Reduced Glutathione VS. Acetyl-Glutathione and NAC

N-acetyl-cysteine (NAC) is no less expensive than acetyl-glutathione. You need to take 3-5 grams of NAC to 1 dose of acetyl-glutathione. NAC doesn't have the ability to pass the blood brain barrier as effectively as acetyl-glutathione.

Glutathione exists in two forms: either the reduced form (GSH), or the oxidized form, commonly written as GSSG (also called glutathione disulphide). If the term "glutathione" is used, this usually means reduced glutathione. Glutathione only has a protective action in the body when in reduced form.

S-Acetyl Glutathione (S-A-GSH) is a unique form of glutathione, one of the most powerful antioxidants naturally produced in the body. It has an acetyl group (COCH3) attached to the sulfur atom of cysteine in the glutathione molecule.

What Is Glutathione? Reduced glutathione, commonly known as glutathione or GSH, is a tripeptide consisting of L-glutamine, L-cysteine, and glycine. It is ubiquitous in living systems. Glutathione bio-synthesis can be affected by biochemical individuality and/or dietary factors. Chronic oxidative stress can also deplete cellular glutathione. Glutathione is naturally synthesized from N-Acetyl Cysteine (NAC) in the human body. Precursors to glutathione, such as whey protein, vitamin C, and glutamine, are also recommended to boost glutathione levels in the body; however, results are inconsistent. Biological individuality is such that not every body has equivalent ability to metabolize the precursor to raise glutathione.

Can't I just take a less expensive "reduced glutathione" supplement? Reduced glutathione is how the body uses it, but it is only absorbed by injection or nasal. Acetyl-glutathione is a a stable form of glutathione that the body can store for several hours, slowly changing in the blood stream to reduced glutathione. This then becomes available to the cells in the body.
Acetyl-Glutathione is a time released glutathione that passes the blood brain barrier.

Why not give pure glutathione? Unfortunately, most oral forms of glutathione are foul smelling, but, more importantly, the majority of an oral dose is oxidized before it can be absorbed and used by the cells. Oral intake of S-acetyl glutathione increases total glutathione and percent-reduced glutathione. **S-Acetyl Glutathione is the most absorbable form of oral glutathione.** With S-acetyl-glutathione, the acetyl bond is placed on a sulfur group, which prevents oxidation and allows the molecule to pass diffusively into the cell after absorption in the gut. The bond is then cleaved by non-specific enzymes inside the cell. Acetylation prevents the breakdown of glutathione, and S-acetyl glutathione does not require energy expenditure to be cleaved to reduced glutathione once it crosses the cell wall.