

Assessing and managing people at risk of suicide

Introduction

The purpose of this section is to enable healthcare staff to play their part within the overall Prison Service suicide prevention strategy and processes. It should be read alongside the relevant strategies. The role of the primary-care team, within the overall multidisciplinary strategy, is to do the following.

- Identify and assess the seriousness of the risk of suicide in prisoners during reception screening, referred by staff and in surgeries.
- Identify and treat depression and other psychiatric disorders, if present.
- Participate in multidisciplinary care planning and through care planning.
- Advise on and advocate for appropriate locations, support and supervision.
- Provide on-going support to staff and prisoners on normal location.
- Contribute to the establishment's suicide prevention strategy, suicide prevention team and staff training.

Important points about risk assessment

- Main method of assessing risk is to ask the patient about his/her thoughts, intentions and plans.
- Be alert to the presence of specific risk factors (see below).
- In addition, be aware that young offenders tend to be more impulsive than older people.
- It is easy to underestimate the risk associated with difficult, uncooperative individuals. The behaviour of aggressive or sullen prisoners may reflect despair and a failure to cope. They should be viewed as objectively as possible.
- Suicide risk fluctuates over time. It is important to keep assessing the risk.
- Risk assessment is difficult and some individuals who are very determined to kill themselves refuse to admit to suicidal intentions. Therefore, decisions about persons considered to be at risk should be made by multidisciplinary teams not individuals alone. All those in regular contact with the individual should be consulted about how he/she behaves on ordinary location (see **Behaviours that indicate raised suicide risk** below).

Assessment of the risk involves considering four domains

- Individual, eg suicidal intentions, presence of mental disorder, coping skills and resources, social problems (eg with their family), housing, finance. Suicidal behaviour in most people, whether in or outside prison, is a 'last straw' phenomenon, ie it happens in the context of underlying associated low mood and suicidal thinking plus multiple social stresses and problems. It is finally triggered by a 'last straw' event that may not in itself be a major event.
- Environment he/she is in, eg access to means of suicide, being left alone for long periods, lack of access to activity.
- Staff (eg level of supervision and support available).
- Specific, known risk factors (see below).

Asking about suicidal thoughts and feelings

If you are managing an individual who is depressed or who you suspect to be suicidal for other reasons, it is important to talk about suicide. Discussing suicide will not make the person more likely to attempt suicide. It is important to be non-threatening, non-judgmental and empathetic when talking to the patient about his/her thoughts or feelings. Give the person the chance to talk freely and openly. Ask about suicidal ideas, plans and history and the feelings of hopelessness. Examples of questions to ask include the following:

Suicidal ideas ¹

- 'Have you been feeling very low for several days at a time?'
- 'Have you ever thought you wouldn't mind if you didn't wake up in the morning?'
- 'When you feel this way, have you ever had thoughts of killing yourself?'
- 'When did these thoughts occur?'
- 'What did you think you might do to yourself?'
- 'How often do these thoughts occur?'
- 'Have your thoughts ever included harming someone else as well as yourself?'

Suicidal plans

- 'Recently, what specifically have you thought about doing to yourself?'
- 'Have you taken any steps towards doing this?' (eg making a noose/hoarding pills).
- 'Have you thought about when and where you would do this?'
- 'Have you made any plans for your possessions or left any instructions for people for after your death, such as a note or a will?'
- 'Have you thought about the effect your death would have upon your family or friends?'

Generally, risk increases as a person moves from thoughts to intention to making plans. Concrete plans indicate a high risk.

Suicide history

- 'Have you acted on these thoughts in any way in the past? Tell me about that.'

If the individual expresses regret that a previous suicide attempt was not successful, this is an individual at high risk.

Feelings of hopelessness and the strength of protective factors

- 'What has stopped you from acting on your thoughts so far?'
- 'What are your thoughts about staying alive?'
- 'What help could make it easier for you to cope with your problems at the moment?'

If a person replies to this last question with answers like 'Nothing can help. It really doesn't matter what happens to me any more,' this is also an indication of high risk.

Assess for depression, psychosis and other mental disorder

- Persistent low mood with intensifying suicidal thoughts is a significant risk.
- Any psychotic symptoms increase risk. Voices commanding the patient to commit suicide mean a high risk.
- Bipolar disorder is the mental disorder most highly correlated with completed suicide.
- For more information on taking a psychiatric history and assessing a patient's mental state, see the 'Assessment' section of **Managing the interface with the NHS and other agencies** (page 149) for guidelines on relevant disorders, and the Mental State Examination on the disk .

Risk factors and protective factors for suicide

It is important to supplement information about thoughts and feelings with information from other sources, eg prisoner escort record, residence manager.

Prisoner groups at increased risk of suicide²

- Those in prison on remand for the first time, those who have returned from court with a sentence longer than expected or those whose status has recently changed, eg from remand to sentenced.
- People with a history of self-harm.
- People with a history of mental disorder (especially depression, psychosis and bipolar disorder).
- People with a history of drug or alcohol abuse.
- Those with chronic or painful physical illness.
- Those convicted of murder, sex or arson offences.
- People with communication difficulties or poor coping skills.
- People with a history of sexual assault or abuse.
- People who are socially isolated either within or outside of prison.

Relationship between suicide and self-harm and substance misuse

- Prisoners undergoing detoxification are especially likely to develop suicidal feelings. Detoxification should be carried out under medical and nursing supervision.

- Look out for prisoners who used cocaine before coming into prison. They are particularly vulnerable to suicidal feelings during withdrawal. Cocaine has a low half-life in the blood stream, does not have a substitute and prisoners often fail to disclose their habit.
- Prisoners emerging from detoxification regimens are at raised risk of depression, anxiety and self-harm. These should not automatically be attributed to the substance abuse. They may be painful feelings or underlying mental disorders that the substance abuse previously masked.

Events that may make self-harm or suicide more likely

Any stressful situation may increase risk. Examples include the following.

- Bullying, intimidation or assault by other prisoners, especially sexual assault.
- All court appearances and outcomes, including appeals.
- Relationship or family problems: children taken into care, social isolation, 'Dear Johns'.
- Bereavement.
- Refusal of parole.
- Disciplinary problems/segregation.
- Home leaves and approaching release.
- Anniversaries — of a death, of the sentence or of the crime.
- Frequent moves within the prison system.
- Identification parades and interviewing about offences.
- Suicide attempts by others in the prison environment or in family members and friends.

Behaviours that may indicate an increased risk

- Withdrawal from the company of others and/or refusal to see visitors.
- Self neglect — not eating or paying attention to washing, hair and clothes.
- Refusal to participate in work, education or association.
- Marked change in mood or behaviour; acting out of character.
- Lack of motivation, eg not planning for home leave/release.
- Tidying up affairs/giving away possessions.

Contact the residential staff for information about these factors.

Protective factors that reduce the likelihood of suicide

- Social support:
 - Confiding relationships (someone trusted to talk to). More is better.
 - Involvement in community or religious organisations.
- Family links:
 - Concern about the impact of suicide on their family.
 - Having children (especially for female prisoners).
- Personal resources:
 - High self-esteem.
 - Good coping skills, especially problem-solving abilities.
 - Spiritual beliefs; a sense of meaning and purpose in life.
- Safe environment:
 - Personal security, eg freedom from bullying.
 - Being with someone. Most suicides take place alone. Shared cells should be used where possible for someone at risk.
 - Lack of access to lethal means of suicide.
- Meaningful occupation:
 - Regular exercise.
 - Opportunities for creative expression.
 - Employment.

Caring for a person who is contemplating suicide or recovering from a suicide attempt

Although any act of self-harm, whether single or repeated, will increase the risk of suicide, you may, after conducting a suicide risk assessment, decide that a patient who has self-harmed is currently at low risk of suicide. For advice on a management plan, see **Assessment and management following an act of self-harm** (page 211).

Where the person is contemplating suicide or recovering from an attempt at suicide, it is important to develop a management plan to help them get safely through the period of distress. Many patients who are vulnerable to attempted suicide are managed on a normal location. Therefore, in the prison context, the care plan needs to be multidisciplinary, with the key elements recorded in the F2052SH (in Scotland, an Act to Care form), though additional clinical points will be recorded on the inmate medical record (IMR) only. Different elements of the management plan will be carried out by different disciplines depending on their skills. Once a plan has been agreed, a key-worker should be nominated to ensure that it is implemented. There should be agreed periodic reviews to ensure that it is meeting the needs of the prisoner. Wherever possible, the individual should be involved in agreeing the care plan. The care plan should aim to reduce the risk of suicide and self-harm in the following areas.

- **In the human environment:** ensure appropriate supervision and support from staff and other prisoners; remove a bully.
- **In the physical environment,** eg by placing in a ligature-free cell; not a strip cell.
- **In the individual,** eg by undertaking clinical assessment, treating the mental disorder, increasing coping skills and resources, helping with social problems.

Suggestions for a management plan include the following:

- Ensure appropriate supervision for the patient. The level of observation required varies according to the individual and should be decided in accordance with individual need and Prison Service procedures (F2052SH in England; an Act to Care form in Scotland). More detail is provided in **Observations of patients at risk** (page 220). Do not leave the individual alone and consider options that allow observations to continue during patrol states and for the individual to have a high level of contact with others. Options include the use of a crisis suite or a gated cell. Shared cells are normally preferable to single cells. Transfer to the health centre may be needed to allow a higher level of observation. There may be occasions on which 24-hour observation and clinical care are essential; these should trigger an urgent assessment by mental-health services.
- Ensure appropriate support for the patient:
 - Consider placing the individual in a shared cell with a listener/buddy or a suitable cell mate.
 - Encourage a supportive network, eg education or chaplain.
 - Encourage use of community resource, eg the Samaritans.
 - Help the individual structure time, eg with work or education or exercise; support the acquisition of appropriate reading materials, provide art materials
 - Promote family contact, eg additional telephone calls and longer visits. The home Probation Service may be able to encourage family to visit (see also 'Voluntary agencies' in **Family support**, page x).
 - If the patient is to return to an ordinary location, give the wing officer a copy of *Ideas for Support Plans* and agree with him/her which of the options should be implemented.
- Arrange a full clinical assessment and clinical care. Most patients who harm themselves have associated psychiatric problems.³
 - **For depression, use a mixture of psychosocial approaches and antidepressants.** The risk of suicide is particularly high during the period following starting antidepressants, as the slowing of thought and movement may improve before depressed feelings. Close monitoring will be required during this critical period. At first, the patient may only notice side-effects. Explain to them that these are a sign that the medication is beginning to work and they will feel better soon.
 - **Single acts of major self-mutilation (eg self-castration) should alert healthcare staff to the possibility of psychotic illness.** Psychotic illness is a very high-risk factor for suicide, irrespective of whether the patient admits to suicidal intent. A psychiatric opinion will be needed. See the guidelines of the relevant disorder for more information.
 - **Acts of self-harm** that are not suicidal in intent and where the risk of suicide is assessed as being currently low indicate emotional distress (for advice on management, see page 211).
 - **Consider the appropriate location for clinical care:** consider the level of support available to the individual on a normal location. Is the individual a loner or does he/she have friends there? Consider mixed healthcare-normal location options, such as attendance at a day centre (if available) during the day and the normal location at night, or a workshop during the day and a healthcare centre at night.
- Engage in ongoing consultation with colleagues and other staff. Discuss the individual with healthcare colleagues. Especially where the individual is managed on a normal location, the residential manager must also be involved. If the risk of suicide is considered serious, and certainly if higher levels of observation are required, refer to the mental-health services for assessment and a second opinion.

- Build a therapeutic relationship with the patient. It is important to be non-judgmental, non-threatening, empathic and clearly willing to help. Do not make judgements about whether the other person's life is no longer worthwhile.
- Try to delay the individual's suicidal impulses. Try to reach an agreement with the individual about what help can be arranged if they feel increasingly suicidal. Ensure that everyone is clear about their role.
- Neutralise the precipitating problem. Encourage the view that all problems can be solved or their effects ameliorated. Even in prison, the individual has options open to him/her. Help the individual to use/learn the skill of structured problem solving. Liaise with staff from other departments, with the patient's permission, to help neutralise the problem, eg contact the wing or personal officer to deal with bullying or conflict with other inmates.
- Consider contacting/informing the patient's solicitor, especially if the individual is on remand in which case the solicitor may be able to speed representation to the court. Obtain the patient's consent first.
- Consider contacting the patient's family. If possible, arrange for a member of staff to meet with the family of the individual at risk, with his/her consent, to talk with them about the care of their relative.
- Reduce access to the means of committing suicide. Wherever possible, provide a safer physical environment by placing patients in safer, ligature-free cells (not strip cells). Medication should be taken under supervision, not given 'in possession'. Be aware that many types of medication, in addition to psychotropics, may be used to self-harm. Repeat prescriptions should be reviewed at regular intervals. Where this has not been the case, consider a review immediately. Where possible, the individual should be allowed to retain his/her belongings, unless it is clearly unsafe to do so. Consider clothes, mattress and a cigarette lighter.
- Agree frequent, regular and planned appointments with the patient. Review progress and continue problem solving. Work to resolve the underlying problems should continue beyond the point at which the immediate crisis is resolved.
- Brief staff on the Residential Unit before the patient is discharged or returned to the unit. Involve the residential care staff in discharge planning, including ideas for a support plan (these are provided on the disk). Agree a review date and ensure that staff are aware of signs of deterioration which might indicate a need to bring the review date forward.
- Contribute to sentence or prerelease planning. The risk of suicide is particularly high following release. Ensure that information about the history and risk of suicide and self-harm is known to those involved in resettlement and through care planning, and to the community general practitioner and mental-health services (if relevant).
- A checklist for prison officers is provided on the disk .

¹ Adapted from Fremouw WJ, de Percqel M, Ellis TE. *Suicide Risk: Assessment and Response Guidelines*. New York: Pergamon, 1990.

² 'Caring for the suicidal in custody' is a Prison Service training pack published by HM Prison Service, London 1994; Scottish Prison Service. *Prevention of Suicide Strategy (Act and Care)*. Edinburgh, 1996.

³ Haw C, Hawton K, Houston K, Townsend E. Psychiatric and personality disorders in deliberate self-harm patients. *British Journal of Psychiatry* 2001; 178: 48-54.

Assessment and management following an act of self-harm — Z91

Understanding self-harm

Self-harm must always be treated seriously. It ranges in severity from mild or superficial effects to permanent physical damage and life-threatening danger. Types of self-harm include cutting, burning, head banging, swallowing objects, self-suffocation, self-choking by ingesting large pieces of cloth, inserting objects into wounds, putting ligatures around the neck, overdosing and other forms of self-poisoning.

Self-harm is a sign of emotional distress and may be associated with mental illness, personality disorder, learning disability (mental retardation) or with none of these. It is a common behaviour in mental health centres in the community and in prisons¹ and presents one of the most difficult dilemmas for healthcare staff, often causing anxiety, frustration or anger, not least because the individual is simultaneously a victim and a perpetrator of harm.

Sometimes it will be clear that an act of self-harm was intended as suicide. However, it is often not easy to categorise the behaviour into suicidal or non-suicidal; motivations may be mixed and (where acts are repeated) suicidal intent may vary over time. Those who self-harm have a 100-fold increase in the risk of suicide in the following year compared with those who do not (about 1% per year as opposed to 0.01% per year). Sometimes, however, the act of self-harm reduces suicidal urges in the short-term by reducing tension. Like depression, drug addiction and being a loner, self-harm is a factor that should alert prison staff to the possible risk of suicide.

Self-harm occurs for a variety of reasons, eg to escape from overwhelming emotions, to release tension, to cause physical pain, which reduces emotional distress, to punish oneself or to show others the emotional pain which cannot be expressed in words.² Occasionally, inmates will copy the behaviour of others, having been told by them that cutting helps to defuse emotional pain. Self-harm may sometimes be a symptom of a mental illness (eg the requirement to self-mutilate or jump off a balcony may be part of a psychotic patient's delusion) or it may occur during withdrawal from drugs, particularly amphetamines. Self-harm is only seldom and never exclusively caused by a wish to get attention or for manipulative reasons. It should always be taken as representing an important emotional need.

People who self-injure repeatedly may have some or all of the following factors in their lives.

- **Predisposing:** problems in childhood (physical or sexual abuse,³ bullying or poor self-esteem), adult experiences of victimisation.
- **Coexisting problems:** eating disorders, alcohol and drug abuse, depression, paranoid ideas, low self-esteem, poor social skills.
- **Precipitating:** recent stresses (coming into prison, rejection by a partner, bullying, the anniversary of a bereavement, cancelled home leave or problems with children). Painful feelings associated with such stresses often become more acute during and after detox, leading to self-harm. The length of time spent in cells may also be a contributing factor in self-harm among young prisoners.⁴
- **Maintaining:** having few friends, being a 'loner', guilt or self-blame, hearing voices, the 'addictive' quality of the self-harm, self-hatred or anger turned inwards.

The great majority of repetitive self-harmers begin the behaviour in their teenage years. It is common to find that people who previously harmed themselves no longer do so by the time they are 40 years old.⁵

Immediate crisis management

- If there is any danger to life, resuscitation should be carried out ensuring that **airways** are clear, **breathing** is taking place, **circulation** is adequate, there is no excessive **bleeding**, there is no immediate risk from **flames**, and **burns** (whether from heat or chemicals) are irrigated with cold water. Death by asphyxiation from a ligature round the neck may take several minutes, allowing time for resuscitation, oxygenation and heart massage, as required. First aid information on **Immediate crisis management** for officers or others who are first on the scene is provided on the disk .
- Referral to the healthcare centre will usually be necessary even where the physical injury is mild. Severe and life-threatening injury and self-poisoning would normally require attendance at A&E (see **Emergency management of poisoning/overdose**, page 225).
- Whether immediate treatment of the wound takes place in A&E or the prison healthcare centre, it is important to treat the patient with respect and care as someone who is communicating distress and not as someone who is not serious about suicide or who is wasting the time of professionals.
- For infected wounds, the use of antibiotics should be kept to a minimum, with good hygiene and antiseptic dressings instead wherever possible.

Assessment

The aims of the assessment following an act of self-injury are the following:

- To identify the underlying reasons contributing to emotional distress.
- To identify the presence and gauge the seriousness of any suicidal intentions or actions.
- To determine the risk of self-harm in the near future.
- To identify what kind of help is appropriate, both for the current crisis and for the underlying problems, and whether the person will accept this help.

Establish a rapport

- Use first names or call the patient Mr or Miss X, depending on what he/she prefers.
- Explain the purpose of the interview is to understand what happened and to arrange for suitable help for problems that might be causing distress. Gauging the risk of suicide is a part (but not all) of the purpose.
- Aim to be non-threatening, non-judgemental and empathetic. Give the patient the chance to talk freely and openly about their thoughts and feelings.
- Take care not to use language that the patient may find unduly emotive or pejorative (eg why are you threatening suicide?).

Understand the act, or attempted act, of self-injury

- Obtain sequential details about the events that occurred in the 48 hours preceding the act of self-injury.
- Explore circumstances surrounding the act or planned act: the reasons, the method, the degree of planning, the location of the act, the presence of a suicide note, the expected extent of injury, any actions after the attempt, whether drugs were consumed (prescribed or illicit), the likelihood of being stopped in time or revived, the extent of the desire to die, feelings about living.
- Previous acts of self-injury.
- Check F2052SH (an Act to Care form in Scotland) documentation, if any, for notes about the patient's behaviour before, during and after the incident, and on any major life events the patient may recently have experienced.
- Be aware that, in the short-term, the individual's painful feelings/problems may be relieved by the act of self-harm, making it easy to underestimate their habitual state.

Indicators that the act was intended as suicide

The patient:

- expected the act to cause death; a non-lethal dose of drug may have been thought to be lethal
- is disappointed to be still alive
- made concrete plans, eg for their possessions after death, a note to other people
- took precautions not to be found
- planned the act for at least several hours and
- feels hopeless about the future; that things will not get much better.

The expression of regret that the act did not lead to death greatly increases the chance that the person will try to kill themselves again in the near future.

Assess the current thoughts about suicide

It is important to talk about suicide, even where the act of self-injury has been repeated many times and a non-lethal method (eg superficial cutting) was used. Motivations for self-injury vary over time; a risk assessment should be repeated at intervals. Discussing suicide will not make the person more likely to attempt suicide. A full discussion of the act of self-injury will lead naturally to questions about current thoughts about staying alive and whether they perceive any positive factors in their lives. For more information on assessing suicide risk, including sample questions that may be asked, see **Assessing and managing people at risk of suicide** (page 204).

Establish current difficulties

- Nature of problems, their duration, recent changes that triggered the act or led to suicidal thinking.

- Psychological and physical problems: the relationship with a partner and other family members, with workmates, other inmates and friends; alcohol or drug use; physical or sexual abuse; financial or legal difficulties, social isolation, bereavement or other threatened loss.

Assess the associated mental disorders

Most patients who harm themselves have associated psychiatric problems.⁶ Look for evidence of major depression, anxiety, psychotic or paranoid symptoms, misuse of alcohol or illicit drugs or withdrawal (especially withdrawal from amphetamines or cocaine), and personality disorder.

See the guidelines for the relevant disorder(s) for more information.

Major depression, bipolar disorder and psychotic illness are high-risk factors for suicide.

Assess the background

- Relevant personal and family history.
- Description of usual personality.
- Obtain information from the wing manager, personal officer or, where possible, a relative.

Identify the usual coping methods

- Coping resources, eg family, friends. Access to appropriate coping resources reduces the risk of self-injury and of suicide. The management plan may focus on increasing the number of appropriate coping resources.
- Is the self-harm itself a method of coping with problems or painful feelings? Especially in cases of repeated self-injury, ask what the self-harm does for the patient.

Work with the individual to devise a list of the most important current problems.

Establish what help is required

- Identify what help is required and what help the patient will accept.
- Consider who else should be involved. Involve the patient's personal officer or other designated member of staff (with patient permission). Consider the chaplain, listeners/buddies, friends, relatives and external organisations.
- Ensure that the agreed help is documented in the care plan (currently F2052SH in England and Wales; an Act to Care form in Scotland), and that an appropriate person supervises the plan.

Management where the suicide risk is high

See **Assessing and managing people at risk of suicide** (page 204).

Management where the suicide risk is currently low

Be aware that the risk of suicide fluctuates. It is important to keep assessing the risk.

When caring for a person who is recovering from an incident of self-harm, it is important to develop a management plan to help the person get safely through the period of distress. In the prison context, the plan needs to be multidisciplinary as many patients who are vulnerable to attempted self-harm are managed on a normal location. Different elements of the management plan will be carried out by different disciplines, depending on their skills. Wherever possible, the individual should be involved in agreeing the care plan. The care plan must be realistic (ie the resources to deliver it must be available).

Treat the associated mental disorders

Most patients who harm themselves have associated psychiatric problems,⁷ which may respond to medication. See the relevant guidelines for treatment information.

- Depression (page 47).
- Anxiety (page 33).
- Psychotic or paranoid symptoms (see **Acute psychosis** or **Chronic psychosis**, pages 11 and 36). Single acts of major self-harm (eg self-castration) are often associated with psychotic illness. Psychotic symptoms usually indicate a high suicide risk.

- Use of alcohol or illicit drugs (see **Alcohol misuse** or **Drug misuse**, pages 18 and 55).
- Personality disorder: these general guidelines are applicable whether personality disorder (usually 'borderline' or 'dissocial') is present or not.

Refer to the secondary psychiatric services if the patient develops acute psychiatric symptoms.

Appropriate support

- Try to remain supportive to the patient, listening to the problems they express and avoid any critical or judgmental comments. Wherever possible, try to remain open to their views, seeing the patient as a person with a problem rather than as a 'cutter'.
- Ask about associated problems, eg bullying, bereavement, relationship problems, the difficulties of being in prison, separation from their children. Encourage the use of any available support for dealing with these. Consider supporting the patient in obtaining increased contact with friends and family, eg telephone calls, increased visits. The **Resource directory** (page 316) lists agencies that deal with particular problems.
- Facilitate access to purposeful activity such as exercise, education, work or opportunities to be creative. Advocate for increased time out of the cell for all prisoners, if appropriate.
- Consider referral to classes in developing coping skills, if available. Self-harm is more common among those who fail to develop more appropriate coping strategies.
- Consider use of a care suite. Ensure the patient is not punished for having self-harmed.

Consider reviewing the prescribed medication

Most substances taken by prisoners in overdoses are prescribed medications, often for physical as well as for mental disorders. Repeat prescriptions should be reviewed at regular intervals. Where this has not been the case, consider a review immediately.

Agree a follow-up appointment/plan

To review progress, continue problem solving and assess the extent of the suicidal thinking. Suicide risk fluctuates over time, especially in adolescents.

Brief staff in the Residential Unit before a patient is discharged or returned to the unit

Discuss, with patient permission, the relevant parts of the management plan and agree a review date. The care plan should aim to reduce the risk of suicide and self-harm.

- Location.
- Sharing a cell: young people, in particular, may find being temporarily 'doubled up' with someone else helps, but ensure they are not sharing with a cruel or manipulative individual who may encourage them to self-harm.
- Monitor for the possibility of bullying, threats of violence, problems with debts or other problems.
- Facilitate alternative coping strategies, eg exercise.
- Monitor for a reaction to possibly stressful visits, eg visits from children.
- Be aware of important dates that may trigger self-harm, eg children's birthdays, anniversaries, dates of the index offence.

If the patient is to return to an ordinary location, give wing officer a copy of *Ideas for Support Plans* and agree with him/her which of the options should be implemented.

If the self-injury is recurrent, in addition the following may be useful.

Advice and support

- Involve mental-health staff. A multidisciplinary approach with a key-worker and a long-term care plan involving the patient is desirable.
- Accept that the self-injury may continue for some time. The aim of treatment is not to stop the behaviour but to understand and support the patient in their distress, to help the patient gain more control of their feelings and to increase self-esteem.
- Make it clear that support is available whether or not they are trying to control the self-harm. Avoid threats and promises.

- Ask what the self-harm does for them — suggest a diary to record their feelings just before harming and discuss possible options for alternative responses (eg punching pillows, taking exercise or a shower, talking to someone). It is most important that the patient provides the ideas for alternative responses. With the patient's permission, involve the residential manager in discussing alternatives and how they may be facilitated.
- Support self-nurturing actions, eg the use of antiseptic.
- Try to see the patient, eg for 15 minutes a week, to talk about feelings: it helps if the patient writes things down before the session. Try to find someone for the patient to confide in, eg a listener, a Samaritan, personal officer, counsellor or friend.
- Where self-injury appears to be related to childhood abuse, see **People who disclose abuse as a child** (page 271) for advice on support and therapy.
- Discuss the possibility of joining a mutual support group, if available.
- Serious, repeated self-harm should result in referral for specialist assessment and advice on day-to-day management.

Medication

The use of medication in the management of patients who self-harm is controversial, except where there is evidence of an associated mental disorder.

- There is some evidence that paroxetine reduces further self-harm in non-depressed patients who self-harm repeatedly.⁸
- Fluoxetine has been associated with a reduction in self-harming in patients with personality disorder in a single controlled study.⁹

Developing in-prison resources

- Discuss with other departments the possibility of developing a course in coping skills. These can be helpful but should not replace reducing the unacceptable sources of stress, such as very long lock-up times.
- Consider the development of a crisis intervention or care suite for use by an individual experiencing an emotional crisis.
- Consider introducing an 'emergency contact card' scheme, whereby patients who have self-harmed are allowed access to immediate telephone or personal support when experiencing an emotional crisis.¹⁰ This may be more effective with patients who have self-harmed for the first time than with those who self-harm repeatedly.
- Develop a library of literature to lend to patients (see **Resources** below).
- It is important to have supervision and training available for staff dealing with self-injury patients, since it can be emotionally draining and can lead to burn-out.
- Consider organising a mutual support group. An experienced, trained facilitator, professionally supervised by a specialist is essential. Other issues to consider in setting up such a group include how confidentiality issues will be handled, the time commitment required from participants, the focus of the group (groups should aim to help participants feel less alone and learn skills for coping with their present feelings), and the provision for support for participants who need it between sessions and after the group ends.

Specialist consultation or referral

The management of severe, long-term self-harm should always be overseen by a psychiatrist.

Referral to forensic psychotherapy services should be considered. Psychological therapies that have shown some effectiveness are the following.

- Structured problem-solving may be useful for associated problems that trigger self-harming behaviour.¹¹
- Dialectical behaviour therapy has been shown to reduce the frequency of deliberate self-harm in people with emotionally unstable (borderline) personality disorder, although it is complicated and time-intensive to administer and is not widely available.¹² Consider for aftercare plans or, if available, for those with more than 1 year left of their sentence.
- Cognitive analytic therapy and some psychodynamically informed therapy has shown some effectiveness in self-injury in the context of emotionally unstable personality disorder.¹³

A combination of cognitive and solution-focused therapy may be useful for those patients with history of sexual abuse.¹⁴

Consider these for aftercare plans or, if available, for those with at least 1 year of their sentence left to run.

If counsellors are contracted to provide particular services (eg bereavement counselling, sexual assault or abuse counselling), arrangements must be made to ensure that they are properly trained and supervised.

Resources for patients and primary support groups

Listener or befriender scheme, chaplain, personal officers (where relationships are good). (Where the individual is considered dangerous, steps should be taken to protect listeners, eg personal alarms).

Samaritans: 08457 909090

National Self Harm Network: 020 7916 5472

c/o Survivors Speak Out, 34 Osnaburgh Street, London NW1 3ND
(Publishes a self-harm sheet and 'crisis card' to take to A&E)

Basement Project: 01873 856524

PO Box 5, Abergavenny NP7 5XW

Bristol Crisis Service for Women: 0117 925 1119 (helpline: Friday and Saturday, 9 pm–12:30 am)

PO Box 654, Bristol BS99 1XH

(Late night national helpline. Also provides information, publications and training about self-injury. Publishes a newsletter, *SHOUT*)

Respond: 0845 606 1503 (helpline: Monday–Friday, 1:30–5 pm)

3rd Floor, 24–32 Stephenson Way, London NW1 2HD

(For people with learning disabilities, who have experienced or perpetrated sexual abuse, their carers and professionals)

Bethlem Royal Hospital Crisis Recovery Unit: 020 8776 4273

Bethlem Royal Hospital, Monks Orchard Road, Beckenham BR3 3BX

(In-patient unit for individuals who repeatedly self-harm. Takes referrals from anywhere in the country)

Survivors of Abuse and Self Harming (SASH)

20 Lackmore Road, Enfield EN1 4PB

(Pen friend network that offers support and friendship on a one-to-one basis)

Disfigurement Guidance Centre: 01337 870 281

PO Box 7, Cupar KY15 4PP

(Supports patients and their families, offers advice on camouflage and natural aid techniques)

MIND leaflets on self-harm and personality disorder. Available from: MIND, 15–19 Broadway, London E15 4BQ. Tel: 020 8519 2122

'What's the Harm?' A Book for Young People Who Self-harm. £3.50. Clear and concise, this book is helpful for young people (and adults) beginning to explore their own self-harm. It is also a helpful resource for workers to use in working with individuals or groups.

The Self-harm Help Book. £5.50. An in-depth resource for people who wish to help themselves or others in their struggles with self-harm or self-injury. It is full of ideas found helpful by people who self-harm

L Arnold. *Hurting Inside: A Book for Young People.* 1988 Basement Project, Abergavenny. £3.50. Aims to help young people tackle difficulties they have as a result of physical, sexual or emotional abuse or neglect. It can also be a helpful starting point for adults looking at their experiences.

All three books are available from: Basement Project, PO Box 5, Abergavenny NP7 5XW. Tel: 01873 856524.

The 'Hurt Yourself Less' Workbook. Available from: the National Self Harm Network, c/o Survivors Speak Out, 34 Osnaburgh Street, London NW1 3ND. Self-help workbook — for people who self-harm to understand their behaviour and find safer alternatives.

- 1 Singleton N, Meltzer H, Gatward R *et al.* *Psychiatric Morbidity among Prisoners in England and Wales.* London: ONS, 1998.
- 2 Favazza A. Why patients mutilate themselves. *Hospital and Community Psychiatry* 1989; 40: 137–145.
- 3 Livingstone M. A review of the literature on self-injurious behaviour among prisoners. In Towl J (ed.), *Suicide and Self-injury in Prisons.* Leicester: British Psychological Society, 1997.
- 4 Pickett P. Unpublished research paper, HMYOI Feltham, quoted in Howard League for Penal Reform. *Scratching the Surface: The Hidden Problem of Self-harm in Prisons* London: Howard League for Penal Reform, 1999.

- 5 Crowe M. Deliberate self harm. In Bhugra D, Munro A (eds), *Troublesome Disguises: Underdiagnosed Psychiatric Syndromes*. Oxford: Blackwell Science, 1997.
- 6 Haw C, Hawton K, Houston K, Townsend E. Psychiatric and personality disorders in deliberate self harm patients. *British Journal of Psychiatry* 2001; 178: 48–54.
- 7 Morgan HG, Burns-Cox CJ, Pocock H, Pottle S. Deliberate self harm: clinical and socio-economic characteristics of 368 patients. *British Journal of Psychiatry* 1975; 127: 564–574.
- 8 Verkes RJ, van der Mast RC, Hengeveld MW *et al*. Reduction by paroxetine of suicidal behaviour in patients with repeated suicide attempts but not major depression. *American Journal of Psychiatry* 1998; 155: 543–547.
- 9 Markovitz P, Calabrese J, Schulz SC, Mltzer HY. Fluoxetine in the treatment of borderline and schizotypal personality disorders. *American Journal of Psychiatry* 1991; 148: 1064–1067.
- 10 Hawton K, Townsend E, Arensman E *et al*. Psychosocial versus pharmacological treatments for deliberate self harm. *Cochrane Database of Systematic Reviews* 2000; 2: CD001764.
- 11 Hawton K, Arensman E, Townsend E *et al*. Deliberate self harm: systematic review of efficacy of psychosocial and pharmacological treatments in preventing repetition. *British Medical Journal* 1998; 317: 441–447.
- 12 Linehan MM, Heard HL, Armstrong HE. Interpersonal outcome of cognitive behavioural treatment for chronically suicidal borderline patients. *American Journal of Psychiatry* 1994; 151: 1771–1776.
- 13 Bateman A, Fonagy P. Effectiveness of partial hospitalisation in the treatment of borderline personality disorder: a randomised controlled trial. *American Journal of Psychiatry* 1999; 156: 1563–1569.
- 14 Dolan Y. *Resolving Sexual Abuse*. New York: WW Norton, 1991.

Observation of patients at risk

Observation is an important skill for all nurses and officers at all times, but in acute phases of mental disorder, some individuals become a risk to themselves or others. The aim is to prevent potentially suicidal, violent or vulnerable individuals from harming themselves or others. Observation is not simply a custodial activity. It is also an opportunity for the nurse or officer to interact in a therapeutic way with the individual on a one-to-one basis.

Definition

Nursing observation can be defined as 'regarding the patient attentively' while minimising the extent to which they feel they are under surveillance. Encouraging communication, listening and conveying to the individual that they are valued and cared for are important components of skilled nursing observation.

Deciding that an individual should be observed

Where possible, decisions about observation should be made jointly by the medical, nursing and residential staff. If a nurse or officer becomes aware that an individual is having suicidal thoughts or difficulty with impulse control, he/she should report to the senior nurse who will decide whether, and at what level, observation needs to be implemented. An F2052SH (or an Act to Care form in Scotland) must be opened and health centre managers must also be made aware so that adequate numbers and grades of staff can be made available for future shifts. The fact that an individual is considered to be at serious risk of suicide should trigger referral to mental-health services for assessment and the results of the assessment recorded in the notes.

Signs that may indicate the need for observation

- History of previous suicide attempts, self-harm or attacks on others.
- Hallucinations, particularly voices suggesting harm to self or others.
- Paranoid ideas where the patient believes that other people pose a threat.
- Thoughts and ideas that the individual has about harming themselves or others.
- Specific plans or intentions to harm themselves or others.
- Past problems with drugs or alcohol.
- Recent loss.
- Poor adherence to medication programmes.

What to observe

- General behaviour, level of cooperation and a willingness to accept help.
- Expression of suicidal ideas or hopelessness.
- Mood and attitude.
- Orientation, ie whether the patient knows where he/she is or what day it is
- Memory (where appropriate).

Make your observations as objective as possible, eg 'he kept saying that he was a complete waste of space' as opposed to 'still depressed'.

Supporting the individual during observations

- Ideally, the observer and individual should know each other and the observer should be familiar with the individual's history, social context and significant events since admission.
- Observer should be aware of the needs assessment and the overall plan of care drawn up by the multidisciplinary team.
- Observation is an opportunity for one-to-one interaction. The observer must show the patient positive regard. If a patient is uncommunicative, the observer can initiate conversation and convey a willingness to listen.
- Some individuals will prefer to be active, or may just want to pass the time. It is important that the observer elicit the individual's preferences, eg in music, television and reading, and attempt to provide these.
- Individual is entitled to information about why they are under observation, how long it will be maintained and what may happen. If possible, information should be provided in written form and translated, if necessary, into the individual's own language. For some individuals, a written contract stating the roles and expectations of staff and the individual might have some therapeutic potential.

- Aims and level of observation should be communicated, with the individual's permission, to the nearest relative and, especially if the individual is on remand, to the individual's solicitor, in order to enable speedy representation to be made to the court.

Responsibility for the observation of individuals

It is impossible to stipulate exactly who should carry out this task, but it is clearly undesirable for someone who does not know the health centre or the individual to be responsible for observing an individual who is suicidal, vulnerable or violent.

Ideally, the nurse or officer responsible for carrying out observation will:

- know the individual well, including their history, background and specific risk factors
- be familiar with the health centre/unit, health centre/unit policy for emergency procedures and the potential risks in the environment and
- have received formal training in observation and in the management of violence.

It is important to note that the registered nurse remains accountable for the decision to delegate observation to a support worker or student in training and ensuring they are sufficiently knowledgeable and competent to undertake the role.

Four levels of observation

- **Level I: General observation** is the minimum acceptable level of observation for all in-patients. Staff should know the location of all individuals, but not all individuals need to be kept within sight. At least once a shift a nurse or officer should sit down and talk with each individual to assess his/her mental state. This interview should always include an evaluation of the individual's mood and behaviours associated with the risk and should be recorded in the notes (see **Mental State Assessment** on the disk).
- **Level II: Closer, more focused observation** means that the individual should be checked at frequent, irregular intervals (exact times to be specified in the notes). Observation should involve close, supportive interaction with the patient. The patient may find it beneficial to have access to a listener or buddy. Level II observation should be used sparingly as there is some evidence from the NHS that it may not be effective. If in doubt, move to Level III. Close, focused observation may be considered when the prisoner is potentially, but not immediately, at risk. Individuals with depression but no immediate plans to harm themselves or others, or those who have previously been at risk of harm to self or others but who are in a process of recovery, require intermittent observation. Use a gated cell to ensure that observation can continue during patrol states.
- **Level III: Within eyesight** is required when the patient could, at any time, attempt to harm themselves or others. The patient should be kept within sight at all times, by day and by night, and any tools or instruments that could be used to harm self or others should be removed. It may be necessary to search the patient and their belongings while having due regard for the patient's legal rights. In practice, this level of observation is very difficult to achieve in prison. In some prisons, an observation ward or cameras are available to assist staff in observing prisoners. In addition, access to a listener or buddy should be facilitated if the prisoner would find it helpful. The need for Level III observation should trigger referral to the psychiatric services for assessment and possible transfer to a psychiatric hospital.
- **Level IV: Within arm's length.** Patients at the highest levels of risk of harming themselves or others may need to be nursed in close proximity. On rare occasions, more than one nurse may be necessary. Issues of privacy, dignity and consideration of the gender in allocating staff, and the environmental dangers need to be discussed and incorporated into the care plan. In practice, this level of observation is possible within a prison only within a special-care suite, with special staffing rotas and where the person on Level IV observation is unlocked. Where this is not the case, individuals requiring Level IV observation should be transferred urgently to a psychiatric hospital.

Review of observation

Observation status should be reviewed by the medical officer and the primary nurse or the ward sister/charge nurse and residential manager (if appropriate) at least daily (including weekends). For arm's-length observation (Level IV), there should be three reviews, two during the day and one before the night shift. Decisions to shift the level of observation should always be taken jointly between medical and nursing staff, except in an emergency. Beware of false symptomatic improvement, especially when life crises that are associated with depression remain unresolved.

Recording decisions

All decisions about observation should be recorded by the doctor or nurse in the individual's medical/clinical notes. Records should include the following.

- Current mental state.
- Current assessment of risk.
- Specific level of observation to be implemented.
- Clear directions about therapeutic approach, ie occupation, therapy sessions.
- Timing of the next review.

Detailed records of observation should be kept by the staff responsible for carrying out the observation, including:

- the name of the person responsible and the time that they commenced and concluded their period of observation and
- a detailed record of the patient's behaviour, mental state and attitude to observation.

Ensuring continuity

Observation may involve a number of nurses and/or officers, with care being handed over at hourly intervals. Excellent communication among staff must be maintained by, for example, a group briefing of all staff to be involved in observing an individual at the beginning of each shift, during which the individual's status is reviewed, the potential dangers are enumerated and the attitudes to the process discussed.

Before taking over the individual's care, each nurse should have familiarised themselves with the individual's background and recent clinical notes. If possible, the hand over from one nurse to another should involve the individual. Though difficult, involving the individual can increase their sense of autonomy and encourage the development of trust. The individual has a right to information about their care and about what might happen in the future.

Length of observation time for individual staff

No period of observation by a member of staff should be longer than 2 hours except in very exceptional circumstances. At the end of each observation period, the nurse should have a break from observation of at least half an hour.

Limits to observation

Should a more intensive level than general observation continue for more than 1 week a review by the full clinical team should be triggered.

Auditing observation

Observation is a frequent and significant event in patient care and should be audited at 6-monthly intervals. A minimum data set would include the following:

- Reason for observation.
- Specific level or levels of observation.
- Length of time observed.
- Any untoward incidents.

Training for observation

Observing individuals at risk is a highly skilled activity. Every health centre should ensure that nursing staff (qualified, unqualified, other clinical staff, and bank and agency staff) are appropriately trained. Essential components of adequate training include the following:

- Risk assessment.
- Mental state assessment.
- Management and engagement of patients at risk of harming self and others.
- Factors associated with self-harm/harm to others.
- Indications for observation.
- Levels of observation.
- Attitudes to observation.
- Therapeutic opportunities in observation.
- Roles and responsibilities of the multidisciplinary team in relation to observation.

- Making the environment safe.
- Recording observation.
- Use of reviews and audit.

Observation by discipline staff

A prisoner identified as at risk of attempted suicide or self-harm and placed on a F2052SH or Act to care procedure will more often be located on a normal location on a residential wing than in a healthcare centre. Staff on the wing will be responsible for maintaining observation of those prisoners identified as at risk, unless and until the acuteness of that risk means that the prisoner is best located elsewhere. Healthcare staff will play a key role in liaising with and supporting officers on the wings, eg by sharing information about prisoners and advising on good practice in how to carry out and interpret observations.

References

Standing Nursing and Midwifery Advisory Committee. *Practice Guidance: Safe and Supportive Observation of Patients at Risk*. Mental Health Nursing 'Addressing Acute Concerns'. London: Department of Health, 1999.

Emergency treatment of self-poisoning or overdose

This section is for use by nurses in centres without 24-hour medical presence. Further information can be found in the *BNF* under **Emergency treatment of poisoning**. It contains general information about the management of poisons and specific information about the management of those poisons used most commonly in prisons. These are:

- Acids and alkalis.
- Alcohol.
- Amphetamine and MDMA (ecstasy).
- Antibiotics.
- Aspirin.
- Batteries.
- Benzodiazepines.
- Detergent cleaners.
- γ -Hydroxybutyric acid (GHB).
- Heroin.
- Ibuprofen.
- Mefenamic acid.
- Methadone.
- Opiates (other).
- Paracetamol.
- Steroids.
- Tricyclic antidepressants (TCAs).
- White spirit.

Information about the following poisons is provided on the attached disk . These can be printed and stored.

- ACE inhibitors.
- Acids and alkalis.
- Alcohol.
- Amphetamine and MDMA.
- Antibiotics.
- Anticonvulsants.
- Antidepressants.
- Antihistamines.
- Antipsychotics.
- Aspirin.
- Barbiturates.
- Batteries.
- Benzodiazepines.
- β -Blockers.
- Bleach.
- Body packers.
- Button batteries.
- Calcium channel-blocking drugs.
- Cannabis.
- Cocaine.
- Detergent cleaners.
- Digoxin.
- Disinfectant.
- GHB.
- Heroin.
- Hypnotics, non-barbiturate.
- Ibuprofen and other non-steroidal anti-inflammatory drugs (NSAIDs).
- Khat.
- Lithium.

- LSD.
- Mefenamic acid.
- Opiates.
- Paracetamol.
- Salbutamol.
- Sterilizing tablets.
- Steroids.
- Theophylline.
- Toilet blocks and channel blocks.
- Toiletries.
- White spirit.

General information

Most cases of poisoning will result from deliberate self-harm by adults; occasionally such acts are accidental.

When assessing the patient, remember the following:

- The history from the patient may be unreliable; particularly when asked how much of a substance has been ingested or inhaled.
- The patient may have taken more than one poison.
- Many poisons cause symptoms and signs similar to the symptoms and signs of other diseases or injuries.
- A patient may be poisoned **and** be suffering from the effects of another illness or injury. Ask about other medical conditions and look for cuts and bruises and other signs of injury. In particular, hypoglycaemia and head injury may be confused with poisoning.

The patient may present with the following:

- Vomiting, abdominal pain, diarrhoea.
- Confusion, restlessness, irritability, slurred speech, ataxia, dizziness.
- Drowsiness, unconsciousness.
- Constricted or dilated pupils.
- Muscle tremors, convulsions.
- Breathing difficulties.
- Circulatory problems such as hypotension, tachycardia or bradycardia.
- Raised temperature and sweating.
- Burns and stains on or around mouth or on the skin if a corrosive or irritant liquid has been taken.
- A history or circumstances suggestive of deliberate or accidental poisoning, but conscious and fully orientated. A conscious and well patient may be in the early stages of poisoning and therefore still at risk of toxicity.

More information on clinical presentation of the poisoned patient is given below in an overview of the typical syndromes of poisoning.

Commonly encountered poisoning syndromes.

Syndrome	Possible agents	Vital signs	Mental status	Signs and symptoms
Anticholinergic	atropine, phenothiazines, tricyclic antidepressants	ØBP `HR	lethargy to coma	confusion, dilated pupils, dizziness, dry mouth, inability to urinate, flushed skin, convulsions
Extrapyramidal	metoclopramide, phenothiazines, some antipsychotics	ØBP `HR ` or Øtemperature	lethargy	dystonic movements, abrupt muscle contractions especially of the face and neck, torticollis, tongue protrusion, oculogyric crisis
Hyperthermic	amphetamine, cocaine, ecstasy	`BP `HR `temperature `RR	fluctuating level of consciousness	rigidity, hyper-reflexia, disseminated intravascular coagulation,

				rhabdomyolysis, renal failure
Neuroleptic malignant syndrome	antipsychotics	`BP `HR `temperature `RR	fluctuating level of consciousness	rigidity, hyper-reflexia, disseminated intravascular coagulation, rhabdomyolysis, renal failure
Opioid	codeine, heroin, methadone, morphine	ØBP ØHR ØRR Øtemperature	lethargy to coma	slurred speech, ataxia, pinpoint pupils
Sedative	barbiturates, ethanol, hypnotics	ØBP ØRR Øtemperature	lethargy to coma	slurred speech, ataxia, hyporeflexia
Sympathomimetic	aminophylline, amphetamine, caffeine, cocaine, phencyclidine, theophylline	`BP `HR `temperature `RR	anxiety, agitation, delirium	dilated pupils, sweating, convulsions
Withdrawal of opiates		`BP `HR	normal	dilated pupils, sweating, nausea, vomiting, hyperactivity, piloerection, rhinorrhea
Withdrawal of sedative hypnotics or ethanol		`BP `HR `RR `temperature		nausea, dilated pupils, tremor, convulsions, sweating

BP, blood pressure; HR, heart rate; RR, respiratory rate.

Resuscitation

- Resuscitate the patient if necessary (Airways, Breathing, Circulation — ABC):
 - **Airway:** if the airway is obstructed, pull the tongue forward, remove the dentures or any other foreign bodies, and oral secretions, hold the jaw forward and insert an oropharyngeal airway, if available. Turn patient semiprone and head-down to reduce the risk of inhaling vomit.
 - **Breathing:** assisted ventilation by mouth-to-mouth or Ambu-bag inflation may be needed.
 - **Circulation:** hypotension is common in severe poisoning with central nervous system (CNS) depressants. If the BP is very low, carry the patient head downwards on a stretcher and nurse in this position in the ambulance.
- Give oxygen via Hudson mask to maintain O₂ saturation > 94%.

Immediate management

- Ingested poison: do not give anything to drink if the patient is drowsy or unconscious or if the breathing is abnormal. Do not induce vomiting. When irritant chemicals have been swallowed, if the patient is fully awake and breathing normally, rinse out the mouth with water. A **small** drink of water can be given (< 200 ml) to dilute the chemical. It is best to avoid giving drinks after ingestion of corrosive chemicals because it may make the patient vomit.
- Chemical in the eye: irrigate immediately with copious amounts of water (preferably sterile) or saline for 15–20 minutes. Solid particles should be removed with cotton wool or forceps. Monitor the pH of the cornea and irrigating fluid with universal indicator paper. Continue until the pH is normal and remains so for 2 hours. Use anaesthetic drops if necessary so that the whole eye can be irrigated including under the upper and lower lids.
- Chemical on the skin: remove contaminated clothing. Irrigate the skin with running water or saline for 15 minutes (30 minutes for alkali exposure). Test the pH of the skin and continue to irrigate until the skin is no longer strongly acidic or alkaline. Neutralising chemicals should not be used. Following thorough irrigation, chemical burns should be treated as thermal burns.

Assess the following signs

- Check the blood glucose and give IV glucose if necessary.
- Respiratory rate, BP, HR, temperature, O₂ saturation, blood sugar.

- Conscious state, monitor the Glasgow Coma Scale (note that the scale is not useful for all agents).
- Gag reflex.
- Pupil size.
- Obtain a full history including the details of poisoning (this should not delay transfer of the patient to A&E).

What substance was taken? Name of the product, its components and manufacturer. Look for a container if possible.
Ask officers or witnesses.

How was it taken?	Swallowed, injected, inhaled, absorbed through the skin.
How much was taken?	Try to work out exactly how much was taken.
When was it taken?	Exact time if possible.
Why was it taken?	Accidental or deliberate.
What else taken?	Overdoses of drugs often involve more than one substance
Previous medical history	A medical condition or medication could put the patient more at risk of toxicity following an overdose. For example, alcohol abuse, or use of carbamazepine or warfarin, put patients into a risk group following paracetamol overdose. When it is not clear what substance has been ingested, a previous medical history may indicate which medicines might have been available to the patient.

Continuing management

- **Airway:** all patients who are at risk of becoming drowsy, are unconscious (Glasgow Coma Scale < 8/15), have an absent gag reflex or are fitting will need airway protection and may need intubation.
- **Fits:** ensure the patient is safe from injury and clear the airway. Most fits stop after 2 minutes. Check the blood glucose and give IV glucose if necessary. For prolonged or recurrent fits not controlled by correcting blood glucose, diazepam can be given, but it may cause cardiorespiratory collapse requiring resuscitation. Refer to a medical officer.
- **Transfer to A&E:**
 - After exposure to a toxic amount.
 - After chemical contamination of the eyes or chemical burns to the skin. In particular, all alkali exposures should be referred to A&E even if they seem insignificant. Urgent referral to an ophthalmologist is essential for alkali contamination of the eye and is probably needed after any chemical contamination of the eye.
- **Contacting a poisons information centre** may be useful to find out whether a substance is considered toxic. Centres are open for consultation by health professionals and emergency services day and night (Tel: 0870 600 6266).
- Preventing absorption with activated charcoal. Activated charcoal binds some poisons in the gut, preventing the toxin from being absorbed. The bound toxin is eliminated rectally. Activated charcoal does not bind the following, and therefore should not be used for:
 - Cyanide.
 - Alcohols, glycols.
 - Metal salts, eg iron salts, lithium salts.
 - Acid, alkali.

Indications:

- Patient is thought to have ingested enough toxin to cause serious poisoning.
- The agent ingested is believed to bind to AC.
- Ingestion was more than 1 hour before.
- Patient is conscious and cooperative.

Contraindications:

- Trivial ingestion.
- Patient has taken an agent that does not bind to an AC.
- Ingestion is more than 1 hour before.
- Drowsy, unconscious patient, whose airway cannot be protected.
- Patient has taken an agent that is corrosive.

Dose: 50 g, given as a drink or via oro- or nasogastric tube.

Substances of low toxicity

- These products are considered non-toxic in **acute** ingestion.

- No clinical features other than oral irritation and gastrointestinal upset are expected.
- No specific treatment is required. In the event of a very large ingestion, or if worrying symptoms occur, contact a poisons information centre.
- All products marked [®] are registered trademarks.

Drugs	Cosmetics	Craft/DIY products	Miscellaneous
<ul style="list-style-type: none"> • Calamine lotion • Emollients (E45[®]) preparations, petroleum jelly) • Evening primrose oil • Folic acid • Oral contraceptives and hormone replacement (HRT) preparations • Simple linctus BP • Steroid creams • Zinc oxide creams/lotions (eg Sudocrem[®]) 	<ul style="list-style-type: none"> • Moisturiser cream/lotion • Solid cosmetics (eg. lipstick, make-up) 	<ul style="list-style-type: none"> • Emulsion paint • Plasticine[®] • PVA (polyvinyl alcohol) glue • Superglue/cyanoacrylate (risk of mechanical injury) • Wallpaper paste 	<ul style="list-style-type: none"> • Artificial sweeteners • Blu Tack[®] and similar adhesives • Candles • Felt-tip/ball-point pen ink • House plant food (eg Phostrogen[®]) • Matches • Mercury thermometers (risk from glass) • Pencil 'leads' (graphite) • Silica gel

Acids and alkalis

- Acids and alkalis affect different areas of the gastrointestinal tract.
- Alkalis damage the mouth, throat and oesophagus more than the stomach.
- Alkalis cause liquefaction burns, therefore they have the potential to cause deep, penetrative injuries.
- Acids mainly affect the stomach. They do not penetrate the tissue as deeply as alkalis. However, severe effects are likely with concentrated solutions. Acids form 'coagulation' burns similar to thermal injuries.

Strong acid	Formic acid, hydrochloric acid, nitric acid, sulphamic acid, sulphuric acid	Likely to cause severe injury
Weak acid	Acetic acid, citric acid	Irritant rather than corrosive unless the solution is concentrated
Weak alkali	Sodium carbonate	Irritant rather than corrosive unless the solution is concentrated
Strong alkali	Sodium metasilicate, sodium hydroxide (caustic soda, lye), calcium hydroxide (slaked lime), calcium oxide (lime, quicklime)	Likely to cause severe injury

Household products that may contain acids or alkalis

Use	Acid or alkali	Examples
Car battery	Acid	Sulphuric acid
Descaler, for a kettle or the bathroom	Acid	Sulphamic acid, citric acid, formic acid
Dishwasher liquid/powder	Alkali	Sodium metasilicate

Drain cleaner*	Acid/alkali	Sulphuric acid, hydrochloric acid, potassium hydroxide, sodium hydroxide
Oven cleaner	Alkali	Sodium or potassium hydroxide
Paint stripper*	Alkali	Sodium hydroxide
Toilet cleaner*	Acid	Hydrochloric acid or phosphoric acid

*Some products with this function do not contain acid or alkali, so it is essential to find out the trade name and constituents of the product involved

May present with:

- Immediate pain in the mouth, oesophagus and stomach, swelling of lips, vomiting, haematemesis, salivation, mucosal burns, dyspnoea, stridor, dysphagia, shock. Note that the oesophagus may be damaged even when there are no burns to the inside of the mouth.

In severe poisoning:

- Burns to the lining of the mouth, oesophagus and stomach.
- Gastrointestinal haemorrhage and perforation, and upper airway obstruction. Acid ingestion may result in collapse, hypotension, acute renal failure and liver damage.
- Contamination of the eyes: there is the possibility of very serious burns, pain and blepharospasm.
- Contamination of the skin: pain, erythema, blistering, ulceration and discoloration of the skin. Alkali burns may be painless initially and appear insignificant, but they may be deep, penetrating burns that become worse over several hours.

Complications:

- Oesophageal stricture and pyloric stenosis can occur after 14–21 days.

Management:

- Ensure the airway is clear.
- For ingestion of household bleach, if the patient is fully awake, breathing normally and able to swallow without difficulty, give small amounts of water to drink.
- After ingestion of industrial bleach, oral fluids should not be given.
- Never give activated charcoal. Never induce vomiting.
- Patients with Grade 1 burns (erythema, oedema) or more severe symptoms, and all who have ingested alkali, even if they are asymptomatic, should be transferred to A&E for assessment. Intensive care may be required.
- **For skin contamination:** as soon as possible, irrigate with water or saline for 30 minutes. Test the pH of the skin. Continue to irrigate until the skin is no longer strongly acidic or alkaline. Treat as a thermal burn. All alkali exposures should be referred to A&E even if they seem insignificant.
- **For eye contamination,** copious and immediate irrigation is essential, with water, preferably sterile, or saline for at least 15 minutes. Solid particles should be removed with cotton wool or forceps. Monitor the pH of the cornea and irrigating fluid, continue until the pH is normal and remains so for 2 hours. Use anaesthetic drops if necessary so that the whole eye can be irrigated, including under the upper and lower lids. Urgent referral to an ophthalmologist is essential for alkali contamination.

Alcohol

Also called ethyl alcohol, ethanol. In tolerant adults, severe effects are rare. Death is usually as a result of aspiration of vomitus.

May present with:

- Impaired visual acuity, coordination and reaction time, and emotional lability.
- Blood levels $< 1.5 \text{ g l}^{-1}$: slurred speech, ataxia, muscular incoordination and diplopia. There may be flushing, tachycardia, sweating and incontinence.

In severe poisoning:

- Blood levels $3\text{--}5 \text{ g l}^{-1}$: cold clammy skin, hypothermia, stupor, dilated pupils and drowsiness progressing to coma. Severe hypoglycaemia may lead to convulsions.

- Blood levels > 5 g l⁻¹: deep coma, shock, respiratory depression, respiratory arrest and/or circulatory failure.

Management:

- Observation is recommended for at least 4 hours post-ingestion. Ensure the patient is adequately hydrated and monitor the blood sugar.
- Patients with signs of severe poisoning should be transferred to A&E.
- For hypoglycaemia administer glucose/dextrose IV.
- Convulsions usually respond to the correction of hypoglycaemia and diazepam may be used if required. Ventilation may be needed for respiratory depression.

Amphetamine and MDMA (ecstasy)

MDMA is an amphetamine derivative. It is taken as a tablet or powder enclosed in a capsule. Adverse effects more commonly occur after 'recreational' doses rather than with an overdose.

May present with:

- Onset of symptoms from amphetamine according to the route of exposure.

Drug	Onset (IV)	Onset (oral)	Duration
Amphetamine	within minutes	within 3 hours	4-6 hours
MDMA		within 1 hour	4-6 hours

- Transient nausea, increased muscle tone, muscle pain, trismus (jaw-clenching), dilated pupils, blurred vision, sweating, dry mouth, agitation, anxiety, palpitations, vomiting, abdominal pain and diarrhoea.
- Hypertonia, hyper-reflexia, hyperpyrexia, tachycardia, initial hypertension then hypotension, tachypnoea, and visual hallucinations.
- Effects may be prolonged if a patient has alkaline urine.

In severe poisoning:

- Delirium, coma, convulsions and cardiac dysrhythmias that may be fatal.
- A hyperthermic syndrome may develop with rigidity, hyper-reflexia and hyperpyrexia (> 39°C) leading to hypotension, rhabdomyolysis, metabolic acidosis, acute renal failure, disseminated intravascular coagulation, hepatocellular necrosis, adult respiratory distress syndrome and cardiovascular collapse.
- Death from intracerebral haemorrhage has also been reported in hyperthermic patients.
- MDMA is also associated with hyponatraemia and cerebral oedema. This can occur in patients who have consumed excessive amounts of water (owing to drug-induced repetitive behaviour). These patients present with mild hypothermia and confusion; they may be unresponsive and staring.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- All patients should be transferred to A&E and observed for at least 6 hours for electrocardiogram (ECG) monitoring and the monitoring of electrolytes balance
- Give diazepam for convulsions. Refer to a medical officer.
- If the rectal temperature > 39°C, instigate cooling measures (fan, sponging, ice packs, cool IV fluids). If this is unsuccessful, the patient will need to be paralysed and ventilated.

Antibiotics

Includes: amoxicillin, erythromycin, flucloxacillin, penicillin. These drugs are essentially non-toxic.

May present with:

- Nausea, vomiting, diarrhoea.

Management:

- No specific treatment is needed.

Aspirin (acetylsalicylic acid)

Includes: salicylate.

Toxic dose:

- Ingestion > 120 mg kg⁻¹.

May present with:

- Nausea, vomiting, epigastric pain, tinnitus, deafness and flushing.
- Hyperventilation, sweating, dehydration, tremor and respiratory alkalosis with metabolic acidosis.

In severe poisoning:

- Confusion, drowsiness, delirium and pyrexia.
- Rarely coma, convulsions, renal failure, pulmonary oedema and cardiovascular collapse.

Management:

- Activated charcoal can be given to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Repeated doses of charcoal may be considered. Consult a medical officer. The patient should be transferred to A&E if > 120 mg kg⁻¹ aspirin ingested.
- Measurement of plasma salicylate concentration is important.
- In severe poisoning, haemodialysis is recommended.

Batteries: button batteries

Used in calculators, watches, hearing aids, musical greetings cards, etc.

- There are five main types: mercury, lithium, alkaline-manganese, silver and zinc-air. Most contain alkaline hydroxide solutions whatever their type.
- May cause:
 - electrical burns
 - chemical burns as a result of current-induced alkali production or as a result of leakage of alkaline contents and
 - chemical toxicity.
- On ingestion: in most cases, batteries pass through the gastrointestinal tract without causing harm. There is a risk of serious complications if the battery sticks in the oesophagus or the gut, but this is rare.

May present with:

- Delayed effects: a difficulty in swallowing, vomiting, haematemesis, nausea, burns in the mouth, indicating damage to the oesophagus; vomiting, tarry or bloody stools, abdominal pain, pyrexia indicating damage to the lower gut.

Management:

- Activated charcoal is of no benefit.
- Patient should be transferred to A&E for X-rays to confirm ingestion.
- Urgent removal may be necessary if the battery is leaking or is in the oesophagus
- If the battery is intact and small enough to pass through the gut, the hospital stay is unnecessary if the stools can be monitored and the clinical condition of the patient closely observed. X-rays should be repeated at 24 hours post-ingestion. If the patient develops signs or symptoms, particularly gastroenteritis or discoloured stools, or the battery is passed leaking or in pieces, the patient should return to hospital.

Benzodiazepines

Includes: alprazolam, clonazepam, chlordiazepoxide, diazepam, flunitrazepam, lorazepam, nitrazepam and temazepam.

Susceptibility to benzodiazepines varies widely. Taken alone, benzodiazepines rarely cause severe effects in overdose. However, serious effects may occur if taken with alcohol or other CNS depressants, or by elderly people. Patients who have been taking benzodiazepine sedatives for some time may develop a tolerance and experience less severe effects from overdose.

Toxic dose:

- A toxic dose of benzodiazepines is difficult to assess, as individual susceptibilities vary and concomitant ingestion of a CNS depressant (eg ethanol) may enhance toxicity. There is also the risk of aspiration of vomit in a patient with altered mental status who may not have exceeded the toxic dose. Therefore, the following doses are to be interpreted with care:
 - Alprazolam: 10 mg.
 - Clonazepam: 20 mg.
 - Chlordiazepoxide: 300 mg.

- Diazepam: 100 mg.
- Flunitrazepam: 10 mg.
- Lorazepam: 10 mg.
- Nitrazepam: 100 mg.
- Temazepam: 200 mg.

May present with:

- Onset of effects within 30 minutes to 3 hours.
- Drowsiness, slurred speech, ataxia and confusion.

In severe poisoning:

- Unconsciousness is unusual, but if it does occur, it may be associated with hypotension and respiratory depression.

Management:

If a toxic dose has been exceeded:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Patient should be observed for at least 4 hours after ingestion for the monitoring of BP, the pulse and the respiratory rate. Patients with impaired consciousness should be transferred to A&E because of the risk of respiratory depression.
- Flumazenil, a specific benzodiazepine antagonist, is not recommended outside hospital. It can reverse the sedative effects of benzodiazepines, but is not licensed for use in benzodiazepine overdose. It may precipitate convulsions or arrhythmias if other drugs have been ingested, and may precipitate withdrawal syndrome in patients addicted to benzodiazepines.

Detergent cleaners

Domestic general cleaners and domestic washing up liquid are of low toxicity.

May present with:

- Nausea, vomiting, diarrhoea. If the patient vomits foam, there is risk of aspiration, which may cause chemical pneumonitis.

Management:

- No treatment is required unless the patient is coughing and may have aspirated. In such cases, the patient should be referred to hospital.

γ -Hydroxybutyric acid (GHB)

Originally developed as an anaesthetic, GHB was found to have steroidal properties and produced effects similar to ecstasy and LSD. It can be in powder or granular form, often presented in a capsule. It is commonly dissolved in water to produce a clear, colourless liquid that may be injected IV or ingested. In addition to its use as a recreational drug, it is also used by bodybuilders, and as a 'date-rape' drug.

May present with:

- Onset of effects within 15–60 minutes of ingestion or 2–15 minutes after IV injection.
- Nausea, vomiting, diarrhoea.
- Drowsiness, headache, ataxia, dizziness, confusion, agitation, hallucinations (rare), euphoria, amnesia, vertigo.
- Urinary incontinence, tremor, myoclonus, hypotonia, hypothermia, sometimes extrapyramidal symptoms.

In severe poisoning:

- Coma usually lasting 1–2 hours, with dizziness lingering for up to 2 weeks.
- Bradycardia, seizure-like activity, hypotension (rarely hypertension with IV use), Cheyne–Stokes respiration and respiratory depression, which may lead to respiratory arrest.
- Effects usually resolve spontaneously within 2–96 hours; most users feel 'high' for 24–48 hours and then suffer a hung-over state for a further 48–72 hours.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.

- All patients should be observed for a minimum of 2 hours, monitoring BP, the pulse and the respiration. If patients are symptomatic for more than 2 hours after ingestion, they should be transferred to A&E.

Heroin

Slang terms vary locally, but include horse, 'H', brown sugar, smack, stuff and junk.

Street heroin varies in its chemical and physical appearance depending on the country or region of origin. Most heroin is sold in 'bags' or 'wraps' filled with 200–400 mg powder varying in colour from white to light brown. Heroin may be administered orally, sublingually or rectally, by subcutaneous, IM or IV injection, or by smoking, the snorting of powder or by inhalation of a thick, white smoke by heating it with a flame on silver paper ('chasing the dragon').

May present with:

- Onset of effects within 30 minutes of ingestion or within seconds to minutes after IV injection. The peak effects last for about 10–30 minutes and continue in milder form for 2–4 hours.
- Nausea, vomiting.
- Dry mouth, constricted pupils, drowsiness, confusion, euphoria, a sense of calmness, flushing, sweating and a feeling of warmth.

In severe cases:

- Hypotension, coma, bradycardia, respiratory depression with associated hypoxaemia and pulmonary oedema, cardiac arrhythmias. The pupils may be dilated if hypoxic cerebral damage has occurred.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Naloxone can be given to reverse the signs of severe poisoning (coma, respiratory depression or convulsions) within a few minutes, but it has a short life and the patient may relapse. Refer to a medical officer.
- All patients who have taken an overdose of opioid analgesics should be transferred to A&E and observed for at least 6 hours. Patients who require naloxone should be observed for 24 hours. ECG monitoring and ventilation may be needed.

Naloxone

Form: ampoule

Strength: 0.4 mg ml⁻¹

Route of administration: IV

Recommended dose adult: 0.4 mg

Duration: can be repeated at intervals of 2–3 minutes to a maximum of 10 mg, only on the medical officer's orders

Ibuprofen

Serious poisoning is unusual. Some preparations are sustained release; the onset of toxicity may be delayed and the duration prolonged.

Toxic dose:

- Ingestion > 100 mg kg⁻¹.

May present with:

- Nausea, vomiting, abdominal pain.
- Drowsiness, lethargy, dizziness, headache and tinnitus.
- Tachycardia, hypothermia.

In severe poisoning:

- Hypotension, renal failure.
- Coma, convulsions, apnoea or respiratory depression, cardiorespiratory arrest.

Complications:

- Electrolyte disturbances, metabolic acidosis, hyperventilation resulting in respiratory alkalosis.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Observe for 4 hours, or 12 hours for a sustained-release preparation. All patients with significant symptoms should be transferred to A&E.
- In drowsy or hyperventilating patients, the pH, electrolytes, blood gases and renal function should be monitored.

Mefenamic acid

Can cause convulsions at doses close to those used in therapy, within 1 hour of ingestion, or delayed for 12 hours or more.

Toxic dose:

- Ingestion > 1500 mg.

May present with:

- Nausea, vomiting, abdominal pain.
- Convulsions.

In severe poisoning:

- Renal failure.
- Cardiac arrest has been reported in patients with convulsions following an overdose with mefenamic acid.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Diazepam can be given to control fits if they are prolonged. Refer to a medical officer.
- Patients should be transferred to A&E and observed for at least 12 hours, or 24 hours if the patient develops convulsions.
- In drowsy or hyperventilating patients, the pH, electrolytes, blood gases and renal function should be monitored.

Methadone

Toxicity is enhanced if other CNS depressants such as alcohol are ingested as well. Methadone has a long half-life; toxicity may be delayed and the duration prolonged.

Toxic dose:

- Difficult to assess as tolerance and therapeutic doses vary greatly
- Hospital management is recommended if the patient has exceeded their established dose.

May present with:

- Nausea, vomiting.
- Some opioids may cause a rash, itching and flushing.
- Drowsiness, pinpoint pupils.

In severe poisoning:

- Unconsciousness, convulsions, hypotension.
- Respiratory depression, with cyanosis and respiratory arrest. Hypoxia due to respiratory depression is the most frequent cause of death from opioid poisoning
- Methadone has a long half-life; the clinical effects may be prolonged. Naloxone infusion may be required.

Complications:

- Non-cardiogenic pulmonary oedema, cardiovascular collapse, renal failure.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Naloxone can be given to reverse the signs of severe poisoning (coma, respiratory depression or convulsions) within a few minutes, but it has a short life and the patient may relapse. Refer to a medical officer.
- All patients who have taken an overdose of opioid analgesics should be transferred to A&E and observed for at least 6 hours. Patients who require naloxone should be observed for 24 hours. ECG monitoring and ventilation may be needed.

Naloxone

Form: ampoule

Strength: 0.4 mg ml⁻¹

Route of administration: IV

Recommended dose adult: 0.4 mg

Duration: Can be repeated at intervals of 2–3 minutes to a maximum of 10 mg, only on the medical officer's orders

Opiates: codeine, dihydrocodeine, morphine

Toxicity is enhanced if other CNS depressants such as alcohol are ingested as well.

Toxic dose:

- A toxic dose of opiate is difficult to assess as individual tolerances vary greatly. Therefore, the following doses are to be interpreted with care:
 - Codeine: 350 mg.
 - Dihydrocodeine: 420 mg.
 - Morphine: 30 mg (patients may be on higher doses in therapy; the clinical effects may occur if established dose is exceeded).

May present with:

- Nausea, vomiting.
- Some opioids may cause a rash, itching and flushing.
- Drowsiness, pinpoint pupils.

In severe poisoning:

- Unconsciousness, convulsions, hypotension.
- Respiratory depression with cyanosis and respiratory arrest. Hypoxia due to respiratory depression is the most frequent cause of death from opioid poisoning.

Complications:

- Non-cardiogenic pulmonary oedema, cardiovascular collapse, renal failure.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Naloxone can be given to reverse the signs of severe poisoning (coma, respiratory depression or convulsions) within a few minutes but it has a short life and the patient may relapse. Refer to a medical officer.
- All patients who have taken an overdose of opioid analgesics should be transferred to A&E and observed for at least 6 hours. Patients who require naloxone should be observed for 24 hours. ECG monitoring and ventilation may be needed.

Naloxone

Form: ampoule

Strength: 0.4 mg ml⁻¹

Route of administration: IV

Recommended dose adult: 0.4 mg

Duration: Can be repeated at intervals of 2–3 minutes to a maximum of 10 mg, only on the medical officer's orders

Paracetamol

Note that preparations may combine paracetamol with opioids, aspirin, metoclopramide or antihistamines.

Toxic dose:

- Ingestion > 150 mg kg⁻¹ (up to 12 g maximum) may be hepatotoxic in an adult.
- Individual susceptibility is affected by age, metabolic status and co-ingested medication. There are certain high-risk groups who may be at risk of liver damage at lower plasma paracetamol levels (75 mg kg⁻¹). They include:
 - malnourished/ anorexic/ bulimic patients

- HIV-positive patients
- patients with pre-existing liver disease or induced liver enzymes, eg due to chronic alcohol abuse
- patients taking enzyme-inducing drugs: carbamazepine, phenytoin, barbiturates, primidone, glutethimide or rifampicin
- patients with cystic fibrosis and
- patients with some viral infections, eg glandular fever.
- If the ingested dose is not known, determination of serum plasma paracetamol is recommended.
- It is important not to delay in treating a patient with a paracetamol overdose. The efficacy of the antidotes decreases greatly if started more than 8 hours after ingestion.

May present with:

- Initially, sometimes nausea, vomiting, abdominal pain, pallor; rarely, drowsiness and coma.
- Patient may be asymptomatic for up to 24 hours, then develop liver damage.

In severe poisoning:

- Coma and metabolic acidosis, hypoglycaemia, delayed liver damage, which occurs about 3 days after ingestion and may result in death 4–18 days after ingestion. Renal damage can occur in the absence of liver toxicity.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Patient should be transferred to A&E if:
 - toxic dose has been exceeded
 - there is doubt about the amount ingested
 - patient is in a high-risk category (see above) or
 - the overdose is staggered.

Steroids

Includes: prednisolone, beclomethasone, anabolic steroids and corticosteroids. Low, acute toxicity.

May present with:

- Nausea, vomiting, diarrhoea.

Management:

- No specific treatment is needed for acute overdose.

Tricyclic antidepressants

Includes: amitriptyline, amoxapine, clomipramine, dothiepin, doxepin, imipramine, lofepramine, nortriptyline, protriptyline and trimipramine.

Tricyclic antidepressants are the most commonly prescribed antidepressants in the UK. Although the individual TCAs have differences in side-effects and kinetics, most behave similarly in an acute overdose. Peak plasma levels normally occur within 2–8 hours of a therapeutic dose because of delayed gastric emptying. After an overdose, peak levels may occur even later. Life-threatening signs usually develop within 6 hours of ingestion or not at all. The complications most often associated with a fatal outcome are severe hypotension and cardiac arrhythmias.

Toxic dose:

- Hospital observation is recommended for ingestion $> 5 \text{ mg kg}^{-1}$.
- Anticholinergic effects, sedation and hallucinations can occur at doses $< 5 \text{ mg kg}^{-1}$.

May present with:

- Dry mouth, dilated pupils, urine retention, hallucinations, jerky movements, drowsiness.
- Metabolic acidosis and hypokalaemia.

In severe poisoning:

- Coma, hypotension, hypothermia, convulsions, respiratory depression, pulmonary oedema, cardiac arrhythmias, cardiac arrest. Arrhythmias may not respond to therapy.
- Lofepramine is less likely to cause cardiac effects.

- Amoxapine is more likely to cause arrhythmias and convulsions.

Management:

- Activated charcoal can be given within 1 hour of ingestion to reduce absorption unless the patient is drowsy, fitting or vomiting.
- Diazepam can be given to control fits if they are prolonged. Refer to a medical officer.
- Because of the potential for serious toxicity, all patients should be transferred to A&E for observation and to monitor their ECG, pH and electrolytes for at least 6 hours post-ingestion.
- In serious poisoning, ventilation and intensive care will be necessary.

White spirit

Also called turpentine substitute and is composed of a mixture of petroleum distillates. Petroleum distillates are the hazardous component of some furniture polishes, window cleaners, shoe polishes, lighter fuels and paint brush cleaners. They are poorly absorbed from the gut and the main risk following ingestion is aspiration, which may occur during ingestion or if the patient subsequently vomits.

May present with:

- Nausea and vomiting.
- Respiratory distress with coughing, choking, tachypnoea and dyspnoea.
- After prolonged contact with skin: erythema and irritation.

In severe cases:

- Drowsiness and coma after large amounts.
- Chemical pneumonitis and pulmonary oedema.

Management:

- Do not give anything by mouth if the patient is drowsy or having difficulty in breathing, but if the patient is fully awake and breathing normally, give them water to drink.
- Patients with history of vomiting or coughing should be transferred to A&E for a chest X-ray.
- After spills, contaminated clothing should be removed and the skin washed thoroughly. Emollient should be applied to areas of erythema.