

**6 April 2012**  
AQW 9968/11-15

**Paul Frew has asked:**

To ask the Minister of Education what strategy is in place to train staff in schools in Cardiopulmonary Resuscitation?

Part 2



**HEART  
START**

# **HEARTSTART SCHOOLS PROJECT**

**Information Booklet  
for Heartstart Instructors**

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# EMERGENCY LIFE SUPPORT

This course is designed for training staff as instructors in emergency life support. It is the minimum training they should receive in order to enable them to train others and it provides guidance as to the standard required for future training of new instructors.

The raising of resuscitation standards is the ultimate goal, and instructors should have the ability to give good, clear explanations and demonstrations of basic emergency life support skills to all those who attend their training.

It is a unique partnership between Western Health & Social Care Trust, Western Education & Library Board and the British Heart Foundation that has enabled this visionary project to be so successful. It is the dedication and support from these partners that has made this programme work so well, providing knowledge and skills to teachers and classroom assistants in schools across the north and west.

## **AIM:**

To equip staff with the knowledge, practical skills and confidence to teach emergency life support (ELS) within their schools.

## **OBJECTIVES:**

Instructors will be able to:

1. demonstrate adequate CPR skills on a manikin for a one man rescue CPR (i.e. 30:2)
2. understand and demonstrate the essential elements involved in adult resuscitation as per UK Resuscitation Council Guidelines
3. demonstrate the recovery position
4. discuss signs/symptoms of a heart attack and how to help the casualty
5. demonstrate the approved procedure when dealing with choking
6. understand the emergency treatment of serious and life threatening bleeding
7. understand the main risks to the rescuer
8. maintain accurate training records
9. follow safety and hygiene guidance as per the manual and manufacturers instructions.

# HEARTSTART SCHOOLS INITIATIVE – WELB

## TRAINING PROGRAMME FOR HEARTSTART INSTRUCTORS

**TIME: 09.30 – 3.30**

09.30 – 10.30	Introduction, aims and objectives and the Heartstart Schools Initiative <b>Unit B</b> – Background Knowledge Coronary heart disease – Angina/Heart attack/Cardiac arrest/Related anatomy and physiology (if appropriate) Chain of Survival / Benefits of CPR	
10.30 – 10.45	<b>COFFEE</b>	
10.45 – 12.30	Unit A – The Heartstart Course <b>DRSABC</b> Rhian’s Day – Assessment and getting help Milly’s Day – Recovery position Steve’s Day – Dealing with choking Baby/Child choking Kyle’s Day – Serious bleeding <b>PEEP</b> Jenny’s Day – Dealing with a suspected heart attack Day  Practical Skills (using 4 stage approach)  Cameron’s Day – CPR	Practice Practice Demo & Practice Demo & Practice    Practice
<b>‘Ordinary Day’ DVD</b>		
12.30 – 1.15	<b>LUNCH</b>	
1.15 – 2.45	Scenarios, practice and assessment of skills	
2.45 – 3.30	<b>Unit C</b> – Teaching ELS  ➤ Individuals concerns in performing CPR ➤ Teaching resources (school pack/other BHF materials) ➤ Implementing the Heartstart programme in your school ➤ Recognising knowledge limitations ➤ Safety, moving and handling issues ➤ Infection Control Policy ➤ Refresher training and training supervision ➤ Questions, evaluation and closure	

**Co-ordinator Days only** - assistance given with completing the application form to become a Heartstart school.

# **RELEVANT INFORMATION**

# CORONARY HEART DISEASE

## KEY FACTS

### Did you know that:

- Around 2.5 million people in the UK are living with coronary heart disease
- Over 200,000 people in the UK suffer a heart attack each year
- Approximately half of people who have a heart attack die within 28 days
- One in three people who have a heart attack die before ever reaching hospital because of an irregular heartbeat

### In Northern Ireland:

- Heart and circulatory disease is Northern Ireland's biggest killer
- In Northern Ireland, 3% of the population have suffered a heart attack at some time
- In 2007, almost 2,500 women died from CVD in Northern Ireland: over 600 more than died from cancer
- 59% of adults in Northern Ireland are either overweight or obese
- Rates of physical activity are low: only 3 in 10 adults in Northern Ireland achieve the recommended daily level of exercise

### Actions to reduce the risk:

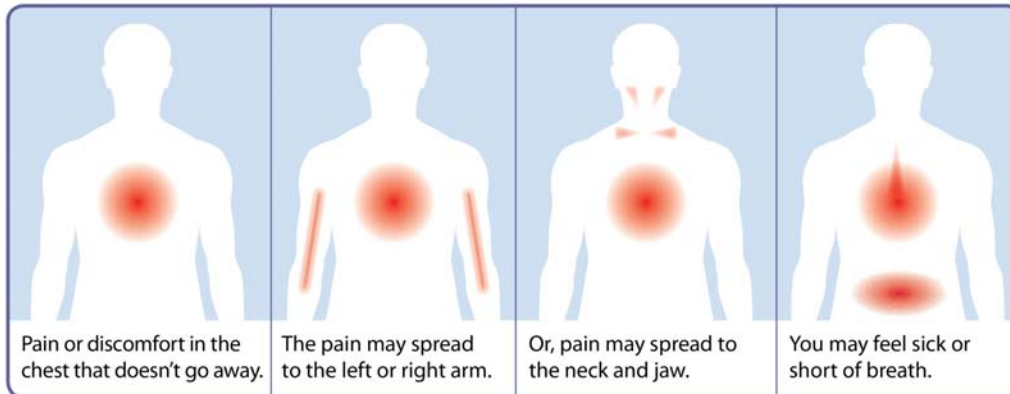
- Stop smoking
- Control your blood pressure
- Become more physically active
- Eat a healthy, balanced diet
- Reduce your cholesterol
- If you drink alcohol, keep within the recommended levels
- Maintain a healthy weight
- Try to prevent diabetes, by making simple lifestyle choices
- Learn to manage stress

# HEART ATTACK

## ‘SIGNS & SYMPTOMS’

**Signs** are how the casualty looks

**Symptoms** are complaints that are reported by the casualty



[www.2minutes.org.uk](http://www.2minutes.org.uk) – Watch your own heart attack

The most important symptom of a heart attack is chest pain, which occurs in 80% – 90% of heart attacks. In approximately one quarter of cases the pain will radiate to the neck, jaw, back, arms and upper abdomen. The pain may be mistaken for indigestion and the victim may take antacids in an attempt to relieve the pain. It is worth bearing in mind that in up to one fifth of cases the victim will experience no chest pain at all (silent heart attack).

Other signs and symptoms that are commonly associated with a heart attack are as follows:-

- sweating which might be quite profuse, the victim may feel cold and clammy
- shortness of breath or a difficulty in breathing
- nausea or actual vomiting
- general weakness, which may be profound
- dizziness
- palpitations are sometimes experienced
- a feeling of anxiety, fear of impending doom is common
- many people who suffer a heart attack have an urge to open their bowels.

Remember **W** – place the casualty in the W position

**A** – Ring 999/112 for an ambulance

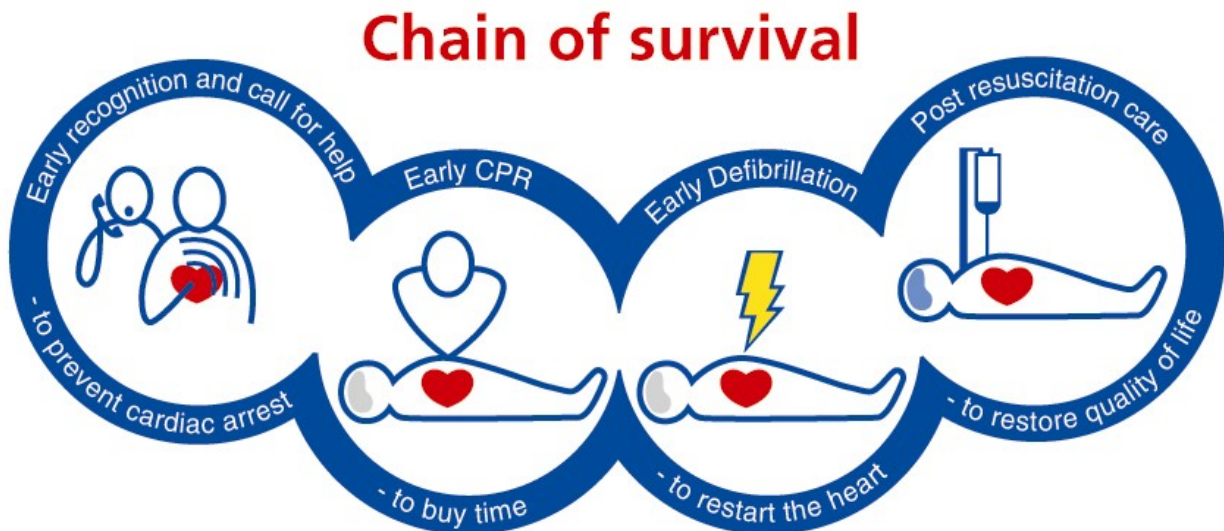
**R** – Reassure the casualty.

**NB** Heart attack **may** be followed by a sudden collapse – **CARDIAC ARREST**. 70% of these occur outside hospital and require early CPR and early defibrillation. It is therefore important that the **CHAIN OF SURVIVAL** concept is promoted and that the first two links are strengthened to increase survival rates.



# CHAIN OF SURVIVAL

The chain of survival represents the sequence of actions that needs to be taken as quickly as possible to ensure the best possible chance of survival.



You can help by providing the first two links in the chain. By recognising an emergency such as a heart attack and getting help early, you may help prevent cardiac arrest. If the casualty does collapse, you should call 999 or 112 for an ambulance. You can then help keep the casualty alive by providing cardiopulmonary resuscitation (CPR) until the ambulance arrives with a defibrillator, a machine that gives a controlled electric shock to restart the heart.

# **CARDIO PULMONARY RESUSCITATION (CPR)**

To live, we need to have a regular supply of oxygen to all parts of our body. In particular, the brain will become severely damaged if it is deprived of oxygen for more than a few minutes. When a person has stopped breathing and his heart has stopped pumping (cardiac arrest), every second counts. CPR buys time until professional help arrives. CPR supplies oxygen to vital organs to keep the casualty alive until normal breathing and a heartbeat can be restored. The provision of CPR by a bystander increases the person's chance of survival and can make the difference between life and death.

## **HOW CPR WORKS:**

### **Expired Air Ventilation (EAV)**

Expired air ventilation, sometimes known as 'mouth to mouth' consists of the rescuer blowing air into the casualty's lungs by applying their own mouth to the casualty's mouth or nose. There is enough oxygen in what we breathe out to sustain life until medical help arrives.

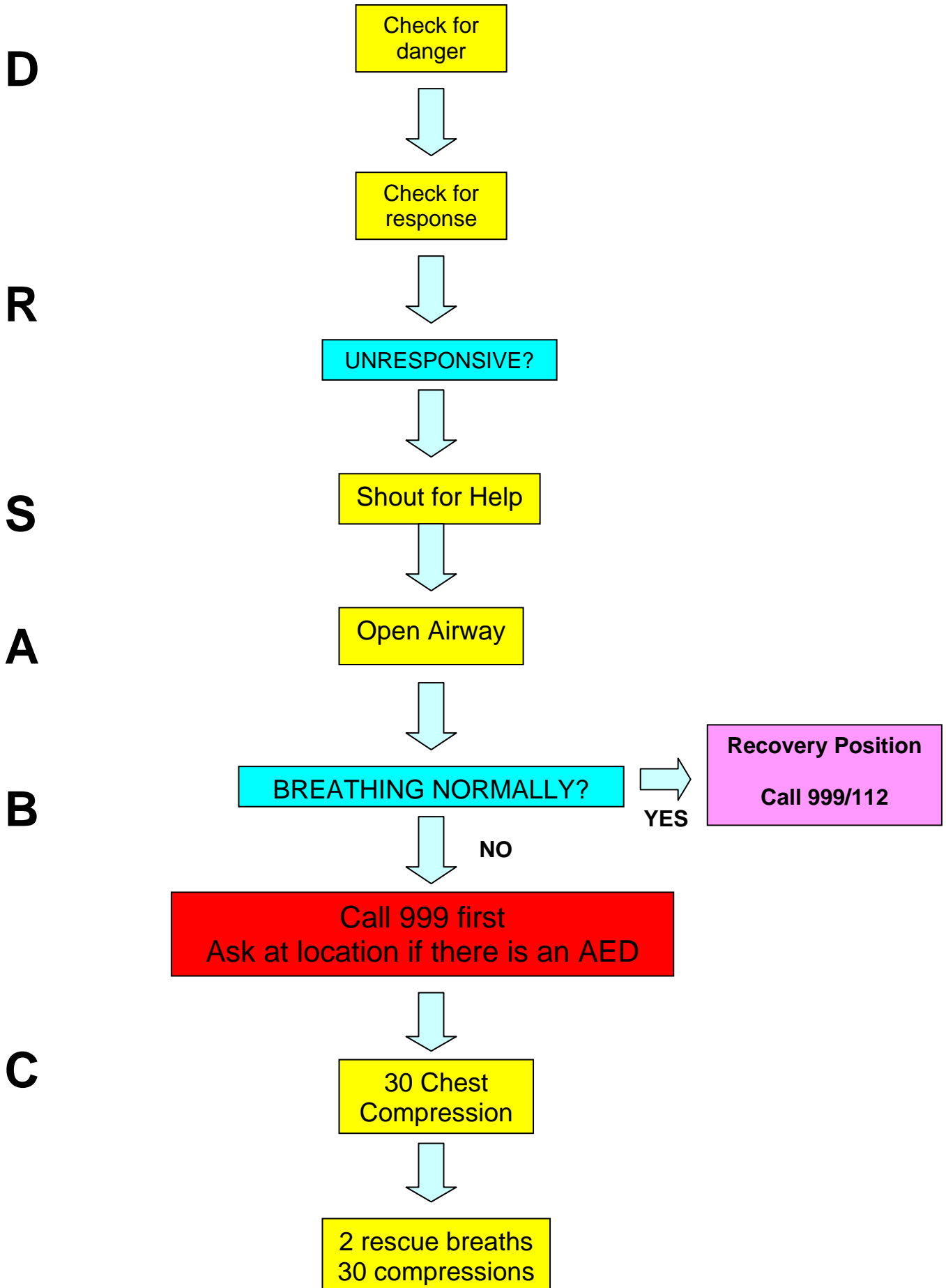
### **Chest Compression**

If a casualty's heart has stopped beating it is possible to maintain circulation of the blood by starting chest compressions. The technique used is for the rescuer to apply a downward force on the breastbone using their own hands. A rhythmical action like this will artificially pump the blood to the vital organs until medical help arrives.

### **Cardio Pulmonary Resuscitation (CPR)**

Expired air ventilation and chest compressions combined is known as cardio pulmonary resuscitation (CPR), and this is a means of artificially inflating the lungs and circulating the oxygenated blood around the body.

# ADULT BASIC LIFE SUPPORT



Algorithm for lay rescuer basic life support (Resuscitation Council UK)

# RECOVERY POSITION

Here's a rhyme to help you remember



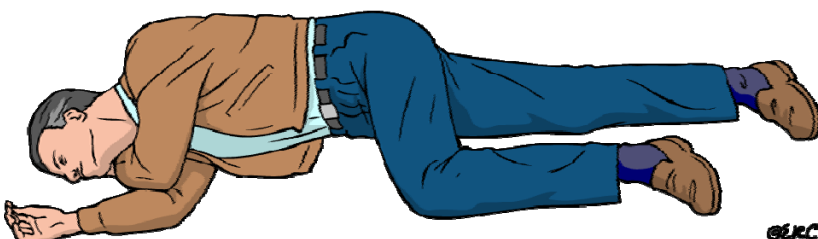
**PLEASE SIR**



**TOUCH MY FACE**



**LIFT MY LEG &**



**ROLL ME OVER**

Knee up  
Chin up  
Now phone 999/112

# CHOKING

Choking occurs when a 'foreign body' (e.g. piece of food), gets stuck in the back of the throat blocking the entrance to the windpipe.

A choking casualty may have difficulty breathing and may turn blue. If conscious, he may try to indicate that he is choking by grasping his neck with his hands or pointing to his throat.

**If the casualty is able to speak, cough and breathe, encourage him to keep coughing, but do nothing else.**

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

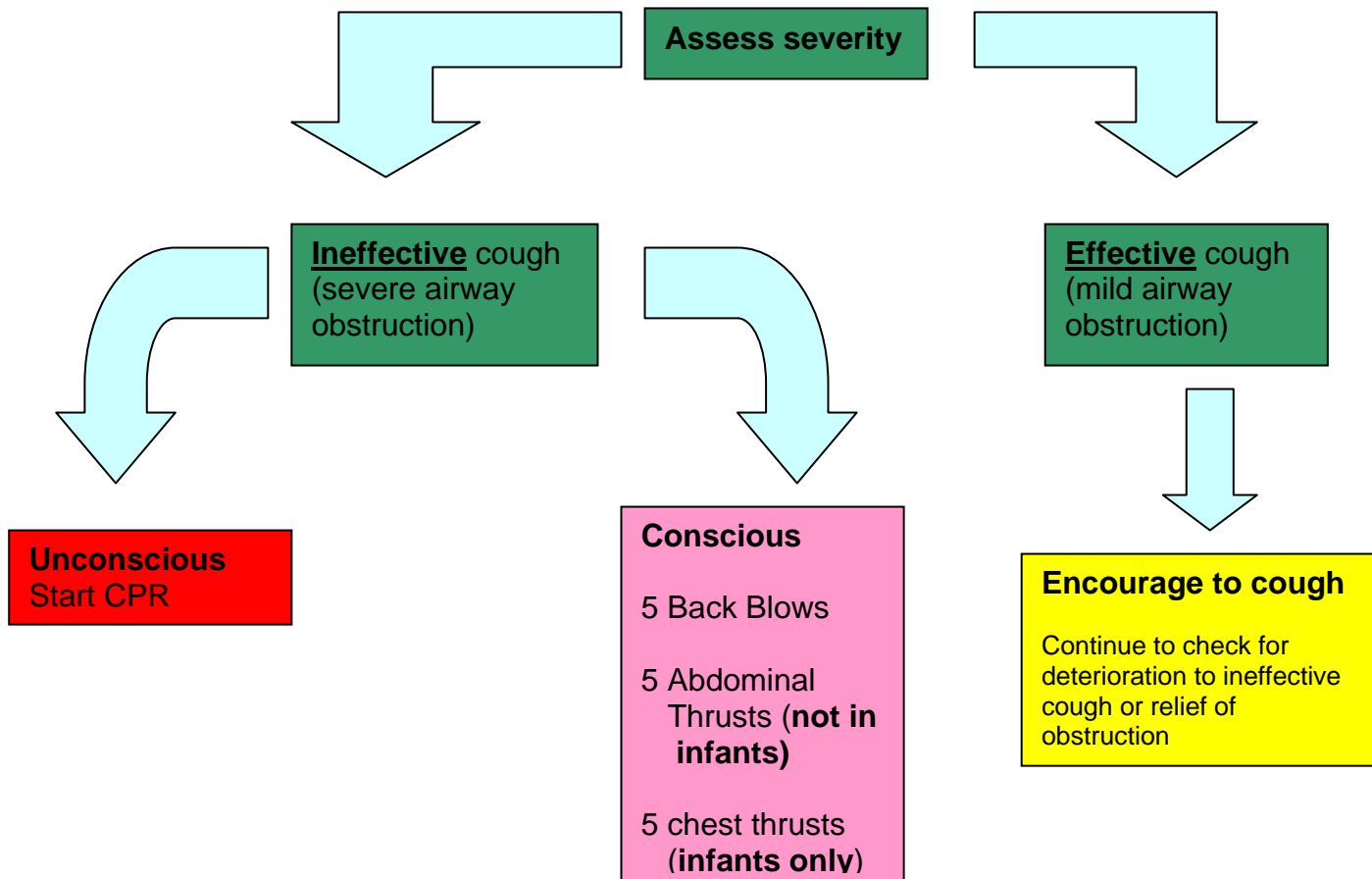
- Stand to the side and slightly behind him
- Support his chest with one hand and lean him forward so that when the foreign body is dislodged it comes out his mouth rather than further down the windpipe.
- **Give up to 5 sharp blows to his back** – between the shoulder blades with the heel of your other hand.
- Check after each blow to see if the object has been dislodged – it may not be necessary to give all 5.



- If following 5 back blows the object has **not** dislodged then give **5 abdominal thrusts**
- If the obstruction is still not relieved following this continue **alternating 5 back blows with 5 abdominal thrusts.**
- If the casualty becomes unconscious
- Support them to the ground
- Immediately call **999** or **112**

**Start CPR**





**Algorithm showing actions required in the event of choking  
Resuscitation Council (UK)**

The same principles of management of choking in adults apply to infants (< 1year old) and children (between 1 year and puberty). It may be easier to support an infant on your knee when giving back blows. It is important that the head is lower than the chest to make sure that the dislodged object comes out of the mouth.

**DO NOT ATTEMPT BLIND FINGER SWEEPS** – these can cause the object to be pushed further into the throat and cause injury.

**DO NOT GIVE ABDOMINAL THRUSTS IN INFANTS** – Give **5 chest thrusts** instead. These are similar to chest compressions in infants and are given at the same place on the breastbone.

In small children, when giving back blows you may need to place them across your lap.

When using abdominal thrusts on a child you may need to kneel behind them.

# BLEEDING

## MINOR BLEEDING

### Aims of Treatment

To prevent infection

### Treatment

- put on disposable gloves
- wash the wound under running water and dry.
- put on a dressing if necessary
- ask casualty to check their tetanus vaccination record

## SEVERE BLEEDING

### Aims of Treatment

To control bleeding

To prevent infection

### Treatment

- put on disposable gloves
- **P**osition – lay or sit the casualty down
- **E**xamine the wound for any embedded objects. (**DO NOT remove if present**)
- **E**levate the limb
- **P**ressure – apply direct pressure over the wound using a pad or bandage
- Dial 999 or 112 for help
- Reassure and observe the casualty



If bleeding continues apply a dressing on top of the existing dressing thus applying further direct pressure and elevate higher if possible.

**Do not** apply direct pressure to:

- a head wound
- an abdominal wound
- a wound containing an embedded object

Instead apply pressure to the wound edges.

**DO NOT USE A TOURNIQUET.**

# FOUR STAGE TEACHING APPROACH

## TEACHING CARDIOPULMONARY RESUSCITATION AND OTHER ELS SKILLS USING THE FOUR-STAGE APPROACH

There are several ways in which the instructor can facilitate learning. A number of studies have highlighted poor retention of skills and it is widely accepted that maximising 'hands-on' practice improves skill acquisition and retention. A common approach to teaching cardiopulmonary resuscitation (CPR) is the 'four-stage' approach, which has shown to help facilitate learning and retention.

This section outlines the procedure for the four-stage approach to teaching ELS and CPR, and the theory behind it as described in publications by the Resuscitation Council (UK) and the European Resuscitation Council.

When teaching ELS/CPR, instructors may wish to adopt the four-stage approach in full (time permitting), or modify it accordingly. For example, on a 2-hour Heartstart course, when time is restricted, instructors should be encouraged to use the *'Buying Time'/ Ordinary Day* video/DVD for stages 1 and 2, then break off into groups for stages 3 and 4 for practice.

**This approach is most suitable when teaching the CPR element of the ELS course, but can be applied to all ELS skills.**

The four-stage approach is also appropriate when training ELS instructors, when there is usually more time available to apply and discuss it. Therefore this is the recommended method to use for preparing instructors to teach ELS.

### **Stage 1**

Demonstrate the skill – with no commentary

You can play the *Buying Time* or *Ordinary Day* DVD where this stage is covered in the real time movie scene.

### **Stage 2**

Demonstrate the skill – with commentary

Again this stage is on your *Buying Time* or *Ordinary Day* DVD when they recap on the movie scene.



### **Stage 3**

Demonstrate the skill – with pupil feedback

Give the pupils a scenario and ask them to tell you as the instructor what to do while you demonstrate.

### **Stage 4**

Pupil demonstrates the skill – providing commentary

Pupil can practise with the instructor giving a scenario situation and the pupil showing the instructor what to do.

## **THE THEORY SUPPORTING THE FOUR-STAGE APPROACH**

The theory supporting the four-stage approach is quite simple. Firstly, the strong visual images provided by the demonstration help trainees to acquire and retain the expert knowledge themselves, and secondly, the four stages allow the trainee to move gradually from novice to expert in the skill.

# INFECTION CONTROL PROTOCOL FOR USE WITH MANIKINS IN HEARTSTART TRAINING

1. Anyone with a cold, sore throat, chest infection, a cold sore or symptoms of Swine Flu should not perform mouth-to-mouth resuscitation on a manikin. It is the instructor's responsibility to state these criteria at the beginning of each training session.
2. Airways and lungs should be changed after each person uses manikin.
3. Each participant should have the sole use of a manikin during a training session.
4. Maintenance of the manikins and in particular the face is as follows:
  - Faces, noses, mouths and torsos must be cleaned with soap and hot water followed by appropriate disinfectant between participants and after every session.
  - Wash hands BEFORE and AFTER cleaning manikins
5. Faces that are cracked or split in any way should be discarded and replaced.
6. It is the instructor's responsibility after each session to ensure all equipment is correctly cleaned and stored safely. Any damage to manikins must be reported to the co-ordinator as appropriate.

# USEFUL CONTACTS

<b>EDUCATION BOARD CONTACTS</b>	
<b>Gemma Fox</b>	<b>Bridie Mullin</b>
CASS (WELB)	ADVISER (WELB)
☎ 028 8241 304	☎ 028 7186 1116
✉ gemma_fox@welbni.org	✉ bridie_mullin@welbni.org
<b>Your Training Supervisor is:</b>	
<b>Omagh/Fermanagh</b>	<b>Limavady, Strabane/Derry</b>
<b>Colin Robinson</b>	<b>Ursula McCollum</b>
Resuscitation Training Officer	Resuscitation Training Officer
Tyrone County Hospital	Altnagelvin Hospital
Hospital Road	Glenshane Road
Omagh	L/Derry
BT79 0AP	BT47 6SB
☎ 028 8283 3129	☎ 028 71345171
✉ colin.robinson@westerntrust.hscni.net	✉ ursula.mccollum@westerntrust.hscni.net
<b>British Heart Foundation NI/WHSCCT Contact:</b>	
<b>Betty Dolan</b>	<b>Nicola McGlinchey</b>
Community Resuscitation Development Officer	Community Resuscitation Development Officer
☎ 07821445739	☎ 07590353359
✉ betty.dolan@westerntrust.hscni.net	✉ Nicola.mcglinchey@westerntrust.hscni.net

## USEFUL WEBSITES:

[www.cbhf.net](http://www.cbhf.net)  
[www.yheart.net](http://www.yheart.net)  
[www.yheart.net/meet](http://www.yheart.net/meet)  
[www.yoobot.co.uk](http://www.yoobot.co.uk)  
[www.bhf.org.uk/teachers](http://www.bhf.org.uk/teachers)  
[www.activeclubs.org.uk](http://www.activeclubs.org.uk)

## USEFUL REFERENCES

- Resuscitation Council (UK) Publications
- Resuscitation Guidelines (2010)
  - Resuscitation for the Citizen (7<sup>th</sup> Ed)
  - The Legal Status of Those Who Attempt Resuscitation
    - Emergency Life Support Skills for Everyone

## HEARTSTART SCHOOLS PROJECT

### *Participant Evaluation*

I am a pupil in                      Primary School    [   ]

Post Primary School    [   ]

What age are you? \_\_\_\_\_

(Tick [] appropriate box)

1(a) Have you enjoyed the Heartstart sessions?

Yes    [   ]                      No    [   ]

(b) If no, explain why?

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2(a) Have you learned anything from the Heartstart sessions?

Yes    [   ]                      No    [   ]

(b) If yes, what have you learned?

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3. Have you shared any of this information with your friends or family?

Yes    [   ]                      No    [   ]

4(a) Was it a good idea to have Heartstart training in your school?

Yes    [   ]                      No    [   ]

(b) Explain the reasons why?

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5. Could you now cope better with an emergency?

Yes    [   ]                      No    [   ]

6(a) Have you had to use any of the skills you have been taught?

Yes    [   ]                      No    [   ]

(b) If yes, explain how.

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7(a) Any other comments or suggestions?

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# FREQUENTLY ASKED QUESTIONS

**Q. How often is update training and what happens if instructors don't attend?**

**A.** It is advised that update training should take place annually. If is not possible to attend on the date you have been asked to attend, please arrange an alternative date as soon as possible with Gemma Fox (WELB) Tel: 028 82411304. If instructors fail to attend update sessions, they will not **be insured** to deliver Heartstart training within their schools or communities.

**Q. How often do schools reaffiliate?**

**A.** Schools are notified annually, normally around June to reaffiliate to the Heartstart scheme. When schools are initially commencing the scheme they will be asked by the instructors (Betty Dolan & Nicola McGlinchey) to complete their affiliation forms as soon as possible in order to join the scheme and to receive their equipment and resources from the British Heart Foundation, which are supplied free to affiliated schools.

**Q. What happens if a school fails to affiliate or reaffiliate?**

**A.** If schools commencing the scheme do not affiliate they will not be insured to deliver the training within their schools and will not receive the equipment such as manikins or other resources from British Heart Foundation. If schools originally on the scheme do not reaffiliate, their manikins and equipment will be collected and they will no longer be classified as a Heartstart school.

**Q. What happens if the coordinator transfers, moves, leaves their post or are off on long-term sick or maternity leave within the Heartstart School?**

**A.** If the coordinator of the school is unable to fulfil their role for any of the above reasons it is up to the deputy coordinator to continue with the programme and to inform the Heartstart trainers (Betty Dolan & Nicola McGlinchey) who will in turn correspond with the British Heart Foundation. N.B It is then the Deputy Coordinators responsibility to ensure the school is affiliated and reaffiliate accordingly.

**Q. How often do the lungs in the manikins need changed?**

**A.** Please refer to the Infection control protocol as shown.

**Q. Where are new lungs, faces and wipes obtained?**

**A.** New lungs, faces and wipes can be obtained by completing the following ordering form and returning it to the British Heart Foundation.