NEURAPTITUDE

Risk of Relapse Declines Significantly After 5 Years of Abstinence from Alcohol

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After 5 years of abstinence, a recovering alcoholic has approximately the same chances of lifetime relapse as a randomly selected member of the general US population has of experiencing alcoholism in the coming year.

This proclamation can be found in the last paragraphs of our previous article, The Science of Alcoholism. When this proclamation was shared on Reddit, it triggered a lively discussion, with proponents and opponents providing many interesting comments and critiques. The proclamation contains a clear message of optimism and empowerment for the individual in recovery; at the same time, the veracity and accuracy of our statistical analyses generated justifiable skepticism. It is for these reasons, as well as for our own professional curiosity, that we will expand on our proclamation in this article.

Before we can begin our discussion we must first define *alcoholism*. *Alcoholism* is a nebulous, poorly defined term that we used in our proclamation because of its universal familiarity, not because we believed it to be a precise term. The medical community currently uses the term *alcohol use disorder* (AUD) to diagnose and classify various levels of problem drinking. There are clearly defined criteria for making a diagnosis of AUD, whereas the term *alcoholic* does not possess any clear parameters for its use. Thus, we will replace *alcoholic* with AUD to increase the precision of our proclamation.

The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) proposes the diagnosis of AUD if an individual experiences 2 or more of the following 11 items over a 12-month period:

1. Alcohol is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.
3. A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects.
4. Craving, or a strong desire or urge to use alcohol.
5. Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.
7. Important social, occupational, or recreational activities are given up or reduced because of alcohol use.
8. Recurrent alcohol use in situations in which it is physically hazardous.

9. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.
10. Tolerance.
11. Withdrawal.[1]

The DSM-5 was published in 2013; however, for the majority of the studies pertinent to our proclamation we must consider criteria from previous versions of the DSM. Prior to the DSM-5, AUD was divided into *alcohol abuse* and *dependence*. Alcohol abuse could be diagnosed if 1 or more of the first 4 items in the above list were present over a 12-month period (item 4 included *legal problems* rather than *craving* as a criteria).[2] Alcohol dependence could be diagnosed if 3 or more of item numbers 5 through 11 were present over a 12-month period.[2] The diagnosis of alcohol abuse was reserved for those that did not suffer from dependence, while dependence could be comorbid with abuse but did not have to be.[3] The diagnostic concordance between the combined DSM-IV *alcohol abuse* and *dependence* entities and the DSM-5 inclusive AUD is very high (kappa = 0.76).[4] All of this is to say that despite the differences in taxonomy, AUD and alcohol abuse/dependence likely describe the same subset of disordered drinking.

Regardless of the terminology used, the study of the natural history of AUD is challenging for a number of reasons, not the least of which is the duration of observation required to obtain valid data. Perhaps the most well-known study of long-term AUD is Dr. Vaillant's prospective cohort study of healthy males from a Harvard University sample and an inner city sample living in the Boston area. The study began in 1940 and the original sample contained 724 men.[5] At multiple time points over the intervening decades, researchers gathered data regarding alcohol use (among other things) through interviews and physical exams. After the age of 47, participants were interviewed every 2 years and received a physical exam every 5 years.[5] The unprecedented duration and intensity of data gathering offered a treasure trove of information about the natural history of AUD in the general population.

In a 1996 article in what is now *JAMA Psychiatry*, Dr. Vaillant analyzed his almost 6-decades worth of data. Of the many findings contained within this paper, one is most pertinent to our discussion. Dr. Vaillant found that only 16% of individuals with a history of alcohol abuse relapsed after 5 years of sobriety, while a much higher percentage relapsed prior to this.[5] From these findings, Dr. Vaillant posited that, like other chronic diseases (most notably cancer), 5 years of relapse-free health should be required before we declare the individual "recovered."[5]

Although the 16% post-5-year relapse estimate only considered men with alcohol abuse, it is similar to the risk of relapse in alcohol dependence. In fact, Vaillant noted higher rates of long-term abstinence achievement in those individuals who met criteria for alcohol dependence than for those who met criteria for just alcohol abuse.[5] Also, almost half of those diagnosed with alcohol abuse in Dr. Vaillant's study met criteria for dependence at some point in their lives.[5]

Another prospective cohort study by Jin et al. demonstrated similar findings. Jin et al. studied 77 long-term abstinent, formerly alcohol dependent, males over the course of 17 years in the San Diego area.[6] Jin et al. demonstrated that only 15% of individuals who achieved 5 years or

more of abstinence went on to relapse.[6] This finding is significant both because it corresponds with Vaillant's findings and because this study examined alcohol dependence rather than alcohol abuse.

A final prospective cohort study we will discuss today was conducted by Dennis et al. and examined drug abuse and dependence among 1,162 participants (61% females) in the Chicago area over an 8-year period.[7] Drugs of abuse or dependence in the study included cocaine (36% of participants), alcohol (27%), heroin (27%), and cannabis (7%).[7] Dennis et al. found that for those participants who achieved 3 or more years of abstinence, only 14% relapsed.[7]

The 3 studies discussed are by no means exhaustive, but are notable for their prospective study design and the reliability of their findings. Various additional studies have provided further evidence that after 5 years of abstinence, only about 15% of individuals with a historical diagnosis of alcohol use disorder (AUD) will relapse.[5,6,8–10]

Now that we have established the validity of 5 years as a milestone in recovery, let's turn to the second part of our proclamation. We claimed that the percentage of individuals formerly diagnosed with AUD who would be expected to relapse after 5 years of abstinence was similar to the prevalence of AUD in the general US population. To support this claim we will examine data from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC).

More than 35,000 US adults in 2012-2013 were included in the 3rd iteration of the NESARC.[11] NESARC-III, like previous surveys before it, was nationally representative in terms of demographics.[11] Grant et al. found that the 12-month prevalence of AUD in the NESARC-III sample was 13.9% while the lifetime prevalence was 29.1%.[11] This value was notably higher than the 8.5% twelve-month prevalence of AUD in the 2001-2002 original NESARC sample.[12] However, there are numerous reasons to believe that the NESARC-III data is valid, and that the prevalence of AUD has increased in recent years.[11,12]

Now we have the tools in hand to validate our initial proclamation:

After 5 years of abstinence, a recovering alcoholic (i.e. an individual previously diagnosed with AUD) has approximately the same chances of lifetime relapse (around 15%) as a randomly selected member of the general US population has of experiencing alcoholism in the coming year (13.9% according to the most recent data; range: 8.5-13.9%).

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