**EMERGENCY NURSING 2**

**1, DROWNING PATIENT**

**1. Get Help**

* Notify a lifeguard, if one is close. If not, ask someone to call 911.
* If you are alone, follow the steps below.

**2. Move the Person**

* Take the person out of the water.

**3. Check for Breathing**

* Place your ear next to the person's [mouth](https://www.webmd.com/webmd/consumer_assets/controlled_content/healthwise/multimedia/anatomy_of_the_mouth_multimedia_tp12512.xml) and nose. Do you feel air on your cheek?
* Look to see if the person's chest is moving.

## 4. If the Person is Not Breathing, Check Pulse

* Check the person's [pulse](https://www.webmd.com/webmd/consumer_assets/controlled_content/healthwise/medicaltest/pulse_measurement_medicaltest_hw233473.xml) for 10 second

**5. If There is No Pulse, Start CPR**

Carefully place person on back.

* For an adult or child, place the heel of one hand on the center of the chest at the nipple line. You can also push with one hand on top of the other. For an [infant](https://www.webmd.com/parenting/baby/default.htm), place two fingers on the breastbone.
* For an adult or child, press down at least 2 inches. Make sure not to press on ribs. For an [infant](https://www.webmd.com/parenting/baby/ss/slideshow-baby-milestones-first-year), press down about 1 and 1/2 inches. Make sure not to press on the end of the breastbone.
* Do chest compressions only, at the rate of 100-120 per minute or more. Let the chest rise completely between pushes.
* Check to see if the person has started breathing.

Note that these instructions are not meant to replace CPR training. Classes are available through the American Red Cross, local hospitals, and other organizations.

**6. Repeat if Person Is Still Not Breathing**

* If you've been trained in CPR, you can now open the airway by tilting the head back and lifting the chin.
* Pinch the nose of the victim closed. Take a normal breath, cover the victim's [mouth](https://www.webmd.com/oral-health/ss/slideshow-mouth-problems) with yours to create an airtight seal, and then give 2 one-second breaths as you watch for the chest to rise.
* Give 2 breaths followed by 30 chest compressions.
* Continue this cycle of 30 compressions and 2 breaths until the person starts breathing or emergency help arrives.

2,DEHYDRATION

1. Reassure the casualty and help them to sit down.
2. Give them plenty of water. You can also use an oral rehydration solution. These can help to replace fluid as well as the correct salt and other minerals they’ve lost.
	* Do not mix regular cooking salt into water and give it to the casualty, this will make the condition worse.
3. If they have any painful cramps, encourage them to rest. Help them to stretch and massage the muscles that are affected.
4. Monitor the casualty’s level of response.
	* If the casualty appears to be unwell, CALL PHYSICIAN.

3, HYPOVOLEMIC SHOCK

Ideally, patients suffering from shock are identified at triage and transferred to the resuscitation room. All patients should be given high flow oxygen, have intravenous (IV) access secured, and have basic monitoring instituted (non-invasive blood pressure, pulse oximetry, and continuous ECG).

MANAGEMENT OF AIRWAY AND BREATHING

Does the patient require intubation and ventilation?

Consider early intubation and ventilation for severe shock if there is respiratory distress, severe hypoxaemia, pronounced acidosis, or coma. Intubation ensures protection from aspiration in the presence of a reduced conscious level. Where agitation is attributable to cerebral hypoxia, intubation and ventilation permits rapid treatment without precipitating further respiratory compromise. Inspired oxygen can be maximised to 100% to optimise oxygen delivery to the tissues. Finally, the increased work of breathing with its resultant oxygen requirements is removed.

Profoundly shocked patients, particularly with severe acidosis or impaired conscious level, should be intubated and ventilated within 15 minutes of arrival in the resuscitation room. Senior anaesthetic and intensive care input should be sought at an early stage. Induction carries particular risks in the presence of severe shock, with a significant chance of precipitating profound circulatory collapse through the myocardial depressant effects and vasodilating properties of many induction agents.

A rapid sequence intubation technique is required using comparatively cardio-stable agents such as etomidate or ketamine. Modified doses will be needed, particularly in the presence of hypotension. Pre-loading the circulation with IV fluids to correct hypovolaemia may be necessary, and the use of pressor agents may be urgently required. Low tidal volumes and peak inspiratory pressures should be the aim immediately after intubation to prevent the reduction in venous return that is associated with positive pressure ventilation.

INITIAL MANAGEMENT OF THE CIRCULATION

Is a fluid challenge indicated?

This can be a difficult decision to make on clinical grounds and often depends on the context in which the patient has presented. Conditions that are associated with actual or relative hypovolaemia respond well to restoration of vascular volume. Such conditions should be identified early. Blood loss can be assumed to be the cause of shock after trauma, at least initially, while a search is carried out for haemorrhage into the chest, pelvis, abdomen, or externally.

In conditions such as diabetic ketoacidosis, bowel obstruction, or severe diarrhoea and vomiting, it is reasonable to assume initially that salt and water depletion have caused hypovolaemic shock.

If it is clear that shock has been caused by hypovolaemia, IV fluids should be started. Patients should receive an initial bolus of one to two litres of IV fluid rapidly and be reassessed. The choice of fluid remains controversial, but crystalloids, particularly Ringer’s lactate, have become widely supported.[1](https://emj.bmj.com/content/22/1/17#ref-1) There is no place for inotropes in the management of severe hypovolaemia unless the patient is in established cardiac arrest, as they may precipitate severe arrhythmias that may in turn worsen the shock state.

In other circumstances fluid therapy can be harmful. A patient with acute myocardial infarction or compromising arrhythmia may progress to cardiogenic shock with left ventricular failure and pulmonary oedema. Such patients may be identified by a previous cardiac history, recent chest pain, or ECG changes together with the clinical and radiological signs of acute pulmonary oedema. Additional fluid loading in these patients may increase an already increased left ventricular end diastolic pressure and worsen pulmonary oedema with no useful gain in terms of cardiac output. This is attributable to the flat nature of the Starling curve in the failing heart. Initial mangement in these circumstances is targeted at immediate treatment of any arrhythmia and early inotropic support, together with aggressive management of pulmonary oedema.

A second scenario in which fluids may be harmful is where there is severe shock associated with ongoing non-compressible haemorrhage, for example, penetrating trauma to the torso or a leaking aortic aneurysm. There is evidence that large volume resuscitation before surgical control of haemorrhage is harmful[2](https://emj.bmj.com/content/22/1/17#ref-2) and these patients should be treated using the principles of hypotensive resuscitation. This approach has been shown to lead to fewer complications such as dilutional coagulopathy, hypothermia, and postoperative adult respiratory distress syndrome.

It entails giving minimal, ideally no, IV fluid to the patient until they are in the operating room and at the point of surgical control of haemorrhage. Enough fluid is given to maintain consciousness (brain perfusion). Blood is the colloid of choice if significant blood loss is suspected.

Hypotensive resuscitation is not recommended, however in the context of blunt multiple trauma and where there is evidence of serious head injury, a systolic pressure of at least 90 mm Hg must be maintained.

Should we give a fluid bolus in shock of uncertain aetiology?

If anaphylactic shock is suspected (rash, wheeze, allergen exposure), then fluid therapy is appropriate along with intramuscular adrenaline (epinephrine).[5–](https://emj.bmj.com/content/22/1/17#ref-5)[7](https://emj.bmj.com/content/22/1/17#ref-7) Similarly, if septic shock is suspected (petechial rash, high fever, presence of infective source, rigid abdomen), then fluids should be given.[8,](https://emj.bmj.com/content/22/1/17#ref-8)[9](https://emj.bmj.com/content/22/1/17#ref-9) In addition to maldistribution, septic shock also has a large hypovolaemic component because of the extravasation of plasma through the leaking vasculature.[8,](https://emj.bmj.com/content/22/1/17#ref-8)[9](https://emj.bmj.com/content/22/1/17#ref-9)

Occasionally a patient will present with shock with no immediate obvious precipitant. The usual causes are occult haemorrhage (such as upper gastrointestinal haemorrhage without haemetemesis or melaena or concealed obstetric/gynaecological blood loss), hidden sepsis (silent intraperitoneal perforation, early meningococcaemia, or toxic shock syndrome), or a silent cardiovascular event (pulmonary embolus, myocardial infarction).

Most of these conditions, including myocardial infarction without left ventricular failure, will be improved by a fluid challenge.

A fluid challenge, usually 250 ml of crystalloid solution via a wide bore cannula over two minutes, should be given in the first instance. The response to this fluid challenge should be noted and if the patient seems to improve (blood pressure up, heart rate down, peripheral perfusion improved), then fluid loss should be assumed and further fluid should be given.

CASE PROGRESSION

The patient in the resuscitation room is struggling for breath and is obviously tired. He is given a 250 ml crystalloid fluid challenge over two minutes with a slight improvement in blood pressure, to 90/50 mm Hg, but no change in heart rate or respiratory rate.

His peripheral perfusion has improved a little.

A decision is made to proceed with intubation and ventilation, and he undergoes rapid sequence intubation using etomidate, fentanyl, and suxamethonium. He is sedated with low dose infusions of morphine and midazolam, paralysed, and ventilated with low tidal volumes. Haemodynamically he tolerates this reasonably well. Further IV fluids are given and a urinary catheter is inserted to assess ongoing urine output.

Invasive haemodynamic monitoring is started, consisting of a radial arterial line and a triple lumen right internal jugular central venous catheter. Despite 2.5 litres of IV crystalloid, his invasive arterial blood pressure remains at 85/45 mm Hg and there is clinical evidence of peripheral shut down. His urine output is 10 ml in the first hour.

Chest radiography in the resuscitation room shows a right lower lobe pneumonia and no evidence of pulmonary oedema. A 12 lead ECG shows a sinus tachycardia, Q waves in leads V2, V3, and V4, but no acute changes.

4,APPENDICITIS

Surgery Acute appendicitis is treated by surgery to remove the appendix. The operation may be performed through a standard small incision in the right lower part of the abdomen, or it may be performed using a laparoscope, which requires three to four smaller incisions. If other conditions are suspected in addition to appendicitis, they may be identified using laparoscopy. In some patients, laparoscopy is preferable to open surgery because the incision is smaller, recovery time is quicker, and less pain medication is required. The appendix is almost always removed, even if it is found to be normal. With complete removal, any later episodes of pain will not be attributed to appendicitis.

Recovery from [appendectomy](https://www.medicinenet.com/script/main/art.asp?articlekey=7990) takes a few weeks. Doctors usually prescribe pain medication and ask patients to limit physical activity. Recovery from [laparoscopic](https://www.medicinenet.com/script/main/art.asp?articlekey=39739) appendectomy is generally faster, but limiting strenuous activity may still be necessary for 4 to 6 weeks after surgery. Most people treated for appendicitis recover excellently and rarely need to make any changes in their diet, exercise, or lifestyle.

Antibiotics and Other Treatments

If the diagnosis is uncertain, people may be watched and sometimes treated with antibiotics. This approach is taken when the doctor suspects that the patient's symptoms may have a nonsurgical or medically treatable cause. If the cause of the pain is infectious, symptoms resolve with [intravenous](https://www.medicinenet.com/script/main/art.asp?articlekey=4021) antibiotics and intravenous fluids. In general, however, appendicitis cannot be treated with antibiotics alone and will require surgery.

Occasionally the body is able to control an [appendiceal perforation](https://www.medicinenet.com/script/main/art.asp?articlekey=40112) by forming an [abscess](https://www.medicinenet.com/script/main/art.asp?articlekey=2097). An abscess occurs when an infection is walled off in one part of the body. The doctor may choose to drain the abscess and leave the drain in the abscess cavity for several weeks. An