

## Standard 3.1 - Stretchers



### Principles

Stretchers in aircraft may be fixed installations or capable of removal from the aircraft for patient transport outside the aircraft. Stretchers should be compatible with ground vehicle stretcher systems.

#### 3.1.1 Location

Stretchers should be located in the aircraft to allow adequate access to the lying patient(s) for routine and emergency care. Access should be possible to the head of an emergency patient from both sides and end of the stretcher in flight.

#### 3.1.2 Loading

Where patients require stretcher transport, loading and unloading of the stretcher from the aircraft should:

3.1.2.1 Maintain the stretcher in close to the horizontal plane at all times.

3.1.2.2 Minimise the need for vertical lifting by attendants.

3.1.2.3 Be operable by no more than two persons.

3.1.2.4 Be available at all locations expecting to convey stretcher patients by air medical transport. This requirement may be best met by a loading system which is aircraft-based.

#### 3.1.3 Fixation

Mountings should meet airworthiness standards for fixed wing and helicopters for a standard adult PLUS any attached medical equipment such as intensive care bridges, intensive care transport modules and incubators.

3.1.3 Stretchers should be attached in aircraft so as to restrain the stretcher and any associated equipment in accordance with airworthiness standards. These standards specify that the supporting structure must be designed to restrain, under any load up to those specified, any item of mass that could injure an occupant if it came loose in a minor crash landing. The inertial loads specified differ for road, rotary wing and fixed wing and according to whether the aircraft was certified under older regulations or new. Since equipment can travel in a variety of vehicles, the combination of requirements is as follows:

	Rotary Wing	Fixed Wing	Combined Requirement
Upward	1.5g	3.0g	3.0g
Forward	4.0g	9.0g	9.0g
Sideward	2.0g	1.5g	2.0g
Downward	4.0g		4.0g

3.3.2 Locking systems between stretcher and aircraft should be simple to use. They should not allow a partially locked position.

3.3.3 Equipment attached to the stretcher must be fixed or lockable in such a way as not to allow a partially locked condition.

**3.3.4 Two high tensile, tapered steel pins of 25mm diameter with transverse apposing location slots are recommended at each end of a stretcher or patient transport module. This recommendation is made on the basis that they are a commonplace world-wide method of connecting stretchers to the airframe mountings of various medical aircraft - both rotary wing and fixed wing. They should be located 205mm apart and 17mm above the horizontal surface. Stretchers of length 1350mm to 1900mm should be fixable in the airframe.**