

## MODULE 7 – ADDITIONAL HANDOUT

### Perfect Sleep

## Melatonin: The Whole Story

You have heard of this as a sleep aid-which it is. But I'm going to tell you a lot more than this.

Melatonin is a neurohormone.

It is found in plants, animals, humans and is believed to be what sets our circadian rhythms (day/night); even those of animals, and, really; of plants!

It reduces oxidative stress (free radical damage), thereby decreasing inflammation, and is now discovered to partially block the process which shortens telomeres (these are the "caps" of our genes: they **do** shorten with age), and that's what we're slowing all through your AgeWellSolutions Modular Program!

- Via the same mechanism, it also protects your body from the "pro-oxidant" (or oxidizing, rusting effects) on your arteries- by iron- discarded by old red blood cells.
- It augments immune function by increasing CD4 cells (something we routinely check in HIV+, AIDS, and other "immune-compromised" patients). It also increases what are known as natural killer cells.
- It reduces inflammation by decreasing pro-inflammatory cytokines.

- It preserves brain mitochondria (remember those little cells that make energy: ATP?), slows age related cognitive decline, and, along with curcumin (find this product in the Solutions handout for Module 1 in the discussion of inflammation) inhibits beta-amyloid formation in the brain; a process that is found in patients with Alzheimer's disease.

In addition, an **exciting** (fairly) new discovery is that we still have stem cells in our brain even as adults, and that melatonin turns on these stem cells.

This means that we CAN still create new brain circuitry as adults! This is a major addition to an anti-Alzheimer's regimen.

- It is also cardio protective; (your heart) and it helps preserve lung function.
- It will help decrease insulin levels, which means that if you are Type 2 diabetic or pre-diabetic (insulin-resistant = "glycating"), it will help. Remember too; a nice low insulin level means minimal internal inflammation.
- Lastly, melatonin inhibits tumor growth in mice, plus it extends their lifespan!