



HEART START

THE HEARTSTART COURSE

Introduction

Now that you've taken the instructor training course, you're ready to start teaching members of the public emergency life support (ELS) – simple skills that save lives.

This course is aimed at the public and anyone from the age of ten years old can attend and learn the complete range of ELS skills.

The course content complies with the current resuscitation guidelines of the Resuscitation Council (UK).

In this booklet you'll find the course outline, lesson plans and delivery options.

The course is divided into two stages:

Stage 1 develops practical skills that are best learned using a hands-on approach, eg, the recovery position, and performing cardiopulmonary resuscitation (CPR).

Stage 2 looks at heart attack signs and symptoms, choking, and serious bleeding. This stage can be delivered in several ways.

You may want further information before you teach the Heartstart course. You can find this in your toolkit, by watching the *Skills for life* DVD, and by visiting bhf.org.uk

Course outline

Stage 1

Introduction

10 mins

- aims of the course
- difference between heart attack and cardiac arrest
- the Chain of Survival

Priorities/conscious casualty

10 mins

- checking for danger
- checking for response
- making a 999/112 call

The unconscious casualty

25 mins

- shouting for help
- opening the airway
- checking for normal breathing
- recovery position
- getting help from the ambulance service

Cardiac arrest

40 mins

- checking for normal breathing
- chest compressions and rescue breathing (CPR)
- compression-only CPR

Stage 1 delivery

We recommend a minimum of 85 minutes for delivering stage 1.

This stage develops your trainees' practical skills, which are best learned using a hands-on approach, eg, the recovery position and CPR. So, you should give them the maximum possible practice time.

You should use the *Skills for life* DVD to support their training and think about using the four-stage approach to teaching (included in the pocket of this toolkit).

Stage 2

Suspected heart attack

10 mins

- heart attack signs and symptoms
- dealing with a suspected heart attack

Choking

10 mins

- recognition of choking
- back blows
- abdominal thrusts
- differences in infants and children

Serious bleeding

10 mins

- dealing with serious bleeding
- pressure and elevation

Summary

10 mins

- general summary/giving out certificates
- reporting ELS skills used
- other useful information (further training/local contacts)
- emphasise the importance of refresher training

Introduction to AEDs (optional module)

5 mins

- what is an AED?
- Community First Responders

Stage 2 delivery

If you use the practical hands-on approach for elements of stage 2, we recommend a minimum delivery time of 35 minutes.

However, you can use a variety of teaching methods for these elements. Which methods you use will depend on a number of factors, including time constraints or where you're delivering the course over a number of units.

Methods of delivery for stage 2:

- Conventional hands-on training.
- DVD-led instruction with questions and answers.
- Demonstration and discussion.
- Discussion group.

Stage 1 lesson plan

Introduction

10 mins

The aims of the course

Introduce Heartstart, the BHF and your Heartstart scheme.
Outline the aims of the course.

Advice/warnings

Tell your trainees that they should only participate in the practical elements of the course if they're physically able to do so.

If a trainee has an injury or a disability and can't practise skills during the course, advise them to watch the practical sessions. They could then talk another rescuer through the procedure.

Advise your trainees on these important health and safety issues:

- They should be careful not to risk injury to themselves or others.
- They should only practise rescue breathing and chest compressions on a resuscitation training manikin.
- They should only use techniques for dealing with choking in an emergency. And, they shouldn't practise them on another trainee.

Chain of Survival

Explain all four links in the Chain of Survival, with a brief explanation of each.

The Heartstart course focuses on the first two links. For more information, please refer to the Resuscitation Council (UK) website at www.resus.org.uk

The links are:

- 1 Early recognition and getting professional help.
- 2 Early CPR to buy time.
- 3 Early defibrillation to restart the heart.
- 4 Post-resuscitation care to restore quality of life.

Explain to your trainees that they shouldn't expect to see the casualty recover spontaneously. Emphasise the importance of buying time until professional help arrives.

Priorities/ the conscious casualty

10 mins

Check for danger

Explain to your trainees what actions they need to take to ensure the safety of the casualty and themselves. Give one or two brief examples.

Check the casualty's response

Explain the reasons for and the method of checking to see if the casualty responds:

- They should gently shake the casualty by the shoulders and ask loudly "Are you all right?"

What to do if they respond

Explain to your trainees what they should do if the casualty responds by answering or moving:

- They should leave them in the position they were found, providing they're not in further danger.
- They should check the casualty's condition and call out for help or use their mobile to call 999 or 112 and ask for an ambulance (112 is the European equivalent of 999 and will connect you to the emergency services in any EU country). Ideally, the first rescuer on the scene should send someone else for help and only leave the casualty if there's no other way of getting help.
- After they've called for help, they should assess the casualty regularly in case they deteriorate.

Priorities/ the conscious casualty continued

Summoning assistance/ making a 999 or 112 call

Discuss with your trainees the important elements of making a 999 or 112 call:

- Explain that the operator will ask them for the number they're calling from.
- Explain that the Ambulance Control Officer will ask a number of questions but that this won't affect the ambulance response time. Some staff who answer these calls may be able to give further help by talking them through CPR if it's needed.
- Briefly explain the use of 999 and 112 numbers.

The unconscious casualty

25 mins

Check for danger

Recap – checking for **danger**.

Check response

Recap – checking **response**.

Shout for help

Demonstrate a shout for help:

- Explain to your trainees that they shouldn't leave the casualty at this point and that they should try to attract the attention of another person.
- Explain that if there's someone nearby, they should ask the person to wait with them until they've checked for breathing.

Open the airway

Demonstrate how to open the airway:

- Explain to your trainees that they should first turn the casualty onto their back.
- Show your trainees the hand position on the casualty's forehead, and finger position under the tip of the chin.
- Explain the reasons for and the effect of this manoeuvre. (The tongue can block the throat and performing this manoeuvre lifts the tongue away from the back of the throat.) Demonstrate on the head section model, if available.

Check for normal breathing

Demonstrate how to check for breathing:

- Keeping the airway open, demonstrate looking, listening and feeling for normal breathing.
- Look, listen and feel for no more than 10 seconds before deciding if normal breathing is present.
- Explain that after cardiac arrest a casualty may be barely breathing or taking infrequent, noisy gasps (often called 'agonal breaths'). This is not normal breathing. If they have any doubt whether the casualty's breathing is normal, they should act as if it is **not** normal.

The unconscious casualty continued

Check for normal breathing (continued)	Ask your trainees to practise: <ul style="list-style-type: none">• checking for danger• checking response• shouting for help• opening the airway• checking for normal breathing.	D R S A B
Check for danger	Recap – checking for danger	D
Check for response	Recap – checking for response	R
Shout for help	Recap – shouting for help	S
Open the airway	Recap – opening the airway	A
Check for normal breathing	Recap – checking for normal breathing	B

The recovery position

Explain to your trainees why a casualty who is unconscious and breathing normally must be placed in the recovery position:

- The casualty's airway may become blocked by their tongue which falls to the back of their throat.
- The casualty's airway may become blocked, eg, by vomit.
- The recovery position helps keep the airway clear.

Demonstrate the recovery position without commentary (real-time) and then with commentary.

You can either demonstrate this yourself or use the 'train station' sequence of the *Skills for life* DVD.

Demonstrate the recovery position with commentary from your trainees.

Ask your trainees to practise:

- Placing each other in the recovery position.
- Following the complete sequence from checking safety to the recovery position. This reinforces **D, R, S, A, B**.

Send (or go) for help – 999 or 112

Explain to your trainees that if they're alone they should place the casualty in the recovery position before going for help.

Check for danger	Recap – checking for danger	D
Check for response	Recap – checking for response	R
Shout for help	Recap – shouting for help	S
Open the airway	Recap – opening the airway	A
Check for normal breathing	Recap – checking for normal breathing	B

Casualty is **not** breathing normally. Send (or go) for help – call 999 or 112

Explain to your trainees that if the casualty is NOT breathing normally, the rescuer should send someone for help.

They should ask another bystander to call an ambulance and bring an automated external defibrillator (AED) if available. If they're on their own, they should use their mobile to call 999 or 112 for an ambulance. Some staff who answer these calls can give further help by talking them through CPR. They should only leave the casualty if there's no other way of getting help.

Start CPR

Emphasise the importance of starting CPR as soon as possible.

While the assistant is calling 999 or 112, or when a lone rescuer returns from calling 999 or 112, they should turn the casualty onto their back (if they're not already in this position) and start CPR.

Chest compressions

Demonstrate chest compressions without commentary and then with commentary.

You can either demonstrate this yourself or use the 'library' sequence of the *Skills for life* DVD.

Demonstrate the following with trainee commentary:

- Kneel at the side of the victim.
- Place the heel of one hand in the centre of the casualty's chest, which is the lower half of the breastbone or sternum.
- Place the heel of your other hand on the top of the first hand.
- Interlock the fingers of your hand and ensure that pressure is not applied over the casualty's ribs. Don't apply any pressure over the upper abdomen or the bottom end of the sternum.
- Position yourself vertically above the casualty's chest, and with your arms straight press down on the sternum 5–6cm (2–2½ inches).
- After each compression release all the pressure on the chest without losing contact between your hands and the sternum.
- Repeat at a rate of about 100–120 times a minute (a little less than two compressions a second). Compression and release should take an equal amount of time.
- Give 30 chest compressions.

Ask your trainees to practise:

- Chest compressions.

Cardiac arrest continued

Rescue breaths

After 30 compressions give two rescue breaths.

Demonstrate rescue breaths without commentary and then with commentary.

Demonstrate the following with trainee commentary:

- Open the airway again using head tilt and chin lift.
- Pinch the soft part of the casualty's nose closed, using your index finger and thumb.
- Allow the casualty's mouth to open but maintain chin lift.
- Take a normal breath and then place your lips around the casualty's mouth making sure you have a good seal.
- Blow steadily into the casualty's mouth (over one second), while watching for their chest to rise.
- Maintaining head tilt and chin lift, take your mouth away and watch for their chest to fall as air comes out.
- Give two effective rescue breaths within five seconds.
- Give only two breaths each time before resuming chest compressions.

Continuing CPR

Ask your trainees to practise:

- Rescue breaths.
- Combining chest compressions with rescue breaths at a ratio of 30 compressions to two rescue breaths.

Demonstrate CPR without commentary and then with commentary.

Demonstrate the following with trainee commentary:

Explain that if there's more than one rescuer present, another should take over CPR every one to two minutes so they don't get too tired. Make sure the changeover happens quickly, as interrupting chest compressions can reduce its effectiveness.

Ask your trainees to practise the following on training manikins:

- Checking for **danger** D
- Checking **response** R
- **Shouting** for help S
- Opening the **airway** A
- Checking for normal **breathing** B
- Sending (or going) for help – 999
- Starting CPR: giving 30 chest compressions C
- Opening airway and giving two rescue breaths
- Combining chest compressions with rescue breaths – ratio 30:2

Cardiac arrest continued

Chest compression - only CPR

Tell your trainees that if they're unable, or unwilling, to give rescue breaths, they should give chest compressions only.

Explain the following:

- If they're only giving chest compressions, they should be continuous, at a rate of 100–120 a minute.
- Stop to recheck the casualty only if they start to show signs of regaining consciousness (eg, coughing, opening eyes, speaking or moving purposefully), and start to breathe normally. Otherwise do not interrupt resuscitation.
- They should continue resuscitation until qualified help arrives or they become exhausted.

Studies have shown that chest compressions alone may be just as effective as standard CPR in the first few minutes after cardiac arrest. Although this isn't the recommended method for trained or professional rescuers, it can be used by an untrained rescuer – and it's certainly better than doing nothing.

Regurgitation during CPR

Explain that regurgitation of stomach contents is common during CPR, particularly in victims of drowning. If this happens, the rescuer should:

- turn the casualty away from them
- keep the casualty on their side and stop them toppling onto their front
- ensure that their head is turned towards the floor, and their mouth is open and at the lowest point, to allow vomit to drain away
- clear any debris from their mouth and immediately turn them onto their back, re-establish an airway, and continue CPR.

Stage 2 lesson plan

Suspected heart attack

10 mins

Recognising and dealing with a casualty who is having a suspected heart attack

Show your trainees the 'garden centre' sequence from the *Skills for life* DVD.

Discuss the signs and symptoms of a heart attack and what action to take:

- The casualty may have chest pain. This is often described as a tight band wrapped around the chest. The pain may spread to one or both arms, to the back, neck or jaw. The casualty may appear pale and sweaty, and is often breathless and anxious. They may feel sick and vomit. They can become unconscious and may have a cardiac arrest.
- Call 999 or 112 and tell the ambulance control that you think the casualty is having a heart attack.
- Discuss how to make the casualty comfortable in a relaxed position that will reduce the work of the heart. This will normally be a sitting position with the head and shoulders supported and the knees bent. Encourage this position but do not force the casualty. Allow them to sit however they feel most comfortable.
- Emphasise the importance of talking to and reassuring the casualty.
- Discuss actions to be taken if the casualty has a cardiac arrest.

Choking

10 mins

Dealing with an adult casualty who is choking

Show your trainees the 'country park' sequence from the *Skills for life* DVD.

Explain that choking occurs when an object, for example a piece of food, gets stuck in the back of the throat blocking the entrance to the airway.

Explain the difference between mild or severe obstruction of the airway.

A choking casualty may have difficulty breathing and may turn blue. If they're conscious, they may try to indicate that they're choking by grasping their neck with their hands or pointing to their throat.

Step 1: Encourage the casualty to cough

If the casualty is conscious:

- Ask them "Are you choking?"
- If the casualty is able to speak, cough, and breathe, encourage them to keep coughing, but do nothing else.

Step 2: Give up to five back blows

If the casualty is unable to speak (they may respond by nodding) or unable to breathe, if their breathing sounds wheezy, or their attempts at coughing are silent:

- Stand to the side and slightly behind them.
- Support their chest with one hand and lean them well forwards so that when the obstructing object is dislodged it comes out of the mouth rather than goes further down the windpipe.
- Give them up to five sharp blows to their back, between the shoulder blades, with the heel of your other hand.
- Check after each back blow to see if the obstruction has been dislodged, rather than giving all five.

Choking continued

Step 3: Give up to five abdominal thrusts

If five back blows fail to relieve the obstruction, give them up to five abdominal thrusts. These force air out of the lungs by sudden inward and upward movement:

- Stand behind the casualty and put both arms around the upper part of their abdomen just below the rib cage.
- Lean the casualty forwards.
- Clench your fist and place it between the navel and the bottom end of the sternum.
- Grasp this hand with your other hand and pull sharply inwards and upwards.
- Repeat up to five times.

If the obstruction is still not relieved, continue alternating five back blows with five abdominal thrusts.

If the casualty becomes unconscious:

- Support them carefully to the ground.
- Immediately call 999 or 112 for an ambulance.
- Start CPR.

Ask your trainees to practise:

- Simulated actions for dealing with the choking adult.
- If there's enough time, practise the actions for dealing with an unconscious casualty who's not breathing, on a resuscitation training manikin – perform CPR.

Explain the differences in dealing with infants and children.

Explain that, following successful treatment, material may remain in the upper or lower respiratory tract.

- Casualties with a persistent cough, difficulty swallowing or with the sensation of an object being stuck in the throat should be referred for immediate medical opinion.

Serious bleeding

10 mins

Dealing with serious bleeding

Show your trainees the 'garage' sequence from the *Skills for life* DVD.

Explain the simple procedures for dealing with serious bleeding:

- How to recognise that someone is bleeding badly. They may appear – pale, sweaty, breathless, anxious – and bleeding externally.
- The importance of direct pressure over the wound, and elevation of the injured limb to reduce the flow of blood to the wound.
- What to do if there's a fixed object embedded in the wound.
- Advise the casualty to sit down, or lie them down (unless they have a chest wound).
- Applying tourniquets and indirect pressure are **not** appropriate.

Ask your trainees to practise:

- Simulated action for dealing with serious bleeding.

General summary of course

Summarise what's been covered, reinforcing the following key points:

- The links in the Chain of Survival and what each link means.
- Emphasise the **D, R, S, A, B, C** principle.
- Restate that simple skills save lives and the importance of acting promptly in an emergency situation.

Giving certificates

Give all your trainees a certificate of attendance at the end of the course.

Emphasise the importance of refresher training for everyone involved in teaching or learning ELS skills.

Reporting ELS skills used

Tell your trainees that it's important for them to let the scheme know if they use their ELS skills.

Cover the following points:

- Any ELS skills they use are potentially life-saving.
- Regardless of the outcome, we want to know about when your trainees used any of their ELS skills, especially if lives were saved.
- This information is essential for your scheme, and for the BHF. We need to be able to demonstrate the value of what we all do so that we can continue to fund community training schemes.
- Mention the BHF recognition of achievement scheme. Trainees who use their ELS skills in an emergency are presented with a certificate of achievement by the BHF.
- Discuss any methods you may have used to encourage your trainees to report skills they've used.

Other useful information (further training/local contacts)

Some of your trainees may express an interest in further training or want to know more about Community First Responders. (See next page.)

Tell them the following:

- What courses are available, eg, First Aid at Work or appointed person courses.
- The contacts for local training providers, eg, voluntary societies, local ambulance service.
- Community First Responder schemes locally (this may be covered in the optional section).
- Encourage trainees to tell their families and friends about your scheme, and the importance of ELS training.
- Pass on any relevant information about the work of the BHF, eg, automated external defibrillator funding, chest pain awareness and heart health – please visit bhf.org.uk

Recruiting instructors

Consider recruiting instructors from your trainee group:

- Discuss what's involved.
- Invite those who are interested to stay behind after the session to discuss it.
- If possible give trainees who are interested a written summary of what's involved.
- Arrange to follow up trainees who've expressed an interest.

Explain the purpose and simplicity of an AED

Discuss the concept of early defibrillation in the context of the Chain of Survival.

Cover the following points:

- The importance and purpose of early defibrillation.
- What happens to the heart when it goes into ventricular fibrillation, and what defibrillation does.

Explain what an AED is, what it does and how it does it.

An AED:

- is a small lightweight 'shock box' that can restart the heart by giving an electric shock in many cases of cardiac arrest
- weighs about 2 kilos (4.5 pounds). It has sticky pads that are placed on the casualty's chest
- can be semi-automatic or automatic
- gives the rescuer voice and/or visual instructions. It guides the rescuer through the stages of use
- analyses the casualty's heart rhythm and determines whether they need a shock
- gives a shock that makes all the heart fibres contract together. This is called defibrillation and can restore the normal rhythm and pumping action of the heart and get the blood circulating again.

Explain about using an AED.

- When using an AED, trainees should minimise interruptions in chest compressions. They shouldn't stop to check the casualty or discontinue CPR unless they start to show signs of regaining consciousness (eg, by coughing, opening their eyes, speaking or moving purposefully), and start to breathe normally.

Using AEDs shouldn't be restricted to trained rescuers. Rescuers who haven't had AED training can still use them effectively. However, you should encourage your trainees to learn how to use an AED to help improve the time it takes them to deliver a shock, and how to place AED pads correctly.

Explain what a Community First Responder is

Explain what Community First Responders do:

- Community First Responders are volunteers who are specially trained and are contacted by their local ambulance service to provide help at an emergency.
- They need to be available at certain times to respond to emergencies and attend a small number of meetings throughout the year.

Find out if your trainees are interested in becoming a Community First Responder:

- If they're interested in becoming a Community First Responder, tell them they can contact the person responsible for community resuscitation issues at their local ambulance service.