

## Decreasing the mTOR Pathway

*An epigenetic approach to decreasing mTOR thereby increase cellular cleaning and detoxification.*

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\*If you haven't listened to my presentation at the Minnesota Holistic Medical Group's spring 2018 meeting where I go through what mTOR is and why it's a good idea to "ease-up" on it, [CLICK HERE TO WATCH THE mTOR presentation.](#)

The word **mTOR** stands for *mammalian target of rapamycin*. It is the master regulator of metabolism, transcription and protein synthesis. In simplistic terms, mTOR is how the body makes new cells, kind of like your body's **construction crew**. When the sperm and the egg meet, mTOR is on overdrive or else we wouldn't be here; when you cut your finger, mTOR is ramped up; body-builders love themselves some mTOR. While the opposing force or mechanism is autophagy. **Autophagy** is a **catabolic process** - the cleaning up of old cells, and other cellular debris, kind of like the **janitors**. Autophagy is also a recycling mechanism by which cells digest damaged constituents and/or organelles and recycle the nutrients back to the cell for essential processes. It's so important that in 2016 the Nobel Prize in Medicine was awarded to molecular biologist Dr. Yoshinori Ohsumi for his work in the field of autophagy.

**When mTOR is stimulated, autophagy is shut down.** In other words, when the construction crew is called in, the janitors are sent home. Genetic patterns that push mTOR and deflate autophagy have been found in those with *Chronic Lyme Disease*. This means that the ability to do the "cellular vacuuming" we all desperately need to do in this toxic world we live in and ESPECIALLY in those with Lyme is shut down even more. Lyme treatment creates a lot of cellular debris and it with this imbalance it can't be cleaned up when mTOR is stimulated. The damaged constituents and/or organelles can't be recycled the nutrients back to the cell for essential processes CANNOT happen. This weakened autophagy leads to an **internal environment that increases the toxic load, makes detox difficult which often leads to negative reactions to both traditional medical treatment, and supplementation to support function.**

So in this toxic world, there are things that naturally push mTOR. They are "epigenetic" factors that upregulate and call in the construction crew, thus shutting down your cellular cleaning system. They are: plastics, proteins (specifically leucine, glutamine and arginine), dairy, electromagnetic fields, iron, folate, methylfolate, methylcobalamin, glutamate, MSG and pesticides. Let's dig a little deeper into all these modifiable mTOR pushers.

- Plastics - Don't drink or eat from plastics. Filter your water. (I prefer reverse osmosis but do not know if this is actually filtering out the plastic fibers.)
- Protein - Rethink protein drinks. Scale down on the meat & replace with vegetables.

- Dairy - Remove. End. Of. Story. It's inflammatory, raises IGF-1 & you can get your calcium from other dietary sources.
- Electromagnetic fields - Turn off WIFI at night, get your phone off your body as much as possible, use EMF protective devices or just call this guy [www.intentionalenvironment.com](http://www.intentionalenvironment.com)
- Iron - Avoid iron fortified food. Avoid OTC iron supplementation, especially if you have HFE single nucleotide polymorphisms - they cause more iron to be absorbed by your body which feed into making hydroxyl free radical (ie increase your body's inflammation) Listen to this podcast for more info on why iron is not so great <http://lymeninjaradio.com/162-morley-robbins/>
- Folate, methylfolate, methylcobalamin - Rethink. Work with a skilled practitioner who will help you sort this out with labs like The Methylation Panel from Doctor's Data. Not everyone with MTHFR needs methylfolate.
- Glutamate - Avoid MSG. Don't over-do bone broth.
- Pesticides - Stop eating and breathing. OK, bad strategy. Eat organically. Keep your organs of detoxification supported with fasting and herbs and cleanses IF NECESSARY. Filter your water (reverse osmosis). Products like "PON1 Assist" by MethylGenetic Nutrition are designed to support the PON1 enzyme, so get your genetics tested (insert here) and find a Certified NutriGenetic Research Institute practitioner - hey that's me!

What else can you do to ease up on your mTOR - FAST. Fasting boosts autophagy like no other pill, potion or lotion on the planet. Pleasant, no. Extremely health-promoting, yes.