High cortisol: A summary of the negative impacts of elevated cortisol includes:

1. Suppression of TSH, decreased conversion of T4 to T3, increased production reverse T3 (rT3) and decreased cellular thyroid receptor binding. (In other words, you get fat, among other things.)
2. Increased blood glucose levels.
3. Suppressed pituitary function, leading to low luteinizing hormone and low Testosterone.
4. Decreased liver detoxification.
5. Suppressed secretory IgA, increasing potential of gut inflammation, infection and permeability.
6. Decreased immune system function, leading to increased risk of infection.
7. Insomnia.
8. Neurodegenerative disorders, including degradation of the blood-brain barrier and destruction of the hippocampus.

Low cortisol also has negative health impacts including:

1. Suppression of the immune system.
2. Hypoglycemic tendencies, leading to increase in catecholamine release, fluctuations in blood sugar and insulin spikes.
3. Increased inflammation.

**Chronically elevated cortisol:**
a. Phosphatidylserine — 2g a day in divided doses
b. Adaptogenic herbs — panax ginseng, [rhodiola](http://www.t-nation.com/store/products/rhodiola), ashwaganda, eleutherococcus
c. Cytokine support — [resveratrol](http://www.t-nation.com/store/products/rez-v), pycnogenol, green tea extract, pine bark extract
d. Neurotransmitter GABA support — taurine, valerian root, passion flower, L-theanine

**Chronically depressed cortisol:**
a. Licorice root extract — Dosages depend on the type of licorice root extract used
b. Adaptogenic herbs — panax ginseng, rhodiola, ashwaganda, eleutherococcus
c. Cytokine support — Echinacea, astralagus, shiitake mushroom, beta-glucan, beta sitosterol
d. Excitatory neurotransmitter support — acetylcholine (Alpha-GPC, huperzine, galantamine), serotonin ([5-HTP](http://www.t-nation.com/store/products/z-12) ), tryptophan, St. John's wort