Psst...NRDC Stoners: Your Endocrines Are Disrupted

By Josh Bloom — June 30, 2016

The Natural Resources Defense Council never shuts up about common trace chemicals that it claims will disrupt your endocrine system. But, it is strangely silent when it comes to a REAL disruptor — marijuana.

Are people there just too stoned to notice?

Go to the NRDC website. Search "endocrine disruptors." You will find 103 articles that rant about all the chemicals that they say are screwing with our hormones.

Here are some of the usual suspects: BPA (surprise), a bunch of phthalates, triclosan, perfluorooctanic acid (teflon precursor), various parabens, flame retardants ... (ran out of electrons). Stuff that you have been exposed to in miniscule quantities pretty much every day of your life. But, does it matter how little?

Apparently not. According to former NRDC president Frances Beinecke (1), "They act in tiny doses. With just the smallest amount, hormones regulate the function of sexual and reproductive organs, neurological development, and even the rate of metabolism."

It’s a miracle that we aren’t all dead. Imagine if we were exposed to endocrine disruptors in large quantities. Wouldn’t it be logical to assume that the NRDC to be jumping up and down if this were the case?

Now, go back to its website and search "marijuana." There is not one single word about human health effects of marijuana in any of the seven articles that mention the word.

I have no idea why, but they must have missed this paper [2]:

"Endocrine effects of marijuana in the male: preclinical studies"

Because, if you are interested in endocrine disruptors, this is your bible. A few key points:

"Endocrine effects of marijuana in the male: preclinical studies," because: "Marijuana affects a variety of hormones that are regulated by hypothalamic function and it appears that the psychoactive ingredient, THC, is the major compound responsible for this action"
"The two gonadotropins, LH and FSH, secreted by the pituitary gland are of major importance to reproduction in the male..."

"The THC-induced block of GnRH release results in lowered LH and FSH which is responsible for reduced testosterone production..."

"THC appears to depress prolactin, thyroid gland function, and growth hormone while elevating adrenal cortical steroids."

"Also, of concern are the reports that acute cannabinoid treatments affects the quality and quantity of spermatozoa produced by the testis."

"reduced prostate and seminal vesicle weights, as well as altered testicular function"

"changes in sperm production by the seminiferous tubules"

Of course, that is only one paper, but so is this [3], which was published by the National Institute on Drug Abuse:

"Marijuana Effects on the Endocrine and Reproductive Systems"

These authors have quite a bit to say as well:

"a clear demonstration of the inhibitory effect of THC on suckling-induced prolactin secretion..."

"Other in vitro studies with cannabinoids have shown that these drugs disrupt gonadal steroidogenesis, protein and nucleic acid synthesis, glucose utilization and prostaglandin synthesis, and reduce cyclic AMP concentrations in various species."

Finally, of all the "deleterious effects" that NRDC and similar groups claim about common chemicals, nothing can even come close to the primary villain — estrogen mimics. This is the knock on most of the everyday chemicals that these groups use to try to scare everyone, especially women about breast cancer.

So, the icing on the marijuana brownie cake may be the following [4] 2104 paper.

"?-Tetrahydrocannabinol Targeting Estrogen Receptor Signaling: The Possible Mechanism of Action Coupled with Endocrine Disruption"

An endocrine disruptor ignored by NRDC. Photo credit: medicaldaily.com
Some highlights include:

"THC’s biological activities, its recognized endocrine-disrupting effects, including anti-estrogenic activity, have been the subjects of previous investigations."

"THC may disrupt the balanced relationship between ER? and ER? via up-regulation of the ? type ER in normal cells."

"THC can be accumulated up to 20-fold in some tissues (i.e., fat tissue) due to its highly lipophilic nature."

So, why is NRDC going after miniscule amounts of chemicals in sunscreens, cosmetics, and canliners — all of which have been used forever — yet not utter one peep about a real endocrine disruptor, that has been used by 94 million people in the U.S.?

Who knows? Maybe the science over there is just pot luck.

Notes:

(1) Beinecke holds a bachelor’s degree from Yale College and a master’s degree from the Yale School of Forestry and Environmental Studies. I am unable to find out any information about her BS degree.