



Urea Cycle—“*The Waste Facility*” is responsible for cleaning up most of the toxic waste generated within the community. Think of this cycle as your local garbage dump replete with trucks transporting recyclables and trash via the liver’s main highway (CBS). Though the “*Better Health 4 Life*” (BH4) Corporation is charitable enough to share its’ BH4 compound in order to clean up toxins and compost, this plant must clear out contaminants in any way possible. This generous supply of BH4 also allows the *Waste Facility’s Supervisor* (NOS) to make nitric oxide (N.O.). N.O. maintains blood vessels throughout the body, keeping them open and free of plaque that would otherwise lead to strokes or heart attacks. This facility also produces an amino acid (fumarate), which feeds directly into the *Power Plant* nearby. This is a true community, in which each cycle functions to support another, making them all interdependent. When everything is operating smoothly, this facility efficiently removes ammonia and other harmful wastes through the liver and kidneys. However, several factors may impede its performance, some of which are:

1. The BHMT & CBS defects may be working overtime to dump waste into this plant’s already overflowing bins, trucks and storage units.
2. The BH4 Corp. may use most if its’ special compound to make dopamine & Serotonin.
3. The BH4 supervisor, the Big Motherflipper, becomes critically ill and is unable to produce BH4 (full defect) or is only able to make small loads (partial defect).
4. The Waste Facility’s supervisor (NOS) has a bit of a drinking problem and doesn’t feel like working too much (partial defect) or worse; he’s destroyed his own liver and doesn’t work at all (full defect).
5. A high protein diet creates more toxic ammonia through the CBS highway (transsulfuration), and burdens the garbage dump further.
6. Those taking a great deal of supplements, without regard for their genetic makeup, will only add more ammonia & sulfites to the growing burden.
7. Chronic bacterial issues, particularly anyone with ongoing gastrointestinal problems, as they are more likely to have too much intestinal bacteria, which release even more ammonia & toxic byproducts.

Though any one of these can lead to problems, having several elements in place implies more serious difficulties. Without viable options, the facility begins to dump toxic waste into surrounding rivers, lakes, and woodlands. While this initially relieves the burden and buys time, it will always come back to haunt everyone in the community. Just as the poisonous waste products known as **free radicals**, wreak havoc within the body’s chemistry by damaging and often, destroying previously healthy cells. These bad boys, known as **Super Oxide** (S.O.) & **Peroxynitrate** (P.N.) are the ultimate villains. Following their assault on healthy cells, they steal their positive energy, triggering collateral damage and widespread destruction. These criminals work together in a highly targeted fashion. S.O. disables your brain’s alarm system (microglia) while P.N. moves in for the kill, annihilating brain cells & nerve cells (neuronal death). This is one reason that antioxidants & free radical scavengers are so vital to overall health and wellbeing---they work to lessen this damage.