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## **A Guide To Skydiving**

Skydiving, as the word implies, is an activity in which you'll be literally diving down from the sky with some safety measures, of course. It's done from an airplane or a helicopter which takes off from a drop zone, which is like a small airbase.

### **A Bird's Eye View Of Skydiving**

If you're planning to do this breathtaking activity, then you should be prepared to know that skydivers would usually exit their airplane at the height of 4000 metres or 13,000 feet. After doing so, you would have to do a freefall for a period of time and then you could open your parachute to slow down your descent until you reach a safe and slow landing speed.

Generally, the chute should be fully inflated by the height of around 2,500 ft. In fact it is part of the law that skydivers should jump with two chutes. One would be the main chute and the other would be the reserve, just in case the main parachute would fail.

Once your parachute is in its full inflation, you now have the ability to control your speed and direction using your chute's steering lines. With that, technical manoeuvres could be executed by experienced skydivers giving them the ability to land with great accuracy. In fact, there are even some competitions held on being able to land in a specific spot with the most precision and style.

Other than bundling yourself out of the plane, opening a parachute and floating your way down to Earth, skydiving also have some specialization areas, and here are some of them.

### **Formation Skydiving: Creating Art While You Fall**

During the freefall period of the jump, some experienced skydivers would combine to create and hold different formations before they breaking off and open up their parachutes and float down to earth as normal skydiving does. In fact, the world record for this kind of skydiving is actually a 400 man dive. The formation was maintained for 4.25 seconds from the altitude of 25,000 ft. in Udon Thai, Thailand.

### **Freestyle Skydiving: A Solo Performance**

This kind of diving can be a very entertaining one. It is where the skydiver would perform some acrobatic manoeuvres and stunts, such as rolls, tumbles and graceful

formations by himself throughout the freefall period and before he opens his parachute. Freestyle dives would also need the participation of another skydiver. The second diver on the other hand would not do any kind of stunts. However, he would be the one to film his partners' performance through a camera that is mounted on his helmet. This kind of dive is actually a registered competitive sport that was declared in 1996 by the FAI.

### **Free Flying: Do It Your Way**

This is considered to be the art of controlling your body and having the ability to move through different static positions while you are in the freefall period of your jump, before you open your parachute. If you'll be doing dives like this, you would have to do some manoeuvres like Sit Flying, Back Flying, and Head Down. These would allow you to have more control on your speed and trajectory. You also have to do some exit rolls or tumbles at the end of your freefall stage so that you can safely deploy your parachute by the time you reach the right altitude.

## **All About Skydiving Weights**

If you want to go skydiving, having the proper equipment is a must. Although there are some equipment that are considered to be staples or standards when diving, there are also those that can be add-ons depending on your body and the type of jump you'll be doing. One of these extra equipments is called weights.

### **What Are Weights For?**

Physics has a lot to do with skydiving, which is why your weight can affect how fast or slow gravity can pull you. If it's the case that you're reasonably light, you would sometimes have to fly at your range's edge in a rather extreme body position that is very uncomfortable to you just to keep down with your diving mates.

As a solution to this problem, wearing weights can help you assume a more versatile and comfortable flying position. However, the kind and amount of weight can still vary on the diver. They would usually base it on your body mass and size. Also, factors such as the neutral position you'll use and your level of experience can play important roles too.

For you to maintain a comfortable neutral while flying in a varied group, having a good jumpsuit and weights are both very helpful tools. You should also learn to adjust the amount of lead that you are wearing. Doing so would highly depend on the type of jumping that you will be doing. All of these are essential so that you can maintain a comfortable position with that specific fall rate.

However, you should also take note that 12-14 lbs of lead would cause your parachute to work as if it is approximately a size smaller. Additionally, you should be aware that you should have the capability to jettison the weights easily, if ever you have an accidental incoming water landing. There are different kinds of weight apparatus, here are some of them.

### **Weight vest**

If you'll be making use of a box position, like the photo right, using a weight vest would be the best choice. Additionally, this would be your pick if you're heavier down your hips than your shoulders. Conditions like these are critical since, if majority of your weight is lower than your center of gravity, you would have a predisposition to backslide. Being able to fly neutral would require you compensation, such as executing bigger legs-out position during your freefall. This can drastically reduce your capability to move dynamically forward; and ironically, can create more drag. If

you wear a chest weight, your legs could come back to having a 90-degree position, which would enable you to have a faster fall rate and at the same time allowing you to have movement with fuller range.

Even though weight vests are efficient, they also have some limitations. After an assured point, you may also need to wear weights in the middle of your body. If this is the case, getting a weight vest that can accommodate upper and lower weight would be the right choice. It is really uncomfortable if you'll wear more than 12 lbs of lead in a single vest. This can put a big strain on your shoulders and neck; thus, weight belts would do the trick.

### **Weight Belts: Another Alternative**

If you have an evenly balanced body, then a weight belt would be perfect. This is also preferred when doing the mantis position. You can wear it outside your jumpsuit and is one of the most comfortable ways to wear weights. However, you should make sure that it won't interfere with your handles, especially if your torso is short.

### **Rig weight**

This kind of weights can be placed in your rig itself. There are some rigs that have pockets in which you can put weights. However, the rig size would be the one to determine the amount of lead you can put.

## **Indoor Skydiving**

Most people think that skydiving can only be done outdoors in the sky. However, with the development of technology, there is now an indoor rendition of the sport, which is done through vertical wind tunnels.

### **What Is A Vertical Wind Tunnel?**

Vertical wind tunnels (VWT) are wind tunnels that blows up air in a column. This is actually a recreational wind tunnel that is most of the time advertised as “bodyflight” or “indoor skydiving”. It’s also a training tool that most skydivers use.

These wind tunnels can give people the ability to fly on air without needing parachutes or planes, simply by the force of wind that’s generated vertically. The wind inside these tunnels generally moves upward at 120 mph, which is also a falling human body’s terminal velocity, although it can vary from one person to another.

VWT’s are most of the time called ‘indoor skydiving’ because of its popularity with skydivers that say the sensation they get is very similar to the real thing. As the person ‘floats’ in midair inside the wind tunnel, this is termed as ‘bodyflight’.

### **Bodyflight**

Bodyflight is said to be the art of ‘flying your body’ but in a controlled method. Control would include rolls, fall rate control, turns, lateral movement and some other acrobatic stunts in mid-air. Knowing bodyflight skills help skydivers go closer to each other while freefalling, so that they can link for formation skydiving, and then fly away from each other again until they reach a safe distance so that they can open their parachutes.

A lot of bodyflight skills could be learned and practiced from VWTs. Most skydivers use this as practice equipment so that they can be better in controlling their bodies while falling from the sky.

Bodyflight can be done through decreasing/increasing your body drag, by using your legs and arms as rudders for motion control. Additionally, other techniques used similar by airplanes are used.

### **Types Of Vertical Wind Tunnels**

Basically, there are 2 main types of VWTs, namely: outdoor and indoor. The outdoor type can be either portable or stationary. The portable ones are the types that are often used for movie productions, demonstrations and are usually rented for big events like state fairs and conventions.

Portable units give a dramatic effect for the spectators and the flying person, since there are no walls bounding the flight area. This kind of wind tunnel gives you the opportunity to fly with a partial or full sky/outdoor view. Some outdoor units can also have nettings around or walls so as to keep beginners from flying out the tunnel boundaries.

For the indoor types, you also have to sub categories, namely: re-circulating and non-re-circulating. Non-re-circulating wind tunnels generally suck air via inlets found in the building's bottom portion. Then the air would go up the bodyflight area, and exit through the top portion of the building. However, the re-circulating type would create an aerodynamic loop that has turning vanes, which are similar to scientific wind tunnels, but has a vertical loop and a bodyflight chamber inside the vertical portion of the loop.

Re-circulating tunnels are usually used in places where the climate is too cold for non-re-circulating types. Indoor types usually have a smoother and controlled airflow than outdoor types. They also have more control on temperature. Thus, they can be operated year-round in places with cold climate.

## **Skydiving 101: The Truth About Parachutes**

Skydiving is considered to be a very extreme sport, yet a lot of people nowadays are becoming very inclined to it. As time passes, more daredevils come into being and get hooked on this breathtaking sport.

However, due to the danger coupled with this sport, a lot of people that have not tried it may have some misconceptions about it. This is very much true especially regarding the issue of malfunction in the activity. To serve as a guide to those who want to try out this sport, yet are having doubts of doing so, here is an overview about parachutes and malfunction issues.

### **All Hope Is Lost For You**

This is probably the myth that a lot of people are scared of happening and is the one that hampers them from trying out the sport. For most people who haven't tried out this sport, they would likely think that once their parachute would fail to open or inflate, then are in big trouble and somewhat feel that they are at the moment screwed beyond no doubt.

If you're in mid-air 25,000 ft high, falling with the pull of gravity, feeling the wind rush on your face and something like this happens, you would definitely be scared to death. However, it is important that you understand the basic principles of a parachute first, before you even go have anxiety attacks.

### **Chutes Are Made To Save You**

The truth is parachutes do want to open; since they are specifically designed to open. These are made to save you and assist you with your descent; and most likely your chute would perform its function and fulfil its purpose. In fact, all skydiving rigs have two parachutes. This is the standard and is actually stated by the law.

Proper care and safety measures are done when parachutes are packed. Basically, the main chute could be packed up by anybody who knows how. However, for the second chute, also known as the reserve chute, it could only be packed up by a certified F.F.A. rigger who has undergone extensive training about the subject.



## **Malfunction Issues**

Additionally, malfunctions on the primary chute are not that common, unlike what most people think. It also does not mean that you're screwed, dead or whatever fatal ending you may think about. As a matter of fact, a lot of those mal-functions are actually minor ones and are very simple to correct even if you're in mid-air. As a safety measure, if ever your primary chute's malfunction can not be corrected you can simply release the primary one, so that you can open the reserve parachute that you have got.

Lastly, if ever a malfunction occurs, you would not feel so extensively screwed since before you are even set for a jump, you would have to undergo special training. So basically, you would already know what to do, even before you take a jump.

In realty, skydiving is a really fun sport to engage in. Sadly, a lot of people are still scared of trying it out due to a lot of factors. For instance, media can be one of the causes of such fears; this is especially true with some movies that show malfunctions happening during a dive. However, if you're affected by things like this, you should keep in mind that these are only movies. There's a lot more to skydiving than parachute malfunctions and you'll never get to experience them unless you get the courage to take that great leap of faith off an airplane!

## **Skydiving Accessories And Gadgets**

Other than weights and jumpsuits, there are other gadgets that you may need for you jump. Here are some of them.

### **Altitude Devices**

Altimeters are one of the obligatory pieces that you would use for skydiving. You may be surprised with the vast variety of choices. However, it is recommend that you use one that's easy to read and can give you outstanding after-sales services. In fact there are ones that even give free lifetime warranty for your device. Such kind of service is especially useful if ever you drop your device on the creeper pad.

### **Audibles**

Even though these are not strictly compulsory, you might enjoy the extra security and benefits of wearing one. Although you do not really have to rely on it, getting an extra altitude warning would be very useful. These are very useful if you're doing various disciplines like: freefly, flat-fly, and breaking off high. This is because your freefall time would vary from one dive to another.

If you want to go freeflying, most coaches wouldn't let you jump if you don't have an audible, since they're such a helpful safety precaution, especially if you're learning how to fly with higher speeds.

Choices would vary from the basic models or the top of the line, which would also act like a log book, measuring your freefall time and speed, and could be connected to a computer to get more statistics. Basically, the more the functions, the higher the price would be.

### **Helmets**

This is yet another mandatory piece. If you'll be buying one, you should consider bother safety and comfort. You should try on as much as you can so you'd find the perfect fit. If you want extra protection, wearing a full-face would be your right pick. It also gives added security if you're wearing contact lenses.

However, open-faced helmets can allow you easier communication, since you're able to see the whole face of the person. Nevertheless, they don't protect your mouth and jaw. You would have to get another pair of goggles for this one.

There are also leather frappe hats. Although they do meet the mandatory requirements of wearing a helmet, these can provide you little protection only from injuries. If you're an experienced diver, these can be an acceptable choice.

### **Gloves**

These are exceptionally useful as protection for your hands. Wearing a pair can protect you from scrapes, line burns, mishaps, and the cold weather. To know if a pair is good for skydiving, they must be appropriately thick to protect you from the cold, while thin enough that you can still feel your handles. To ensure that gloves are suitable for skydiving, you should buy from a skydiving store instead of a general sports shop.

### **Hook Knives**

Hook knives are also important when you're jumping. This is another safety measure, just in case you'll be having a line-over malfunction with your reserve chute. There are various types of hook knives and they all do work. In choosing one, you should get a piece that you particularly like yet can still conveniently fit in your rig. Placing a hook knife on your chest strap is not really a good idea, since it can be easy to lose. Your leg strap is the more preferred choice. To keep your knife sharp, try not to use it for other tasks.

## **Skydiving Myths Revealed**

People who have not tried skydiving have a lot of misconceptions or “myths” about the sport. Sad to say a lot of people are misled by these myths and tend to have wrong perceptions about the sport. Here are some of the most common skydiving myths that buzz around and the true explanations to them.

### **Friends And Secret Signals**

Most people think that if you would be skydiving with your friends, you should have a “secret signal” with your buddy to tell that your parachute failed to open. And when this happens, you would make your way towards them and give your buddy a bear hug or hook yourself to their parachute pack thingy and then afterwards the chute would inflate just in time to save the both of you.

If this myth were true, most probably both of you would have broken arms by the end of the dive; which you would think is way better than hitting the ground in terminal velocity. Additionally, there is no known hand signal for ‘my chute failed, please let me hug you’ kind of stunt.

If you were to skydive in a group, it is a protocol that before any of you would pull their parachute, you should be a hundred and one percent sure that your air space is clear. This is done so that you wouldn’t be entangled with any of your group mates once all of you pull out your chutes. Collision is also another thing to watch out for.

Secondly, that ‘parachute pack thing’ is actually called a ‘rig’, as to no skydiver would refer to it in that way.

### **The Ultimate Myth: Death**

Of all the myths of skydiving, this one would be the truest, especially if you are falling at terminal velocity and suddenly you are face to face with the ground even before your parachute has slowed down your descend, then you’ll probably die. Well of course this myth would only happen if you let it. This is exactly why you have to commence a pull sequence, then deploy your main chute and make sure that it’s working properly so that you can give yourself the chance to cutaway and get your reserve.

## **The Going Solo Myth**

Another one would be if you're for some impious reason, making a dive by yourself, then your last resort of surviving would be to land with as much surface area that you can get and the type of surface you'll be landing on.

First off, you should know that it is extremely common to have a license and skydive alone. A lot of skydivers do this. In fact, if you get a license you can do this, especially if you want to see the beauty and sacredness of watching the sunset as you freefall all by yourself.

Second if ever both of your chutes fail to inflate, there is no choice but to fight for your life even if blood would fill your goggles. You can not rely on your buddies nor your surface area.

You can't really rely on landing in water, since this is something that you wouldn't really want, because it's just the same as landing on cement. However, if you can, try landing on something soft and steep like a mountain side with some snow.

## **Skydiving Photography Considerations**

Being a skydiving photographer is just as extreme as being a skydiver. So if you plan on becoming one, there are some considerations that you might want to deliberate on first before you go out and buy your camera. Here are some of them.

### **The Price Of Art**

Getting to fly a camera is just as fun as skydiving gets. However, it could also make your fun into a frustrating and expensive affair in a great hurry, and can eat out your valuable jump money much faster. Why is it expensive? Well, first off, you still do pay for your jumps even if you have a camera. Well, you do, but maybe for about your first 50-100 jumps with the gadget on. Your proficiency on using the equipments and techniques would have to improve first so that time would come that somebody would see it's worth it to pay for your slot. Take note that it's your skill with the art that should improve and not your flying skills.

This is just one reason that you should make sure that your precious money spent on the camera equipments would not be wasted because of inexperience.

### **For What Purpose?**

First off, just like with other major purchases, you should have an idea on what exactly you want to do with your equipment. One camcorder can be useful for AFF, tandems, freeflying and 4-way; however, if you don't know which model and brand you should get, you'll probably end up with equipment that don't exactly function the way you want it to.

### **Get A Master!**

If you're new to this stuff, it would be best that you find a mentor. Try your best to find an experienced camera flyer to ask input from them. Also try to ask how they started in the field, what equipment they got and why. You can also ask them about expensive and hard lessons that they've learned through experience, as for sure any camera flyer that has adequate experience has at least one eye-opening story in store for you.

## **Shopping Galore**

Apparently, once you're done with your homework, then it is time to go shopping. Nowadays, there are a lot of options and choices available for you that sometimes it's overwhelming just to know who you should trust and know exactly where to go. Should you buy through mail or locally? Should you avail of the extended warranty they are selling you? Should you get extra batteries? How about getting a wide-angle lens?

There are more choices to make that you're probably clueless with, which is just one of the many times that you'd really benefit from having a mentor.

## **Safety First**

For newbies or want-to-be camera flyers, taking precaution in buying your equipment is the right way to do it. You should always make sure that what you buy would really provide you what you need.

For example, if you are planning to shoot a freestyle revolution and have some awesome head-down footages, then getting a large 3-chip camcorder would probably not be the right choice. However, if you're planning on challenging one of the top-of-the-line freestyle photographers for the "Top Dog" title, then you may want to get the most feature-heavy and powerful camera available in the market.

## **Basic Requirements**

Obviously, if you want to be a camera flyer, you would have to meet some basic requirements, such as being able to skydive. At least having basic training and a bit of experience would do. Of course learning how to operate the gadgets and some of the techniques are important too, but these can all be learned within the whole process.

## **The Less Popular Types Of Skydiving**

Skydiving has a lot of types. However, there are ones that are commonly known such as freestyle, formation and freeflying. Although these three are considered to be the ones that are always done and seen on television or in media, there are still other types of skydiving that are most likely not known to many.

If you are new to the sport of skydiving and want to know more about it, then knowing the less popular types would still be important. Who knows? Maybe you'll be having a knack for these less popular types!

### **Skysurfing**

This type is actually said to be an even more extreme and radical rendition of skydiving. In skysurfing, the diver would be diving with a board that is somewhat like a snowboard, but a bit smaller in size. This board would be attached to the diver's feet.

Skysurfing is said to be hard simply because board attached to your feet is extremely difficult to control. In fact, even simply standing straight would require you some skill and precise balance that you can only get from considerable experience in free flying.

Once you gain some experience and become a master of skysurfing, you would have the ability to use your boards to execute rapid rolls, tumbles, and spinning helicopter acrobatic stunts. Just like in Freestyle skydiving, you would have to have an auxiliary partner, whose duty is to film your skysurfing performance. As a safety measure, the boards can be detached while you are in mid-air. However, this can cause extra hazard for those people on the ground, which is why not every skydiving club allow this kind of skydiving.

### **BASE Jumping: As Close As It Gets**

BASE jumping is actually considered to be the most extreme and dangerous among the types of skydiving. "BASE" is actually an acronym which refers to the structures that the skydivers jump from: Building; Antennae, which can be an uninhabited structure, aerial mast or tower; Span, which are bridge-like structures; and Earth, such as cliffs or canyons.

This kind of skydiving is only done by very experienced divers. This is so, because such kind of diving includes huge risks due to the fact that the jump is quite a short



one and has close proximity to a lot of structures that give huge risks of entanglement, collision and the likes.

According to statistics, in between 1981 to 2007, there is an estimate of one hundred eleven experienced BASE jumpers have already met fatal endings due to some complications in the jump, that basically lead to a failure.

### **Wingsuit Flying: Flying In Style**

This branch of skydiving is a recent one. A wingsuit is an up to date invention in which skydivers put on a specially designed suit that has webbings stitched in between the arms and legs.

When the wingsuit is worn while skydiving, it results to an airfoil, which gives the skydiver a lift. Thus the diver is apportioned with an even more highly developed level of control over his descent speed and trajectory that seems impossible at normal circumstances.

However, this kind of dive would usually entail you to use portable computers and other gadgets to record your velocity and distance travelled. Records show that the slowest speed ever accomplished with a wingsuit is 25mph. Once you get to reach the specified altitude, you would have to unzip your wingsuit's arm webbing in order to deploy your parachute.

Wingsuits are commonly used and popular with BASE jumpers. This is due to the reason that when they wear wingsuits, they can have the ability to turn their 60 second freefall period into a longer span of 3 minutes. Nevertheless, this kind of skydiving is only done by very experienced divers. In fact, it's recommended that you should have hundreds of jumps under your belt even before you decide to embark on this kind of skydiving.

### **Accuracy Landing: Getting It Straight To The Point**

This type of skydiving is a competitive one in which a skydiver would earn points in the competition for being able to land as closely as he can to a specific target point or area on the ground. It is usually done solo and the landing part is the one given the most attention.

# **The Skydiving History**

Skydiving is a well loved sport, especially for the extreme goers out there. However, it may seem that skydiving is something new as a sport, but in reality, it has a very rich and colourful history that can be very interesting to know, whether you are a fan of the sport or simply curious about it.

## **Milestones And More**

Although most of skydiving milestones happened during the 20th century, its history actually goes back further more. Originally, parachuting started around the 1100s in China, which is about a thousand years ago. Although there were no airplanes during that time, people would find natural formations in which they can leap off and float safely towards the ground below.

Additionally, Da Vinci actually made a design that shows a wooden frame parachute that has a pyramid shape. This is just one of the proofs that parachuting is actually way older than most people think.

## **Skydiving Sport History**

If you'll be talking about the sport of skydiving, this matter would have a much recent history in the making. The very first person who did this daring act was Jacques Garnerin. He didn't jump from an airplane though. What he did was jump off from balloons, around late 18th century. He also performed fanciful displays when he did so. After he executed his jumps, he would then make use of a parachute to have a safe landing.

## **When Women Came In**

Women had a part in skydiving history too. However, it was not until the 19th century that they started having participation in the sport. One of the most famous women in skydiving history is Kathe Paulus. She parachuted in Germany during the end of the 19<sup>th</sup> century and became very well known for this skill of hers.

## **Airplane Generation**

Ever since the airplane was invented, the skydiving history became even more colourful than ever. Indeed, it took a great leap of faith, literally and metaphorically! With the evolution of the airplane, the more did skydiving evolved and became even more daring. Now, daredevils had the opportunity to parachute from a fast-moving mechanical device, which caused even more spectacular and breathtaking skydiving routines.

The first woman to ever jump off from an airplane is Tiny Broadwick. She did this daring stunt back in 1913. Additionally, she is also the first woman to do a free fall jump from an airplane, which she did in 1914.

## **Skydiving: It's Official!**

One interesting fact about skydiving is that it wasn't called skydiving before. The term skydiving was only coined in the mid-1950's and used for Raymond Young.

This was the first time when it was actually declared as skydiving. Before it was termed as such, "skydiving" was simply called as "parachuting" by many.

## **From Novelty To Sport**

Before, skydiving was considered to be more of a novelty act than a sport. It was only during the period after World War II that this art became an actual sport that a lot of people could engage in, just like basketball. This transition was due to the fact that skydiving and parachuting was commonly done as a tactical move by many countries throughout the war.

In fact, pilots during World War I were even told to crash their planes into enemy territory rather than bailing out and were just given parachutes for survival. Ever since the 1st successful bailout in 1922 of an airplane, parachuting became a popular method of bailing out for pilots.

After the Second World War, it became a mainstream hobby for many. This is because the soldiers who came back enjoyed this activity and even have the courage to do a freefall. They held some competitions which then became a popular sport for civilians too. It was in 1957 that the first skydiving schools appeared and up until now, more people are having the courage to face this extreme sport.

