18. SPINAL INJURY

18.1 Contents **Paragraph**

18.2 Introduction

18.2.1 Damage to the spinal cord results in paralysis and loss of sensation below the level at which the cord has been injured; together with loss of ability to control bladder and bowels. The type of paralysis depends on the level of the injury.

18.2.2 **Paraplegia**, which is paralysis involving both lower limbs, results from damage to the thoracic (middle) or lumbar (lower) sections of the cord. Part or all of the trunk may also be affected.

18.2.3 **Tetraplegia**, also called **quadriplegia**, is paralysis involving all four limbs. It results from damage at the cervical (neck) level. The whole trunk may also be affected.

18.2.4 Paraplegia is a major disability, but pioneering work at the Spinal Injuries Centre, Stoke Mandeville, during the 1939-45 war showed that rehabilitation is possible in the great majority of cases to the point of independence, in a wheelchair and with suitably adapted living accommodation, in the activities of daily living.

18.3 Care Needs

18.3.1 Rehabilitation of the person with **paraplegia** depends on the person learning to transfer from bed to wheelchair or other surface at a similar level. The ability to do so requires normal function in the upper limbs. With the use of appropriate aids, the person can then swing the lower part of the trunk and lower limbs to effect the transfer. The ability to balance whilst sitting, and to lean short distances forward, background, and sideways, may also be developed during the course of rehabilitation.

18.3.2 Because of the loss of sensation the person is constantly exposed to a risk of damage to the skin and to the development of pressure sores. He is trained to avoid this danger by regularly changing position both by day and by night.

18.3.3 Loss of bladder and bowel control is dealt with in various ways. Mechanical pressure exerted by the person on the lower abdomen may be used to empty the bladder at pre-determined intervals. More commonly, self-catheterisation

is employed. Alternatively, in men a penile sheath may be connected to a urinal strapped to the thigh. In women, waterproof pants with an absorbent pad are often worn. Emptying of the bowel may be assisted by use of suppositories or enemas, or by manual evacuation.

18.3.4 A person with traumatic paraplegia who has normal function in the upper limbs would therefore usually be expected to attain a considerable degree of independence in attending to bodily functions. However, a significant amount of help may still be needed with tasks which are performed at the beginning and end of the day.

18.3.5 As far as night is concerned, a person who, with suitable aids, can turn himself in bed should be able to do so at prescribed intervals by setting an alarm. If he cannot turn unaided, attention will be required.

18.3.6 On occasion a seemingly independent person does in fact require assistance. For example, repeated breakdown of the skin with the formation of pressure sores, or repeated urinary infection, may indicate that though the person appears to be coping with his bodily functions, his care is not adequate and he requires help from another person.

18.3.7 There are factors which may prevent successful rehabilitation. The majority of persons with traumatic paraplegia are young, previously healthy and possess the considerable and sustained motivation necessary for successful rehabilitation. Older persons may lack the requisite strength and stamina. Young persons who at the time of their accident suffer significant brain as well as spinal damage, may not be able to achieve independence. Some young persons without brain damage may be unable to adjust psychologically to the radical change in their entire way of life, and in these circumstances continued assistance may be necessary.

18.3.8 In persons with **tetraplegia**, the upper limbs are also weak to a greater or lesser extent, and therefore cannot be used to effect transfers from bed to wheelchair, to change position in bed, or to cope with bodily functions. Persons with tetraplegia will therefore require a great deal of help both by day and by night.

18.4 Mobility Considerations

18.4.1 The person with a spinal injury resulting in paraplegia or tetraplegia is unable to walk.

18.5 Duration of Needs

18.5.1 Rehabilitation in respect of care needs, during which the affected person has to master all the new tasks which have to be learned, commonly takes about two years following the injury. During the rehabilitation phase, there is likely to be a need for considerable help, at least by day. At the end this period a well-adjusted, well-rehabilitated person with paraplegia should be able to perform most, or all, of these tasks without the assistance of another person, although assistance may still be required with tasks at the beginning and end of the day.

18.5.2 The care needs of a person with tetraplegia will be ongoing.

18.5.3 A person with paraplegia or tetraplegia resulting from an injury which severs the spinal cord will remain permanently unable to walk.

18.6 Further Evidence

18.6.1 In cases in which there is difficulty in deciding the degree of a person's disability and what help is needed, a report from the spinal injuries unit with which the person has regular contact, would be helpful.

18.7 Paraplegia From Other Causes

18.7.1 The effects of paraplegia which is not of traumatic origin will depend on the cause. In conditions which, when successfully treated, do not lead to progressive disability, the care and mobility needs will be similar to those arising from traumatic paraplegia. Where paraplegia is due to progressive disease such as cancer, there will usually be progressive deterioration with accompanying high dependency on help from others.

18.7.2 In persons with paraplegia not due to trauma, the cause of the condition will have to be identified, since this will give an indication of the likely care needs and their duration. If further evidence on this point is required, it should be sought from the GP or from a consultant at the hospital which the person is attending.