

Scientific Evidence



In a short presentation it is not always possible to give all the scientific evidence we think supports what we are trying to do. This handout is given to rectify that problem. Also it should be noted that there is some repetition of information among the two handouts and the PowerPoint. Thought was given to eliminating the repetition but then it was remembered that “repetition is the mother of memory.”

There are a number of ways of doing studies such as retrospective, prospective, case control, cohort, and double blind placebo controlled (and possibly others). The latter is, as some people well know, the gold standard. It may be a long time before that kind of study will be done to prove or disprove the relationship between caffeine and addictions. In the meantime, given the scientific information we do have both in animals and humans, our committee has felt comfortable in spending all the time, and effort, and money so far. We expect to be spending more in the future.

The animal evidence is strong in showing that caffeine and/or poor diet can cause addiction to alcohol,

(1) (2) (3) (4) (5) that caffeine is a drug reinforcer for nicotine, alcohol, cocaine, and amphetamine, (6) (7) (8) (9) (10), that caffeine can cause a wide range of biochemical alterations in the central nervous system.

(11) (12) (13) Human studies are strong in showing that caffeine can cause; 1. decreased blood flow to the brain (14) (15) (16) (17), 2. adverse psychiatric effects (18) (19) (20) (21) (22) (23) (24) (25) (26), 3. adverse effects on blood sugar and insulin resistance (27) (28) (29) (30) (31), 4. decreased absorption of iron from the GI tract ((32) (33)). 5. a doubling of the rate of miscarriage in pregnant women. As little as 200 mg per day—about what is in 2 cups of coffee. (34)

As far as human studies showing that caffeine can be a drug reinforcer there are two. One showing this to be the case with nicotine (35). And one showing it to be true for alcohol (36). There is one human study showing that in high school students caffeine was one of the substances responsible for inducing students to use drugs (37).

There is clear proof of how relatively simple lifestyle changes can make a remarkable difference in behavior and scholastic performance. This was demonstrated in the 5-year experiment which was started in the Appleton, WI Central Alternative High School in 1997. Since it was so successful it was incorporated in other parts of the public school system in Appleton, WI. In this case all the pop machines and junk food machines were taken out of the schools. In the school cafeteria they served fruits, nuts, vegetables, whole grain cereals, and meats using old fashioned recipes. The students were not getting any artificial seasoning nor coloring. The only liquid that was served was water. What was seen there was clear evidence of how relatively simple lifestyle changes could make a great difference (38).

In the *The New York Times* of May 26, 2008 Kathleen Miller, an addiction researcher at the University of Buffalo, was quoted as saying, “high consumption of energy drinks is associated with “toxic jock” behavior, a constellation of risky and aggressive behaviors including unprotected sex, substance abuse and violence.” Because her statement fit so well with what we are trying to do contact was made with her. In response to questions to her she emailed an answer on June 9, 2008 containing this statement, “I believe a strong circumstantial case can be made that excessive consumption of energy drinks increases odds of problem drinking and illicit drug use.” The two main ingredients of energy drinks are caffeine and sugar. (underlining supplied).

Given all the information we have presented and the devastating nature of addictions we feel that it does not stretch the imagination too far to suggest that caffeine can also play a significant role in getting teenagers addicted to other drugs. We feel comfortable in encouraging people to make a few simple lifestyle changes. These changes have the potential, in some cases, of preventing addiction, helping people overcome their addictions, and preventing relapses. Finally, even if none of those things happen, getting away from junk foods and most soft drinks and eating a much more natural and sensible diet will help to preserve health and prevent other diseases.

This final comment may explain why these things happen, “It is well known that certain vitamin B deficiencies will lead to irritability, confusion, persecution complex, emotional instability or an inability to adjust to conflict situations. Is it possible that diet factors like coffee, tea, etc, may act synergistically with a poor quality, though popular diet to exceed man’s nutritionally-lowered mental and emotional threshold, thus triggering him to turn to alcohol (and/or meth and other drugs—our comments) as an anesthetic or a poor solution to the increasing and apparently insurmountable problems facing him in this complex age?” (39)

References:

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- (38) www.feingold.org/PF/wisconsin1.html
- (39) This quote was taken from an article published in a non-medical journal for which no title is available. It seems apparent that the article was referring to reference #1.