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Avon and Wiltshire
Mental Health Partnership
NHS Trust

Alcohol and your blood test results

Bristol Specialist Drug and Alcohol
Service (part of Bristol ROADS)

You matter, we care

Drinking a lot of alcohol can be damaging to your health. This leaflet explains the blood tests that can show the effect on your health from heavy drinking.

Recommended alcohol limits

Men should not regularly drink more than 3 to 4 units of alcohol per day.

Women should not regularly drink more than 2 to 3 units of alcohol per day, and not at all if pregnant.

The more you drink above these limits, the greater the risk to your health. To protect your health, you should

- have at least one day without alcohol every week. You should not drink more than twice the above amounts in any one day.
- take a break for two days (48 hours) after a heavy session to let your body recover.

How can alcohol affect your health?

Regular heavy alcohol consumption can have many effects.

- **liver and stomach**
 - liver damage including fatty liver and cirrhosis
 - stomach ulcers
- **brain and nervous system**
 - memory problems and brain damage
 - nerve damage
 - alcohol withdrawal symptoms (dependence)
 - addiction (wanting to continue drinking)
- **mood / mental health**
 - depression
 - anxiety
 - paranoia and hallucinations
- **raised blood pressure which can lead to:**
 - strokes
 - heart attacks

4. MCV

This stands for Mean Cell Volume, and refers to the size of red blood cells. Red blood cells carry oxygen in your blood to all parts of your body.

Heavy drinking over longer periods leads to poisoning of the bone marrow where the red blood cells are produced. As a result, red blood cells are not produced properly and become abnormally large, and the MCV result becomes higher than normal.

Stopping heavy drinking allows the bone marrow to recover, and the MCV usually returns to normal within two months.

Your blood test results

You may wish to use the table below to record your blood test results and discuss them with your key worker.

Name.....

Date 1..... Date 2.....

Test	Date 1	Date 2	Normal range
GGT			6-32 iu/L
ALT			5-40 iu/L
Bilirubin			0-17 micromol/L
MCV			83-96 fL

3. Bilirubin

Bilirubin is a waste product that is normally removed from the blood by the liver.

When the liver is badly damaged by high intake of alcohol, it becomes swollen. This swelling blocks the removal of bilirubin, and bilirubin levels then rise in the blood. A raised bilirubin level indicates serious long term damage to your liver.

If this happens, it can cause a yellow colouring of the skin and the eyes known as jaundice. It also causes your urine to be darker than usual. These are both signs of indicators of serious harm to your liver.

Further drinking at this point can make the swelling worse and can be medically dangerous.

Stopping drinking allows the liver to recover. As the swelling reduces, the bilirubin level can go back to normal.

However, each time the liver is injured it repairs itself by producing scar tissue. A build up of scar tissue in the liver is called cirrhosis and this is a form of permanent damage.

Each heavy drinking episode can lead to more scar tissue being produced and the cirrhosis gets worse.

In severe cirrhosis, the bilirubin will always be high, as the liver can't remove it properly. At this stage, stopping drinking will not cure the damage already done, but it can help protect whatever functioning part of the liver remains.

One of the ways to find out whether your drinking is already causing medical problems, especially with your liver, is to have a blood test.

What the tests are and what they mean

1. GGT

This stands for Gamma Glutamyl Transferase. This is an enzyme in liver cells.

When people drink at harmful levels, liver cells are killed. The contents of the cells are released into the blood, increasing the GGT level measured in the blood test. If your result is higher than the normal range, it means that your liver is being harmed. If you have no other known liver disease, then heavy drinking is the most likely cause.

Stopping drinking at harmful levels allows the liver to heal. GGT levels may return to normal within weeks of reducing alcohol intake.

2. ALT

This stands for Alanine Aminotransferase. This is another enzyme found in liver cells. Higher than normal levels indicate that the liver is being damaged. Reducing alcohol intake to safe levels can prevent further damage being done and allow the liver to recover.

However if your tests are abnormal and you continue to drink heavily, you risk causing more severe and permanent damage to your liver.

Common drinks	Units	ABV*
1 pint of regular lager/beer	2.3	4%
1 pint of premium lager/beer	3	5.20%
500ml can of super strength lager	4.5	9%
440ml can of cider	2.5	5.5%
1 litre of strong cider	7.5	7.5%
3 litres of strong cider	22.5	7.5%
250ml glass of red/white wine (10% ABV)	2.5	10%
250ml glass of red/white wine (12% ABV)	3	12%
250ml glass of red/white wine (14% ABV)	3.5	14%
750ml bottle of red/white wine	10.5	14%
750ml bottle of sherry or martini	15	20%
25ml measure of spirits	1	40%
Double spirits	2	40%
700ml bottle of spirits	28	40%

<http://www.drinkaware.co.uk/tips-and-tools/drink-diary/>

*ABV: Alcohol by volume