

Alcohol and its journey through the body

Workshop notes



Drinkaware aims to change the UK's drinking habits for the better. We promote responsible drinking and support individuals and organisations who aim to positively change their own drinking habits or those of others. We provide impartial, credible, objective facts. Among young people, we aim to focus on delaying first alcohol use where possible, but we recognise some people will drink so we also concentrate on promoting harm minimisation.

About this resource

Talking to your class or youth group about alcohol can be tricky, but it's essential that young people learn the facts.

This easy to use workshop/lesson plan, produced by Drinkaware, provides engaging activities for 11 to 16 year olds (with extra activities and information aimed specifically at 14 to 16 year olds).

The workshop will last 1 hour: opening activity (10 minutes); activities 1 and 2 (20 minutes each); plenary (5-10 minutes). There are two options for activity 1: 1a is aimed at 11 to 13 year olds, 1b at older groups. For a longer lesson/workshop, you can use both activities.

Topics covered:

- How alcohol affects your body, appearance and general health.
- Alcohol units and sensible drinking.

The workshop involves discussion-based work, group work, a true or false quiz and the opportunity to do some online research, if appropriate.

We've provided worksheets (available as separate downloads), suggestions for alternative activities and comprehensive but straightforward information – everything you need for a fun and informative lesson or youth group workshop.

Learning objectives

To understand:

- How alcohol affects the body (including your appearance).
- Units of alcohol and the strength of different alcoholic drinks.
- How long alcohol stays in your system and what factors affect this.

NOTE: All background information and references to scientific information and Government guidelines can be found on the Drinkaware website at www.drinkaware.co.uk



Opening activity (10 minutes)

Ask the class/youth group to share what they know about alcohol in general, and how it can affect health.

- About alcohol in general.**
- Short-term physical effects** – that night and the next day.
- Long-term physical effects** – over the years and when you're older.
For older groups, also ask how it affects.
- Mental and emotional health.**

Information for answers to opening activity

They may come up with some of the following:

about alcohol in general:

- it's a drug
- it gets you drunk
- it's illegal to buy it when you're under 18
- it's made when yeast and sugar are mixed
- it's a depressant (although many people believe alcohol is a stimulant)

short-term physical effects:

- nausea or throwing up
- dehydration
- hangovers: headaches, dry mouth, nausea
- bad skin, blood shot eyes
- poor judgement: getting into fights or having accidents
- falling over
- memory loss (and blackouts)

long-term physical effects:

increases your chances of:

- having a stroke
- getting cancer
- osteoporosis (an illness that causes your bones to get thinner)
- heart disease
- liver disease
- sexual problems
- brain damage
- putting on weight from all the calories

mental health:

- anxiety
- depression
- self harm
- unpredictable behaviour
- family problems
- relationship problems – friends, boy/girlfriends
- problems at work

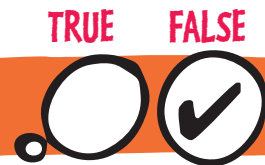


Activity 1a: Myth buster (20 minutes)

Hand out copies of **Worksheet 1a** and ask the class/group to work in pairs to decide whether each statement is true or false.

Information for answers to Worksheet 1a

If you've had too much to drink, a black coffee will sober you up



The caffeine might perk you up, but it doesn't sober you up. All you can do is wait for the alcohol to pass through your system.

You get drunker if you mix your drinks



It does make it harder to keep track of how much alcohol you've had, and you may feel sick because of the different toxins you've consumed – but mixing your drinks won't make you feel any 'drunker'.

It's illegal to drink alcohol if you're under 18



You can't buy alcohol until you're 18 but you can legally drink it at home or when you're 16 you can also have a drink bought for you in a restaurant with a meal.

There is more alcohol in a can of extra strong cider than in a double vodka



There are close to 4 units in a can of strong cider, but around 2 in the vodka.

On a cold day you can warm yourself up by drinking



You may feel warmer when you drink (this is because alcohol widens the blood vessels close to the skin), but your body temperature actually drops.

You can go to a pub when you're 14



Yes, you can, but you can't buy or drink alcohol.



Information for answers to Worksheet 1a continued

All young people aged 16 and over drink alcohol

TRUE FALSE



Lots of young people choose not to drink. This might be because of their religion, or because they decide they don't want to. The Government advises that children should not drink before they're 15, if at all. If 15 to 17 year olds drink, they should do so infrequently and definitely on no more than 1 day a week. This should be no more than the daily recommended guidelines for adults (3-4 units for men and 2-3 units for women). Parents and young people should be aware that drinking, even at age 15 or older, can be dangerous to your health. Not drinking is the healthiest option for young people.

A glass of wine has the same number of calories as a couple of biscuits



Alcohol is fattening. There are 115 calories in a 175ml glass of wine, equivalent to 2 plain digestive biscuits.

If you drink a glass of water before you go to sleep you won't get a hangover



Unfortunately not, though it's always a good idea to drink plenty of water. If you alternate soft drinks with alcoholic ones, however, you'll reduce your chances of getting a hangover.

You sleep really deeply when you've been drinking



A lot of people think alcohol helps you sleep, but you're actually far more likely to have disturbed or fitful sleep when you've been drinking.

Alternative ways to approach this activity

- Identify 1 corner of the classroom as 'True', another as 'False'. Go through each statement and ask the young people to stand in the corner of the room that they think matches the answer to the question.
- Ask each person to write out the words 'True' and 'False' on pieces of A4 paper. As you go through each statement, ask the class/group to decide whether it is true or false and hold up the appropriate piece of paper.
- Cut up the list of statements and put them in an envelope. Each group of young people should pick a statement, discuss it as a group and then feedback to the rest of the class.



Activity 1b: Alcohol and your body (20 minutes)

(Please note: you only need to print 1 copy of the worksheet.)

Divide the class/group into groups of around 5 or 6. Give each group one of the boxes on **Worksheet 1b**.

Ask the group to think about the topic they have been given and how it can be affected by drinking alcohol. If appropriate, they can use the internet to help search for answers. (Suggested websites: www.drinkaware.co.uk; www.alcoholconcern.org.uk; www.talktofrank.com; www.thesite.org)

Give them 5-10 minutes to come up with ideas:

THE WAY YOU ACT

HINT: THINK ABOUT THE WAY PEOPLE BEHAVE WHEN THEY HAVE BEEN DRINKING. FOR EXAMPLE, THEY MIGHT GET MORE TALKATIVE OR DO THINGS THEY WOULDN'T NORMALLY DO.

YOUR BODY

HINT: THINK ABOUT WHAT HAPPENS WHEN ALCOHOL GETS INTO YOUR BODY. DO YOU KNOW WHAT IT DOES TO YOUR BLOOD AND ORGANS – YOUR LIVER, KIDNEYS AND BLADDER?

THE WAY YOU LOOK

HINT: WHAT DOES DRINKING ALCOHOL DO TO YOUR SKIN AND HAIR, YOUR WAISTLINE, YOUR EYES?

Bring the groups back together and ask someone from each one to share their ideas. Discuss the information on the next page. Were they right? Are they surprised about anything they've learnt?



Information for answers to Worksheet 1b

THE WAY YOU ACT

Use the group's ideas to discuss the following facts:

- Alcohol can make you feel more relaxed, talkative and happy. But only in small amounts. Drinking too much alcohol can leave you feeling depressed and upset.
- Alcohol affects your short-term memory – you may forget what you were going to say, or people's names. Or you might find that you wake up the next morning unable to remember parts of the night before.
- Too much alcohol affects your judgement. You might experience the 'beer goggle' effect, where people around you seem more attractive. You're also more likely to have an accident.
- Alcohol can make people angry and aggressive. You are more likely to get into arguments and fights when you've been drinking.

More detail for older groups – how alcohol affects the brain.

- How alcohol affects your brain – in other words how drunk you feel and act – depends on the amount of alcohol in your blood. Alcohol affects the part of the brain you use to think. This means you can't think as clearly or judge situations as effectively as usual. Alcohol also affects your emotions and memory. You might get upset more easily, and forget things – including what's happened the night before. The part of your brain that controls your muscles is also affected – that's why you stumble and fall over more easily when you're drunk.

THE WAY YOU LOOK

Use the group's ideas to discuss the following facts:

- Alcohol dehydrates your body, and so it can make your hair brittle and dull. It can have the same effect on your nails.
- It can make your skin dry too. If you forget to take your make-up off when you've been drinking, you're more likely to get spots.
- Drinking more than you should over time can cause acne rosacea, a skin disorder that makes your skin appear red.



Information for answers to Worksheet 1b continued

- It can also make your eyes red and bloodshot.
- Alcohol is fattening. Just a few drinks are often the equivalent of a few bars of chocolate.
- You may want to eat more fattening 'comfort' foods when drunk or hungover.
- Drinking alcohol has been linked with cellulite.

YOUR BODY

Use the group's ideas to discuss the following facts:

The liver

The liver's main job is to break down food and convert it into energy when you need it. The liver also helps to get rid of waste products and to remove poisons from your body. When you drink, your liver breaks down (or 'metabolises') the alcohol. It can only get rid of around 1 unit an hour (explain to the class/group that they'll learn more about this when you go on to talk about units later in the session). So, if you drink alcohol faster than your liver can deal with it, you end up with more alcohol in your blood – and become more drunk. Drinking heavily over a long period will damage and eventually kill the cells in your liver, and stop it working properly. If it's damaged too much, it stops being able to repair itself.

The kidneys and bladder

The kidneys' job is to filter your blood, getting rid of any waste. They also control the amount of water in your body. When alcohol gets involved, your body ends up getting rid of too much water – you end up dehydrated. When you drink alcohol the amount of urine your body produces increases (due to the 'diuretic' effect of alcohol), your bladder ends up full and you need to go to the toilet far more often. Dehydration plays a major part in your hangover – that's the main reason you get a headache and feel so thirsty the morning after.



Information for answers to Worksheet 1b continued

The blood

Alcohol gets into your blood through blood vessels in the lining of your stomach. Your blood carries alcohol around the body to all your different organs. The more alcohol in the blood, the more drunk you will feel.

Because the alcohol enters your blood through your stomach, the more recently you've eaten, the slower this will happen. That's why you feel the effects of alcohol more when you drink on an empty stomach. Remember, how quickly you drink, as well as your body size and weight, also affect how quickly the alcohol is absorbed and how much goes into the blood – the same amount of alcohol will have a larger effect on a smaller person. Women also absorb alcohol faster than men. This is because the female body has more body fat and less water than the male body.

(see Drinkaware's *Alcohol's journey through the body* factsheet for more information)

Alternative activity

Draw a life-size body on a piece of paper. Ask the class to think about how alcohol affects different parts of the body. Get them to write these ideas onto sticky notes and one by one to come and stick them to the relevant part of the body. Discuss each one of the ideas.



Activity 2: Measuring alcohol – units (20 minutes)

Ask the class/group what they already know about units of alcohol.

Question: What is a unit?

Answer:

- Alcohol is measured in units.
- A unit is around 8 grams of alcohol.
- Unfortunately, it's not as simple as 1 drink, one unit – it depends on the type of drink and can even vary from 1 brand to another.

Question: Do you know how many units there are in a glass of wine? A beer? Spirits?

Answer:

- Half a pint of weak lager (such as Carling, 4%) contains 1 unit . Half a pint of stronger lager such as Stella (5.2%) is 1.5 units.
- A 275ml bottle of strong cider (such as Diamond White which is 7.5%) contains 2.1 units. A pint of regular strength cider (such as Magners, 5%) is 2.8 units.
- A single pub measure of vodka (25ml) contains 1 unit. A double pub measure of vodka (50ml) is 2 units. (Remember: some pubs serve spirits in 35ml measures too – this is 1.5 units.)
- Alcopops: a standard bottle of Smirnoff Ice (5%) is 1.5 units. A weaker alcopop, such as Bacardi Breezer (4%) is 1 unit.
- A standard (175ml) glass of wine can contain anything from 1.5 to 2.5 units. The strength of wine affects the number of units it contains. Wine glasses in pubs can range from 125ml to 250ml.

Remember: when you pour drinks at home or at a party, you will generally make them bigger than they serve in a pub. It makes it very difficult to keep track of how much you're drinking.

This is only a rough guide. Different brands of alcoholic drink have different strengths.



Workshop notes

For older pupils, you can also explain about the percentages of alcohol: all drinks show the percentage of alcohol they contain. It's written on their label and shows how strong a drink is. For example, an average beer is around 4%, while a spirit like vodka is between 35 and 50%.

Ask the class/group which brands of lager they think are strong and which ones are weak.

Examples:

- Carling is 4% alcohol. Kronenberg, Budweiser and Grolsch are 5%.

Do the same for wine.

- Lambrini, which is often drunk instead of white wine, is 7.5%, whereas Jacobs Creek Chardonnay is 13%. This means that a standard (175ml) glass of wine can be anything from 1.5 to 2.5 units.

Question: How many units is it safe to drink?

Answer:

- The Government's guidelines say that a man should not regularly drink more than 3 to 4 units a day and a woman should not regularly exceed 2 to 3 units a day. Remember, these are the guidelines for adults, the only guidelines for young people recommend that not drinking at all is the healthiest option. The government advises that if people under 18 are going to drink, they should not consume alcohol more than once a week and no more than the daily recommended guidelines for adults
- If you drink double the daily recommended unit guidelines on a single day it's classed as binge drinking.

Question: How long does it take for a unit to wear off?

Answer:

- Usually an average adult gets rid of 1 unit per hour, but it depends on how much you weigh, and whether you're a man or a woman. If you drink faster than your liver can get rid of it, the level of alcohol in your body rises – there's a 'topping up effect'. This means it isn't just the alcohol you drink there and then that's affecting you, it's what you've had over the last 12 hours or more as well. Alcohol keeps going through your body at the rate of 1 unit an hour. And as you continue drinking, you carry on 'topping up' the amount of alcohol in your body. This means you can still be drunk the morning after.



Workshop notes

Divide the class/group into small groups or pairs for this exercise. Give each group a copy of **Worksheet 2**.

If you have access to the internet, ask the class/group to use the Drinkaware unit calculator to help them add up the number of units drunk in each of the scenarios: www.drinkaware.co.uk/tips-and-tools. You can also order a hard copy of the drinks calculator from the website.

Information for answers to Worksheet 2

Who do you think got the most drunk?

Alcohol affects different people in different ways. We do know that Dan had approximately 10 units of alcohol. However, Misha had anything between 5 and 10 units depending on the size of the vodkas she poured herself and the share of wine she had. Make the point that it's particularly difficult to keep track of what you're drinking when you're pouring the drinks yourself.

What factors will affect this?

Most women are smaller than men and so process (or 'metabolise') alcohol at a different rate. Women have a proportionally higher ratio of fat to water than men and are therefore less able to dilute alcohol within the body. Because of this, women will tend to have a higher concentration of alcohol in their blood than men after drinking the same amount.

Dan also drinks quicker than Misha, and on an empty stomach. Alcohol gets into your blood through blood vessels in the lining of your stomach. So how recently you've eaten will affect how drunk you get (also see Question: How long does it take for a unit to wear off? on page 11 and remind the class/group about the 'topping up' effect).

Who do you think is likely to feel more hungover and why? Is there anything Dan or Misha could have done to stop them getting so drunk?

Misha had dinner and drank lots of water which will have helped her hangover. Dan could have eaten a meal before he started drinking. He could have alternated each alcoholic drink with a soft drink.

If Misha had not started drinking before she went out, she would have consumed far fewer units.



Information for answers to Worksheet 2 continued

Remember: when you're drinking wine in a group, you're probably not measuring out the wine equally, and friends may top up your glass without you realising. Misha may have drunk far more than she thought.

Dan and Misha drank far more than the recommended daily guidelines, (2-3 units for women, 3-4 for men) putting their health at risk. These guidelines are for adults. The Government advises that children should not drink before they're 15, if at all. If 15 to 17 year olds drink, they should do so infrequently and definitely not more than once a week. This should be no more than the daily recommended guidelines for adults.

Alternative activities

- 1) Bring in a selection of empty bottles of different alcohols. For example, spirits, alcopops, champagne, cider and wine. Cover up the labels so the class/group can't see the percentages. Ask them to put the bottles in order with the strongest alcohol content first.
- 2) For this task you'll need: the Drinkaware unit measure (available from October 2009 at www.drinkaware.co.uk) or a measuring jug, a jug of water, and a selection of different size wine glasses.

Ask the class/group to pour out what they think is 1 measure of spirits. Then show them the real measure.

Get a large wine glass. Ask someone from the class/group to imagine they were pouring a glass of wine at a party. Where would they fill it up to? Then pour this into the unit measure. This will show the class/group how easy it is to pour more than a standard glass of wine.



Plenary (5-10 minutes)

Ask the class/group to write down 3 things they have learnt from today's activities. If there is time, ask 2 or 3 people to share these with the rest of the class/group.

Visit the Drinkaware website www.drinkaware.co.uk for more workshop plans, factsheets and other useful tips and tools, publications and resources.

Special thanks to youth workers and young people at The Cupboard Project in Leeds, who helped us to develop this pack.