

New Spinal Recovery Position

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Background

Since first publication, the Quallsafe *First Aid Made Easy* A4 sized First Aid Book has included methods for turning an unconscious casualty with a suspected spinal injury in order to protect the airway – a “spinal recovery position”.

Originally a log-roll was included, which requires the first aider to recruit the help of three other people, and more recently a spinal recovery position that required the help of one additional person was included. Injury to the lumbar or thoracic region present in 71.4% of spinal injury patients,⁸ so the guidance for placing someone into the spinal recovery position has always differed from the ‘traditional’ recovery position, in order to minimise torsion (twisting) of the spine, which is impossible to avoid when pulling a casualty onto their side using only the knee.

This topic is only taught to first aiders who attend a course that specifically covers spinal injury on the syllabus (e.g. First Aid at Work, but not Emergency First Aid at Work).

The problem with the previous spinal recovery position

It is important to note that turning an unconscious casualty onto their side to protect the airway is an emergency procedure that a first aider will have to perform in stressful circumstances. The optimum treatment for a supine spinal injury patient is to keep the casualty on their back and provide manual in-line stabilisation (MILS) with the head and neck in a neutral alignment, whilst continually monitoring breathing.^{1,2} Ideally the first aider who can stay with the casualty should only turn them if they become concerned about the airway. The likelihood of needing to ‘leave’ the casualty is vastly reduced with the advent of mobile telephones.

So in short – if the first aider needs to turn a spinal injury patient – they need to do it very quickly, and it is an emergency procedure.

We know that simplification is vital to enable lay-rescuers to carry out emergency procedures effectively – CPR guidelines have been significantly simplified over the last two decades for this exact reason.^{3,4,5,6}

Despite this, the existing published methods of turning a spinal-injury patient remain extremely complex – they require the first aider to recruit, and then give verbal instructions, to up to three helpers⁷, none of whom are likely to be trained in the technique. Whilst doing so, the first aider is

expected to maintain manual inline stabilisation and therefore cannot even use their hands to help communication.

One only has to ask learners to demonstrate this in the classroom, in relatively relaxed circumstances, to witness unacceptable delays in protecting the airway and poor c-spine control resulting from unnecessary complexity.

Removing the complex need to 'recruit and instruct' helpers is vital to minimise delays in protecting the airway.

It is important to consider the emergency situation in which this technique is to be deployed. There is a suspected spinal injury and the first aider has become concerned about the airway of an unconscious casualty (e.g. the patient has vomited). Given that just 1.8% of patients presenting with blunt trauma suffer spinal cord injury,⁸ the logical conclusion is that whilst minimising movement of the spine is the ideal, it is the **airway** that must take priority.

A solo-rescuer technique

Qualsafe are proud to welcome Professor Sir Keith Porter to the Qualsafe Clinical Review Panel. Sir Keith, a professor of clinical traumatology, co-developed a solo-rescuer spinal recovery position technique with colleagues from the University Hospitals Birmingham NHS Trust. The resulting paper was peer-reviewed and published in 2004.⁹ We are delighted to be able to replicate this in our updated *First Aid Made Easy* book.

The technique necessitates the first aider to move to the side of the casualty, to cross the casualty's legs, bringing the far leg towards them, to carefully slide the palm of the casualty's nearest hand under their head and to pull equally on the hip and the shoulder to turn the casualty into a semi-prone position. A full description is provided in this [video](#).

Is there a risk in positioning the hand behind the head?

Current recommendations for the acute treatment of the cervical spine injured patient are to position and then immobilise the head and neck in **neutral alignment**.^{10, 11, 21} A cervical spine that is positioned and maintained in neutral alignment should preserve the space within the spinal canal that normally surrounds the spinal cord.^{12, 13, 14, 15, 16} Deviations from neutral alignment can decrease the diameter of the spinal canal and the space available for the spinal cord.^{12, 14} Once the spinal canal is compromised, compression of the cord can ensue, which can ultimately impair spinal cord function.^{17, 18} Compression of the spinal cord interrupts nerve impulses¹⁸ and decreases spinal cord blood flow,^{19, 20} which in turn lead to deleterious histologic and biochemical changes that ultimately lead to tissue necrosis.^{20, 21}

The cervical spine is in the optimal 'neutral alignment' in adults when the occiput (back of the head) is raised by between 2 and 3.8cm when the casualty is in a supine position.^{22, 23, 30} Further, it has

been argued that spinal cord damage is done at the time of impact and that subsequent movement is generally not sufficient to cause further damage.^{24, 25}

In short – it is accepted practice to carefully move the head into a neutral position – this can reduce pressure on the spinal cord. Carefully sliding the hand under the head (as described in our [video](#)) achieves the manoeuvre with minimal movement and actually positions the cervical spine into a neutral position when compared to the occiput sitting on the ground.

What are the legalities of following this guidance?

When teaching First Aid in the Workplace, the HSE require training organisations to teach first aid in accordance with:

- current guidelines published by the Resuscitation Council (UK);
- the current edition of the first-aid manual of the Voluntary Aid Societies (St John Ambulance, British Red Cross, St Andrew's First Aid); **or**
- other published guidelines, provided they are supported by a **responsible body of medical opinion**²⁶

The legalities surrounding those who teach and provide first aid are outlined excellently in *CPR, AEDs and the Law*, a document published by the Resuscitation Council (UK). The document discusses how it is extremely unlikely that 'procedures that are considered acceptable' by a responsible body of medical opinion could be successfully challenged in UK law, even if the body of responsible medical opinion is a minority body, and even if another responsible body of opinion takes a contrary view.²⁸

The Quallsafe Medical Review Panel consists of a renowned panel of experts and forms a responsible body of medial opinion. In addition to this, Quallsafe first aid guidance is adopted by over three quarters of UK first aid training providers, including NHS ambulance services and NHS trusts. More learners are trained each year using Quallsafe first aid guidelines than any of the UK Voluntary Aid Societies.²⁷

Using the 'hand behind the head' method of turning a casualty into the recovery position has also been adopted by citizenAID,²⁹ a charity founded by a renowned group of clinicians who also form a responsible body of medical opinion.

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