

%dCDT

Carbohydrate-deficient transferrin (%dCDT) is a blood test for heavy alcohol use that can be very useful in evaluating medical symptoms and predicting complications after surgery. It is based on the fact that an average daily consumption of more than 60g of alcohol (about 5 standard drinks) during the previous 2 weeks increases the percentage of transferrin that has a deficient carbohydrate content. A positive %dCDT test result is 1.7% or higher and may change up or down with increased or decreased drinking.

Frequently Asked Questions:

Does a high %dCDT mean that a person is an alcoholic?

No, not at all. Alcoholism is a clinical diagnosis that can only be made with a more complete assessment. There are many people who might be drinking heavily enough to elevate %dCDT who do not meet criteria for alcohol abuse or dependence.

Does a high %dCDT indicate harmful alcohol use?

The fact that %dCDT is elevated most likely means that a person is drinking too much. %dCDT is an indication that alcohol is disrupting the normal chemistry of the liver cell. While it does not mean that there is liver damage per se it does indicate that alcohol is having a negative effect. It also means that alcohol may be affecting other organs besides the liver and playing a harmful role in the patient's medical or social functioning.

How sensitive is %dCDT?

It has been established that %dCDT can increase after about 2-3 weeks of steady alcohol consumption of about 4-6 drinks a day (this is equivalent to a bottle of wine, 5 cans of beer, or ½ pint (8 oz.) of hard liquor). The longer a person drinks at this level (or perhaps binge drinks) the more likely %dCDT will be positive. Men seem to be more sensitive than women. In many studies, chronic heavy drinking leads to a sensitivity of 60-80%.

How specific is %dCDT – do other diseases or drugs affect it?

Actually, %dCDT is quite specific for heavy alcohol use. There are a few inborn errors of glycoprotein metabolism that may cause elevated %dCDT in about 1-5% of the population. Also, very severe liver disease may lead to false positives. There are no medications that are known to elevate %dCDT. The new %dCDT test is capable of indentifying genetic variants that might cause false positives and negatives as well as unique patterns due to liver disease related to heavy alcohol use.

How long does %dCDT stay elevated once a person stops or moderates drinking?

In most people, an elevated %dCDT will return to normal during several weeks of alcohol abstinence. It will also decrease if a person substantially reduces drinking.

Can %dCDT be used to monitor how well people are doing in moderating their alcohol intake?

Most definitely. Data show that a 30% reduction in %dCDT is consistent with a substantial reduction in alcohol intake. %dCDT then has characteristics similar to hemoglobin A_{1c}, cholesterol and other blood tests that change based on diet or pharmacological intervention. If %dCDT goes up again, once it has been reduced, this could be an indication that the person has returned to heavy drinking.

What if a person admits to drinking heavily but %dCDT is not elevated?

There could be several explanations for this. Since %dCDT begins to “normalize” within a few days, if a person has not consumed alcohol for four days or more prior to testing, the %dCDT may have fallen sufficiently to read within the normal range. However, it is well known that a person can have a %dCDT within the normal range and still experience a 30% reduction if followed over time while maintaining abstinence. Also, not everyone is a %dCDT responder/elevator. That is why a good clinical history as well as the utilization of GGT may be useful.

Why assess GGT as well as %dCDT?

GGT and %dCDT are independent markers of heavy drinking. Alcohol may elevate one, the other or both in different people. It usually takes heavier and more chronic drinking to elevate GGT but in some people, especially women, GGT seems to be more sensitive to sub-acute heavy alcohol use. Also, GGT may increase secondary to other illnesses (ex. hepatic, biliary, obesity) and medications (ex. hormones, anticonvulsants). So if an isolated GGT is abnormal one might need %dCDT to confirm or disconfirm that the elevation is due to alcohol use.

What do I tell the patient if %dCDT is elevated?

Of course clinical judgment and other signs and symptoms should guide the response. However, a non-confrontational approach such as “it appears that the amount of alcohol you are drinking (not being accusatory of drinking too much) may be affecting how your body functions – we have evidence that alcohol may be disrupting your liver metabolism which also means it may be affecting your other symptoms (fill in the blank as necessary). So... lets see if a reduction in drinking (perhaps in conjunction with other treatments that I might prescribe) may be useful in helping with your problem. Lets make another appointment. Between now and then try to keep a diary of how much you drink each day so we can discuss it more thoroughly.” An appointment for reassessment can be made, the use of a questionnaire (like the AUDIT [see enclosed pamphlet] which takes a few minutes for the patient to file out) can be considered, and a retest of the %dCDT undertaken. If a person exhibits persistent heavy alcohol consumption, a referral for counseling might be considered.

Is %dCDT covered by third party payers?

%dCDT is covered by Medicare and Medicaid. Most insurance companies follow the lead of government payers and should cover the expense of testing within the limits of their policies. Even if not covered, the costs of a misdiagnosis of heavy alcohol use are costly to patients and medical personnel.

How quickly can I expect to get the results of %dCDT testing?

It is anticipated that results will be available within 24 hours of the serum sample reaching our laboratories during Monday through Friday business hours.