



Unit 3

The Secondary survey

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Calmly and confidently conduct a secondary survey when encountering a casualty
- ✓ Identified injuries and conditions that may not be immediately apparent
- ✓ Gauge level of response of a casualty to determine the severity of their injuries

Unit 3

The Secondary Survey

This is a detailed examination of a casualty to look for other injuries or conditions that may not be readily apparent on the primary survey. To do this, carry out a head to toe examination. Your aim is to find out:

- **History** what actually happened and any relevant medical history.
- **Symptoms** Injuries or abnormalities that the casualty tells you about.
- **Signs** Injuries or abnormalities that you can see.

By checking the recognition features of the different injuries and conditions explained in the chapters of this book you can identify what may be wrong. Record your findings and pass on any relevant information to the medical team.

History – find out more about the casualty's history. Use the mnemonic AMPLE as an easy reminder. Look out for any medical warning jewellery which may provide information their medical history or any allergies.

- Allergy – Do they have any allergies? For example, nuts or any medication such as penicillin or aspirin?
- Medication – are they taking any medication?
- Previous medical history – do they suffer from any medical condition such as diabetes, epilepsy or heart disease? Have they had any previous injuries or surgery?
- Last meal – when did they last eat or drink?
- Event history – what happened and where? Is the incident due to an illness or an accident? Ask any people nearby what happened and look for any clues that may give you more information.

Symptoms – ask the casualty short, simple questions about any symptoms and sensations they may be feeling. They should answer in as much detail as possible. For example, ask them:

- Do you have any pain?
- Where is the pain?
- When did the pain start?
- Can you describe the pain, is it constant or irregular, sharp or dull?
- Is the pain made worse by movement or breathing?

Signs – look, listen, feel and smell for any signs of injury such as swelling, deformity, bleeding, discolouration or any unusual smells. When checking them you should always compare the injured side of the body with the uninjured side. Are they able to perform normal functions such as standing or moving their limbs? As you check, make a note of any superficial injuries to treat once you've finished your examination.

Level of Response

You will initially have noted whether or not a casualty is conscious. He may have spoken to you or made eye contact or some other gesture. Or perhaps there has been no response to your questions such as “Are you all right?” or “What happened?” Now you need to establish the level of response using the AVPU scale. This is important because some illnesses and injuries cause a deterioration in a casualty's level of response, so it is vital to assess the level, then monitor him for changes.

Mechanisms of Injury

The type of injury that a person sustains is directly related to how the injury is caused. Whether a casualty sustains a single injury or multiple injuries is also determined by the mechanisms that caused it. This is the reason why a history of the incident is important.

In many situations, this vital information can be obtained only by those people who deal with the casualty at the scene often first aiders. Look, too, at the circumstances in which an injury was sustained and the forces that were involved.

The information is useful because it also helps the emergency services and medical team predict the type and severity of injury, as well as the treatment. This therefore helps the diagnosis, treatment, and likely outcome for the casualty.

Circumstances of Injury

The extent and type of injuries sustained due to impact—for example, a fall from a height or the impact of a car crash—can be predicted if you know exactly how the incident happened. For example, a car occupant is more likely to sustain serious injuries in a side-impact collision than in a frontal collision at the same speed. This is because the side of the car provides less protection and cannot absorb as much energy as the front of the vehicle. For a driver wearing a seatbelt whose vehicle is struck either head on or from behind, a specific pattern of injuries can be suspected. The driver's body will be suddenly propelled one way, but the driver's head will lag behind briefly before moving. This results in a “whiplashing” movement of the neck (below). The casualty may also have injuries caused by the seatbelt restraint; for example, fracture of

the breastbone and possibly bruising of the heart or lungs. There may be injuries to the face due to contact with the steering wheel or an inflated airbag.



Forces Exerted on the Body

The energy forces exerted during an impact are another important indicator of the type or severity of any injury. For example, if a person falls from a height of 3 feet (1 m) or less onto hard ground, s/he will probably suffer bruising but no serious injury. A fall from a height of more than 10 feet (3 m), however, is more likely to produce more serious injuries, such as a pelvic fracture or internal bleeding. An apparently less serious fall can mask a more dangerous injury. A fall from a standing position in susceptible people, like the elderly, those suffering from bone disorders, or those who taking blood thinners, can result in serious head or other injuries.

Questions to Ask at the Scene

When you are attending a casualty, ask the casualty, or any witnesses, questions to try to find out the mechanism of the injury. Witnesses are especially important if the casualty is unable to talk to you. Possible questions include:

- **How far did the casualty fall?**
- **What type of surface did she land on?**
- **Is there evidence of body contact with a solid object**, such as the floor, a coffee table, or a vehicle's windshield?
- **How did she fall?** (For example, twisting falls can stretch or tear the ligaments or tissues around a joint such as the knee or ankle.)

Further Reading:

- ✓ *APLS: The Pediatric Emergency Medicine Resource 5th Edition* by American Academy of Pediatrics (AAP) (Author), American College of Emergency Physicians (ACEP) (Author), 2012
- ✓ *ACLS, CPR, and PALS: Clinical Pocket Guide First Edition* by Shirley A. Jones (Author), 2014