Sussex Partnership NHS
NHS Foundation Trust

Guidance on the administration of medicines to inpatients believed to have consumed alcohol

Sussex Partnership NHS Trust clinical policy Alcohol, Harmful Substance and Illegal Drug Use by Service Users and Visitors in Inpatient Services and Trust Premises states that 'any situation where a service user is found to be misusing substances (includes alcohol in excess), whilst in hospital must be treated individually'. 'Baseline observations of pulse, blood pressure, respiration, levels of consciousness, arousal and pupil size must be taken and recorded. Medical staff and shift coordinator should agree what actions need to be taken and the frequency of physical observation.' (1)

To help decide whether to administer or omit medication in a patient who is apparently acutely intoxicated two factors can be taken into account:

1. The Alcometer reading
2. The nature of the medicine to be administered (its potential to interact with alcohol)

This guidance applies to general psychiatry units, (incl. WAA, OPMH and CAMHS), but may not be suitable for application on specialist units caring for patients who are known alcohol abusers or are alcohol dependent.

1. **Alcometer Readings**

Alcometer Reading (breath alcohol)	Comment / Suggested Course of Action
Zero	Administer all medication due, unless there are other clinical reasons not to do so.
0-0.15mg/L	Administer all medication due, unless there are other clinical reasons not to do so. Consider whether prescribed regular sedatives / hypnotics are required if patient is already sedated or asleep.
0.16-0.35mg/L (Note - 0.35mg/L is the UK drink-drive limit).	Medication may be given following clinical assessment and discussion with a doctor. It is possible that prescribed regular sedatives / hypnotics may not be required.
0.36-0.8mg/L	Medication may only be given following clinical assessment and discussion with a doctor.
Above 0.8mg/L	No medication to be administered

As the blood (breath) alcohol level declines, it may be appropriate to repeat Alcometer readings and patient observations, and re-consider drug administration when the alcohol level has significantly reduced.

2. **Medication to be Administered, and its potential to interact with alcohol.**

The following table provides a list of medicines that are known to interact with alcohol. A course of action is suggested with every drug that should help decide whether to administer it or not. Please note that the evidence to support this advice is at times limited and that with some medicines further patient-relevant information needs to be taken into account. Please refer the decision to the doctor in charge if unsure.

Drug - Alcohol Interactions or evidence of lack thereof:

Class	Example of drug	Available information on interaction with alcohol	Suggested course of action
ACE inhibitors, Adrenergic neurone blockers, Angiotensin-II-receptor antagonists	Lisinopril	Enhanced hypotensive effect with alcohol.	Use with caution. Monitor patient closely.
Alpha-blockers	Indoramin	Increased levels of indoramin and alcohol when used concurrently. Increased drowsiness and enhanced hypotensive effect. Baratol SPC advises against ingestion of alcohol.	Use with caution. Monitor patient closely.
	Prazosin	Enhanced hypotensive effects.	Use with caution. Monitor patient closely.
Antibiotics	Cephalosporins,	No reports of cefadroxil and cefalexin causing this reaction.	Cefadroxil and cefalexin safe to administer.
	Metronidazole, possibly tinidazole	Disulfiram-like effect (see disulfiram).	Discuss with doctor to delay administration until patient is sober.
	Co-trimoxazole	Disulfiram like effects have been reported	Use with caution
Anticoagulants	Warfarin and phenindione	Major changes in alcohol consumption may affect anticoagulant control.	Monitor INR
Antidepressants	Agomelatine	No pharmacokinetic interaction.	SPC states concurrent use not advisable. However, effect on patient might be minimal.
	Citalopram	Little evidence published. SPC states that combination not advisable however concedes that clinical studies have not revealed adverse pharmacodynamic interactions.	Use with caution.
	Escitalopram	See citalopram.	Use with caution.
	Fluoxetine	No additional effect of alcohol on drowsiness, sedation or task performance tests with fluoxetine 40 mg/day, compared with fluoxetine alone.	SPC states concurrent use not advisable. Use with caution.
	Fluvoxamine	No significant potentiation of the cognitive effects of 40 g IV alcohol by single and multiple doses of 50 mg fluvoxamine occurred in one study. SPC advises to avoid alcohol.	Use with caution.
	Irreversible MAOI's: isocarboxazid, phenelzine, tranylcypromine	Alcohol may increase central catecholamine synthesis and release, and MAOIs may inhibit alcohol dehydrogenase, potentiating alcohol. Phenelzine SPC contra-indicates, isocarboxazid SPC advises to avoid combination.	Since alcohol is likely to have been ingested in form of beer or wine, which contain tyramine and could precipitate a severe hypertensive crisis: avoid combination.
	Mianserin	Drowsiness caused by mianserin enhanced significantly by alcohol. Significant additive effect on objective psychomotor performance.	As one single missed dose of mianserin might produce only limited harm, probably best to avoid combination in this situation.

	Mirtazapine	Lack of pharmacokinetic interaction has been shown, but additive sedation was noted. SPC advised to avoid alcohol.	As one single missed dose of mirtazapine might produce only limited harm, probably best to avoid combination.
	Moclobemide	Some degree of potentiation of the effects of alcohol has been noted. Case of fatality with a moclobemide overdose, plus half a bottle of whisky.	Use with great caution. Monitor patient.
	Paroxetine	Lack of interaction has been shown. SPC advises against combination.	Use with caution.
	Reboxetine	No potentiation of alcohol's cognitive effects reported.	Probably safe to administer. Monitor patient as above.
	Sertraline	Evidence for lack of interaction. SPC does not recommend combination, however.	Probably safe to administer. Monitor patient.
	Trazodone	Additive sedation has been reported.	Use with caution. Monitor patient.
	Tricyclics, e.g. amitriptyline, nortriptyline, dosulepin, lofepramine	Enhanced sedation, increased impairment of psychomotor performance. No studies evaluating respiratory response. Both alcohol and tricyclics lower the seizure threshold; care is needed in patients susceptible to seizures. Concurrent alcohol may increase oral bioavailability of tricyclics.	Use with caution. Monitor patient.
	Venlafaxine	There appears to be no significant additive effect between alcohol and venlafaxine.	Use with caution.
Antidiabetics		Reports of severe hypoglycaemia. Rarely, slight disulfiram-like reaction with glibenclamide, gliclazide and other sulphonylureas. Increased risk of lactic acidosis with metformin and alcohol.	Monitor BMs before and after administration. Warn patients on glibenclamide and gliclazide of disulfiram-like reaction.
Antiemetics	Metoclopramide	Metoclopramide can increase rate of alcohol absorption and its blood-level. Increases in sedative effect of alcohol seen.	Give with caution.
Antiepileptics	In general	Moderate social drinking (1-2 drinks/occasion, 3-6 drinks/week) does not change serum levels of carbamazepine, ethosuximide and phenytoin, but increases phenobarbital levels marginally and valproate levels somewhat. Social drinking (see above) has no effect on the frequency of convulsions. Moderate to heavy amounts at one occasion (3-4 drinks) increase risk of seizures. Alcohol can exaggerate the side effects of antiepileptics.	Use with caution. Monitor patient.
	Carbamazepine	No published evidence but additive sedation would be expected. SPC states that alcohol tolerance may be reduced.	Use with caution. Monitor patient.
	Gabapentin	Additive sedation can occur	Use with caution
	Levetiracetam	No data available. Most frequently reported side effects of levetiracetam: dizziness, somnolence, headache and postural dizziness.	Given the indication for levetiracetam (epilepsy) and its central side effects involve doctor in decision.

	Oxcarbazepine	Additive sedation can occur.	Use with caution.
	Paraldehyde	Enhanced sedative effect can be expected.	Given the complex situations when paraldehyde is given, refer decision to doctor. Avoid whenever possible.
	Phenytoin	Alcohol intake might affect phenytoin levels. The half-life of phenytoin can be up to 50% shorter in an abstaining alcoholic than in a non-drinker.	Use with caution. Remind doctor to check phenytoin levels regularly. Monitor patient as mentioned above.
	Pregabalin	Possible potentiation of sedative effects.	Use with caution.
	Rufinamide	No information available (SPC). PIL advises not to drink alcohol. Most commonly reported side effects of rufinamide that were more frequent than with placebo: somnolence and vomiting.	Given the severity of indication (epilepsy) and lack of information, refer decision to doctor. Monitor patient.
	Tiagabine	Lack of interaction has been shown.	Use with caution.
Antifungals	Ketoconazole	Reports of disulfiram-like reactions. The incidence of this reaction appears to be very low and its importance is probably small. Reactions of this kind are usually more unpleasant than serious. All symptoms resolved completely within a few hours (SPC).	Discuss with doctor benefit vs. risks of administration.
	Griseofulvin	Possibly enhances effect of alcohol	Use with caution.
Antihistamines	Non-sedating: e.g. cetirizine, loratadine, desloratadine, acrivastine and fexofenadine.	Acrivastatine might slow reaction times with alcohol. Astemizole, desloratadine, fexofenadine, levocabastine, loratadine and mizolastine do not interact with alcohol. Slight additive effect of cetirizine.	Depending on clinical need (allergy) give with caution.
	Sedating: e.g. cyclizine, chlorphenamine, cyproheptadine, ...	Significant impairment of psychomotor performance with alcohol and chlorphenamine. Reports of abuse of cyclizine with alcohol (dangerous, as antiemetic effect of cyclizine increases alcohol toxicity). Cyclizine may have additive effects with alcohol.	Probably best avoided with large amounts of alcohol.
	Severely sedating eg.diphenhydramine, hydroxyzine, promethazine, *Benylin, Night Nurse*	Diphenhydramine enhances detrimental effect of alcohol on psychomotor performance. Marked interaction with hydroxyzine and promethazine.	Probably best avoided with alcohol.
Antihypertensive drugs (see also beta-blockers & calcium channel blockers below)	Clonidine, diazoxide, methyldopa, moxonidine, hydralazine, minoxidil and sodium nitroprusside	Enhanced hypotensive effect with alcohol,	Use with caution.
Antimalarials	Mefloquine	Mefloquine does not affect blood-alcohol levels or effect of alcohol on psychomotor tests. One report of severe paranoid delusions, hallucinations and suicidal behaviour.	Consider giving mefloquine on a day when patient is sober (it is given once weekly for prophylaxis, once only for treatment).
Antimuscarinics	Atropine	Reduction of bioavailablity of alcohol by oral atropine. Marked attention impairment.	Use with caution.
	Glycopyrronium	No effect on reaction times and co-ordination. Marked impairment of attention.	Use with caution.

	Hyoscine	Increased sedative effect.	Use with caution.
	Hyoscine butylbromide	Does not as readily cross brain-blood barrier as hyoscine, and so is expected to be less likely to cause additive effects with alcohol.	Use with caution.
Antimycobacterials	Cycloserine	Possible enhancement of effects of alcohol. Manufacturer contraindicates its use in alcohol abuse due to increased risk of seizures.	Do not use.
	Isoniazid	Slight increase of impairment seen in psychomotor tests. The incidence of severe progressive liver damage due to isoniazid is said to be higher in those who drink alcohol regularly, and the clinical effects of isoniazid are also said to be reduced by heavy drinking in some patients. Apparently no effect of acute alcohol intake on pharmacokinetics of isoniazid.	Use with caution.
Antiplatelet agents	Aspirin	Small increase in gastrointestinal blood loss as well as increase in haemorrhage (especially in heavy drinkers). Small additive damaging effect on gastric mucosa. A single dose of aspirin (1 g or 600 mg) may raise blood alcohol levels.	Avoid large doses. Small doses (75 mg/day) with caution if not contraindicated or no increased risk of bleeding present (e.g. peptic ulcer, bleeding disorder, chronic and gross overuse of salicylates in combination with alcohol).
Antipsychotics	In general	Enhanced CNS suppression resulting in impaired concentration and coordination, drowsiness and lethargy as well as hypotension and respiratory depression. Drowsiness is significant with the phenothiazines and flupentixol. EPSEs may also be enhanced as can hepatotoxicity with eg chlorpromazine. No published evidence that alcohol reduces antipsychotic efficacy.	Do not administer to patients with asthma, respiratory depression or chest infection as accidental alcohol-overdosage in these patients could prove fatal. Do not administer in severe CNS depression. Refer decision to doctor. Omit, if doctor unavailable. If clozapine is stopped for longer than 48 hours, it needs to be titrated again.
	Amisulpride	Single oral doses do not seem to enhance the effects of alcohol on the performance and memory of healthy subjects.	Use with caution.
	Aripiprazole	No significant difference in performance or gross motor skills, although 2.5 to 10 mg/day increases sedation.	Safety and efficacy has not been evaluated in patients intoxicated with alcohol. Use with caution.
	Clozapine	Enhanced central effects. Additive CNS depression and cognitive and motor performance interference when used in combination. Possible risk of circulatory collapse.	Avoid, if possible. Consider, however, that clozapine needs to be retitrated if omitted for 48 hours or longer. Concomitant use contraindicated by manufacturer of clozapine.
	Flupentixol	Significant drowsiness with alcohol. SPC contraindicates concomitant use.	Avoid with alcohol.
	Olanzapine	Enhanced CNS sedation. Raised heart rate and increased postural hypotension have been reported.	Use with caution.

	Phenotiazines (e.g. pipotiazine)	Significant drowsiness with alcohol.	Since respiratory depression might occur, discuss with doctor.
	Quetiapine	As with antipsychotics in general	Use with caution. If stopped for longer, consider re-titrating patient.
	Zotepine	Contraindicated in acute alcohol intoxication.	Do not use.
Antiretrovirals	Abacavir	Alcohol increases AUC and half-life of a single dose of abacavir. The increase in exposure to abacavir is not considered clinically significant (one of the primary metabolic pathways of abacavir by alcohol dehydrogenase).	Give drug. Use caution in liver disease (chronic alcoholism).
	Other antiretrovirals: e.g. indinavir, saquinavir, nelfinavir, ritonavir, ...	One study showed that the amount of alcohol use did not affect antiviral response. Another study suggests that heavy users of alcohol are twice as likely not to achieve a positive virological response. Alcohol consumption can induce CYP3A4 (protease inhibitors and non-nucleosidic reverse transcriptase inhibitors metabolised by it).	Use with caution.
Anti-worm infection medicines	Levamisole	Possible disulfiram-like reaction	Use with caution
	niclosamide	May increase levels of niclosamide potentially leading to more side-effects	Use with caution
Anxiolytics	Buspirone	Increased sedation but little impairment of psychomotor performance. SPC still recommends avoiding the combination.	Use with caution.
Barbiturates	E.g. phenobarbital	Enhanced or prolonged CNS and respiratory depression can occur, seriously impairing concentration and performance. Lethal dose of barbiturates is up to 50% lower in combination with alcohol. Manufacturer of phenobarbital advises not to drink alcohol. Note half-life of phenobarbital: 1.5 to 4.9 *days*.	Use phenobarbital for epilepsy with great caution. Monitor patient closely, respiratory depression possible. Do not use other barbiturates.
Benzodiazepines	Lorazepam, chlordiazepoxide, clonazepam, diazepam, temazepam	Sedative effects caused by benzodiazepines increased by 20-30%. Larger quantities of alcohol may inhibit benzodiazepine metabolism. Patient might be unaware of the impairment that occurs. Temazepam, flunitrazepam, flurazepam and nitrazepam, when taken at night with alcohol, can still interact with it the next morning. The anxiolytic effects of lorazepam and possibly chlordiazepoxide may be opposed by alcohol. Possible increased behavioural aggression with alprazolam and flunitrazepam. Lorazepam SPC states that “use in individuals with a history of alcoholism or drug abuse should be avoided” and does not recommend combination.	Inform doctor. Use with great caution after assessing benefits vs. risks.

Beta-blockers	Atenolol	Enhanced hypotensive effects	Use with caution.
	Bisoprolol	Enhanced hypotensive effects	Use with caution.
	Propranolol	Enhanced hypotensive effects. May reduce propranolol levels.	Use with caution.
	Sotalol	Blood pressure lowering effects of sotalol increased by alcohol.	Use with caution.
Calcium-channel blockers	Amlodipine	Enhanced hypotensive effect.	Use with caution.
	Diltiazem	SPC for Adizem brand warns against use of alcohol at the same time as this may increase the release of diltiazem from the modified release preparation.	Do not use Adizem brand at the same time as alcohol. Use other brands with caution. Monitor blood pressure.
	Felodipine	Felodipine levels doubled by alcohol in one study. Increased heart-rate and diuresis. Possible lowered blood pressure.	Use with caution. Monitor blood pressure.
	Isradipine	Increases in heart rate and decreases in blood pressure enhanced.	Use with caution. Monitor blood pressure.
	Nifedipine	Significant increases of nifedipine blood-levels seen, no significant changes in heart-rate and blood pressure, though.	Use with caution.
	Nimodipine	No significant interaction with respect to psychomotor response, blood pressure, heart rate.	Use with caution.
	Verapamil	One study found that verapamil raises blood-alcohol levels, and that subjects on combination felt more intoxicated. Another study did not find any significant interaction with respect to pharmacokinetics, blood pressure, heart rate and psychomotor response.	Use with caution.
Chemotherapeutics	Methotrexate	Possibly increased hepatotoxicity with alcohol. One manufacturer contraindicates use of methotrexate in alcoholism.	Discuss discontinuing methotrexate temporarily for psoriasis and rheumatoid arthritis (given once weekly) with doctor.
	Procarbazine	Flushing reaction on face reported after small amounts of alcohol. Procarbazine is also a weak MAOI (see there).	Use with caution. Involve doctor in decision.
Diuretics	Furosemide	Enhanced hypotensive effect with alcohol	Use with caution.
Dopamine agonists	Bromocriptine	Increased side-effects when combined with alcohol.	Use with caution.
Drugs for dementia	Memantine	Memantine has no effect on alcohol-induced performance impairment, but may increase some subjective symptoms.	Use with caution.
H_2-receptor blockers	Cimetidine, famotidine, nizatidine, ranitidine	Cimetidine and nizatidine might slightly increase alcohol levels. Famotidine could produce hypoglycaemia with alcohol. Ranitidine might increase alcohol levels and worsen hypoglycaemia after alcohol ingestion.	Use with caution.

Hypnotics	Chloral hydrate, cloral betaine	Additive CNS effects occur. Tachycardia, impaired concentration, disulfiram-like effects and profound vasodilation may also occur.	Avoid if used as hypnotic.
	Clomethiazole	Bioavailability of oral clomethiazole increased (inhibition of first-pass metabolism).	Probably best to avoid combination.
	Melatonin	Reduced effectiveness of melatonin on sleep; SPC advises against use of alcohol for this reason.	No data on other adverse interactions. Use with caution.
	Zaleplon	While zaleplon enhances alcohol performance impairment, the effect appears short-lived.	Given the indication (sleeplessness), probably safest to avoid combination.
	Zolpidem	No published information on interaction available. Risk of habituation and psychological dependence in alcoholics.	Combination not recommended.
	Zopiclone	There appears to be no significant interaction. Additive adverse effect on driving ability.	Given the indication (sleeplessness), probably safest to avoid combination.
Illicit substances (See also opioids)	Cannabis	Decreased ethanol metabolism may occur with enhanced CNS depression.	Refer to Medicines Code for information on what to do with illicit substances.
	Cocaine	May produce changes in heart rate and blood pressure, increasing the risk of cardiovascular toxicity. Enhanced cocaine-induced hepatic and cardiac toxicity	Avoid if possible. Refer to Medicines Code for information on what to do with illicit substances.
Immune modulators	Tacrolimus and Pimecrolimus ointment/ cream	Increased facial flushing / redness	Use with caution
Lipid lowering drugs	Nicotinic acid	Concurrent use of nicotinic acid and alcohol may result in an increase in adverse effects such as flushing and pruritus, and possibly liver toxicity.	Use with caution, especially if patient has drunk substantial amounts of alcohol.
Mood stabilisers	Lithium	No clinically significant adverse interactions have been reported. Impaired driving skills have been suggested. Alcohol may produce a slight (12%) increase in peak lithium levels.	Involve doctor in decision. Use with caution.
Muscle relaxants	Baclofen, tizanidine	Possible enhanced sedation.	Use with caution.
	Methocarbamol	Acute alcohol intoxication combined with methocarbamol can lead to increased CNS depression.	Avoid combination.

Nitrates and nicorandil	Glyceryl trinitrate (GTN) nicorandil	Increased risk of exaggerated hypotension and fainting.	Tell patient to sit down before administration. Administer drug. Tell patient to lie down if feeling faint or dizzy. Monitor closely.
NSAIDs	E.g. ibuprofen, naproxen, phenylbutazone, ...	Increased risk of gastrointestinal complications in those combining alcohol with NSAIDs. More than additive risk of NSAIDs in patients with history of alcohol abuse. Phenylbutazone worsens impairment of psychomotor skills (driving) caused by alcohol. Report of acute renal failure with ibuprofen and 375 ml rum.	Use with caution.
Opioids	Buprenorphine	Enhanced hypotensive and sedative effects when given with alcohol.	Probably best avoided if patient is heavily intoxicated. Delay dose until alcometer reading reduced to below 0.35mg/L.
	Codeine	Enhanced hypotensive and sedative effects when given with alcohol.	Probably best avoided if patient is heavily intoxicated. Use with care otherwise.
	Dextropropoxyphene	Enhanced hypotensive and sedative effects when given with alcohol. Increased impairment of psychomotor skills. Reduction of lethal dose of dextropropoxyphene by alcohol.	Avoid combination.
	Hydromorphone	Increased CNS depression. SPC (of m/r preparation) contraindicates use with alcohol.	Avoid combination.
	Methadone	Increased sedation and respiratory depression may occur, especially in overdose, as could hepatotoxicity. SPC states that methadone should be used with great caution in acute alcoholism.	Use with great caution. Involve doctor in decision. Delay dose until alcometer reading reduced to below 0.35mg/L.
	Morphine	Enhanced hypotensive and sedative effects when given with alcohol.	Probably best avoided if patient is heavily intoxicated. Use with care otherwise.
Phosphodiesterase type-5 inhibitors	Sildenafil	Headache and flushing reported with alcohol. PIL advises against use of large amounts of alcohol.	Use with caution.
	Tadalafil	Reports of dizziness and postural hypotension. Additive blood-pressure lowering effects possible.	Use with caution.
Smoking cessation	Bupropion	Increased risk of seizures**.** Rare reports of adverse neuropsychiatric events or reduced alcohol tolerance in patients drinking alcohol during bupropion treatment. SPC contraindicates in patients who, at any time during treatment, is undergoing alcohol withdrawal.	Combination should be avoided. Do not give to patients on alcohol detoxification.
Treatment for ADHD	Methylphenidate	Alcohol may exacerbate some CNS effects (Increased drowsiness and sedation).	Discuss need for administration with doctor. Avoid where possible. Atomoxetine alternative for patients with a history of substance misuse.
	Dexamphetamine	*(as methylphenidate above)*	*(as methylphenidate above)*

	Atomoxetine	Increased somnolence when taken together. Dizziness and lightheadedness may be increased with alcohol. No other specific interactions.	Use with caution. Alternative to stimulants in patients with history of substance misuse.
Treatment for narcolepsy with cataplexy	Sodium oxybate	Enhanced CNS depression can occur.	Probably best avoided if patient is heavily intoxicated. Use with great caution otherwise.
Teatments to maintain abstinence from alcohol	Acamprosate	No detectable pharmacokinetic interaction.	Probably safe to administer. However, continued alcohol use may negate therapeutic effect of acamprosate.
	Disulfiram	Flushing, sweating, palpitations, hyperventilation, increased pulse, hypotension, nausea and vomiting. **Reaction occurs within 5-15 minutes and can be fatal.** Interaction can occur with disguised sources of alcohol, e.g. “Listerine” mouthwash, cough mixtures ... Delirium has been reported with combination.	**Avoid combination**.
Treatment for opiate withdrawal symptoms	lofexidine	Increased sedative effect	Use with caution

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Approved by the Drugs & Therapeutics Group – April 2012

Reviewed unchanged: May 2015 **Next review: May 2018**