replication of the influenza A virus.² This is likely due to the delicate balance of immune function and oxidation.

The antiviral and anti-inflammatory mechanisms of NAC are a powerful combination and studies show how it inhibits both virus replication and the production of pro-inflammatory molecules in H5N1 infection. In a randomized, placebo-controlled study of 262 subjects, N-acetylcysteine (NAC) was found to dramatically reduce both local and systemic symptoms of influenza and influenza-like episodes. In A/H1N1 Singapore 6/86 influenza virus infections, NAC reduced the number of patients with symptoms to 25% versus 79%.³

To fully understand how this is effective, it is important to understand that many viral infections and disorders of the immune system result in chronic inflammation and oxidation. Not only is this inflammation and oxidation damaging, it also lowers the immune system and causes dramatic (and even lethal) symptoms. At this point, the condition must be addressed as not only infectious, but as inflammatory and oxidative. This is where N-acetylcysteine comes in.

What is oxidation?

A consequence of inflammation is oxidation. Inflammatory cells release many chemicals designed to kill germs, weaken connective tissue, and allow vessels to “leak” a bit. This invites healing agents into the area of inflammation (such as a swollen ankle, for example). One of the chemicals released by inflammatory cells is Reactive Oxygen

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The master antioxidant of the body (glutathione) is not helpful when introduced into the body because it is not absorbed well (this includes transdermal, liposomal, oral, suppositories, and even inhaled glutathione). Instead, our bodies must make their own glutathione, and the body is equipped to do so! By ingesting NAC, the body begins making its own glutathione almost immediately!

Can we do better than N-acetylcysteine alone?

To maximize the ability of NAC to support immunity and antioxidant levels, NAC MAX™ was developed.

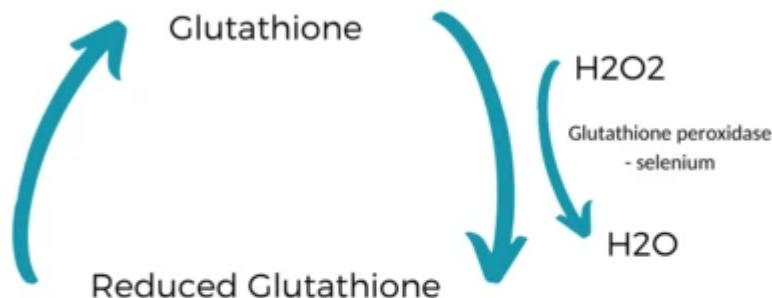
NAC MAX™ does more than NAC alone. In addition to the necessary NAC, NAC MAX™ has additional ingredients to do the following:

- Recycle the glutathione that is produced. Both Vitamin C and alpha-lipoic acid can recycle glutathione, allowing levels of glutathione to increase.⁴ But this is not a matter of just adding more ingredients! Too much Vitamin C is actually pro-oxidative (the opposite of antioxidative)!
- Supply selenium which is required by glutathione peroxidase to produce glutathione.



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Glutathione peroxidase catalyzes the reduction of H₂O₂ by glutathione and forms reduced glutathione (the active form of glutathione).

The active form of glutathione is called “reduced” glutathione. To maximize reduced (“active”) glutathione, an enzyme called Glutathione peroxidase is needed. It converts glutathione to reduced (active glutathione). **It does so by catalyzing the reduction of H₂O₂ (hydrogen peroxide) to H₂O (water)** which then forms reduced glutathione. Glutathione peroxidase is a selenium containing enzyme. We need sufficient levels of selenium to produce glutathione peroxidase.

NAC MAX™ contains all of these ingredients – in just the right proportions—to support the production of active glutathione for the body.



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Dr. Diana Driscoll, an Optometrist, is the President of Genetic Disease Investigators, LLC – a research corporation devoted helping people affected by “invisible illnesses”. Now focused on... [Read more...](#)

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