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This information can be made available in other formats (for example, Braille) or languages on request by calling the PALS number.

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Alcohol and Your Blood Test Results

Bristol Specialist Drug and Alcohol Service (BSDAS)

Heavy alcohol consumption can be damaging to your health. This leaflet explains the blood tests that can show the affect on your health from heavy drinking.

BSDAS upholds the Service User Charter, a copy of which is displayed in reception areas, and is available upon request.

NHS recommendations:

- **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.

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.

You should also take a break for two days (48 hours) after a heavy session to let your body recover.

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

How can alcohol affect your health?

Regular heavy alcohol consumption can have many different effects on the body:

- **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 of time 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 of the body's chemical processes, that is normally removed from the blood by the liver. If the liver is damaged and no longer works properly, the bilirubin levels will rise. An increased bilirubin level indicates long term serious damage to your liver.

When you have high levels of bilirubin in the blood, this can cause a yellow colouring of the skin and the eyes known as jaundice. It also causes your urine to be darker than usual. Yellowing of the skin and darker urine are also both indicators of serious harm to your liver.

The liver becomes swollen when it is badly injured by high intake of alcohol. This swelling blocks the removal of bilirubin, leading to a rise in bilirubin levels in the blood. 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 subsides the bilirubin level may return 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 a progression of the cirrhosis.

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

One of the ways to find out whether your current 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, which is an enzyme normally contained within 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%