

Stirling University Skydiving Safety Regulations



How safe?

This is a question that many people ask themselves before deciding whether to enrol on a beginners' parachute course. Others may ask:

- **Is it totally safe?**
- **Can I be sure I won't be injured?**

The British Parachute Association - the sport's National Governing Body - has built up an extensive database, which can help to answer some of these questions.

[Summary of the data](#) on which the following advice is based (this link is repeated at the bottom of the page).

Is it totally safe?

No! There is no such thing as a **totally** safe parachute jump. The risk may be fairly low for some types of jump but there is always *some* risk. As with any action sport, sport parachuting can never be entirely risk-free.

All those who choose to participate in the sport therefore voluntarily accept an element of risk. Here, our purpose is to provide data to quantify the risk and help you make an informed choice.

How is risk measured?

Risk in parachuting is best expressed as Injuries per 1000 Jumps and as Fatalities per 100,000 Jumps. 'Injury' may mean anything from a minor cut, bruise or scratch through fractures and sprains to multiple fractures and internal injuries. If a parachutist reports any injury, it is counted. Fortunately most of the injuries are minor or are simple fractures. Multiple or internal injuries are rare. The injury rates quoted are fairly stable and are useful for comparing one type of parachuting with another. Fatality rates are less stable from year to year due to the (thankfully) tiny numbers involved - it is debatable whether they are stable enough for comparing one type of parachuting with one another.

Do all types of parachuting carry the same risk?

No. There are now three ways to be introduced to parachuting. The risk profiles of these three methods vary considerably. The risks also vary depending on your gender, age, weight and fitness. For solo jumpers the injury rate for female novices is 2 - 2½ times that for male novices. This gender difference has yet to be explained satisfactorily. The injury rate rises with increasing age, increasing weight and decreasing physical fitness.

Tandem jumps

The novice is strapped to an experienced instructor. They share a modern, extra-large, 'square' parachute. After a freefall of several thousand feet, the instructor opens the parachute. The instructor deals with any emergencies. The dual control parachute lets the novice practice canopy control and the instructor controls the

landing. The injury rate is about 1.3 injuries/1000jumps (about 1 injury per 700 jumps) and varies only a little by gender (slightly higher risk for women). The fatality rate is about 0.3 per 100,000 jumps (1 in 300,000).

This is a great way to be introduced to the sport, requires very little training and probably carries the lowest risk profile. However, it does not leave you ready to continue in the sport and much more training will be required before a solo jump.

Static line jump - square canopy (also called Category System or 'RAPS')

The novice jumps with a modern square parachute, which is opened within a few seconds of leaving the aircraft by a 'static line'. The novice has to deal with any emergencies and has to steer the parachute to a safe landing area. The square parachute can give a very soft landing if handled well (and vice versa).

The novice injury rate averages 6/1000jumps (about 1 injury per 170 jumps) but ranges from 5/1000jumps for men (about 1 injury per 200 jumps) to 10/1000jumps for women (about 1 injury per 100 jumps). The fatality rate may be about 2-3/100,000 jumps (1 in 40,000).

This method requires significant training and carries a higher injury rate than Tandem jumps. Injury rates are higher still for the very overweight or unfit. It demands significant self-confidence and personal discipline. It is a suitable method of training for those that wish to become skydivers. It may not be the ideal method for those that just wish a single jump or a 'taster' of the sport.

Accelerated free-fall (AFF)

The novice jumps with a modern square parachute but, instead of a static line opening the parachute immediately, the novice has a free-fall of several thousand feet before opening their parachute themselves. Throughout this free-fall the novice is accompanied by two experienced instructors who continue to teach during the free-fall. This 'in-air' teaching provides the accelerated learning.

The novice injury rate averages 6/1000jumps (about 1 injury per 170 jumps). Over the last couple of years the gender difference in injury rates has reduced but still shows women having a higher injury rate than men. However jump numbers for AFF are small and the figures may show considerable year to year variation. A reliable fatality rate has not been established due to the relatively lower number of AFF jumps done to date.

This method requires significant training and has a higher financial cost per jump than the Category System method. However, due to the accelerated learning, it requires fewer jumps to reach a competent level. It is an excellent method for those wishing to become skydivers. It demands significant self-confidence and personal discipline. Its major disadvantage for those on a tight budget is its higher initial training cost.

Static line jump - round canopy (also known as 'traditional')

This is parachuting as it was in the 'old days', with round parachutes. Although this activity still appears in our statistical database to the end of 2007, it is no longer available as a means of novice training within the BPA. It is no longer an option for you to learn to parachute by this method.

Experienced skydivers

Once a skydiver is fully trained, the average injury rate is 0.4 injuries/1000 jumps and the fatality rate is about 1/100,000. Some forms of parachuting undertaken by experienced parachutists do involve higher risks. For instance, public displays average an injury rate of 2/1000 jumps and a fatality rate of 7/100,000 jumps.

Risks other than the jump itself

The airfield environment, the flight leading to a jump and the training before a jump can all carry their own risks, both for the parachutists themselves and for any friends or family who come to watch.

These risks are particularly hard to measure but they are numerically less significant than those of the jump itself. Major international airlines maintain their aircraft and conduct their flights in accordance with 'Public Transport' Requirements. However, many parachute clubs may maintain their aircraft and conduct their flights in accordance with the less demanding requirements of the 'Private Category' Schedules. Commercial airports usually strictly separate the public from the aircraft. This is certainly not the case at some small airfields where aviation fuel and turning propellers can pose a risk to wandering visitors and unsupervised children.

Which is best for me?

This depends on what you want out of the experience, how fit and self-confident you are and what level of risk you are prepared to accept.

(a) ***You want NO risk at all.***

Skydiving is NOT for you. Do NOT enrol on any type of parachute course.

(b) ***You want the lowest possible risk but are prepared to accept an injury rate of up to 1 in 870 (male) or up to 1 in 650 (female), you are not very fit, you are not self-confident, you want to avoid prolonged training, you just want the experience of a jump but do not yet wish to commit to regular skydiving.***

Tandem skydiving may be the best choice for you to consider.

(c) ***You are fit and self-confident and are prepared to commit time to training. You would enjoy the challenge and thrill of a solo jump and the satisfaction of being responsible for yourself in the sky. You may wish to become a competent skydiver. You can accept an injury rate of up to 1 in 200 (male) or up to 1 in 100 (female).***

Static line (RAPS) or AFF may be the best choice for you to consider.

In Summary

Make a realistic assessment of your own fitness and decide on your priorities and desires.

[Summary of the data](#) on which the following advice is based (this link is repeated at the bottom of the page).

Have a great first jump!

