JUST KEEP FLYING

Wingsuit Transitions

By Patrick Kramer and Alex Knaub
Photos by Kevin Oliveri

As with any other skydiving discipline, it's best to get a good coach to help you learn wingsuiting skills. If you're fortunate enough to be in Sweden, where there's a dedicated wingsuit tunnel, you will be able to accomplish in a few hours what might take months to learn in the air. A wingsuit tunnel is also scheduled to open in 2022 near Orlando, Florida. (But honestly, doesn't a trip to Sweden sound more fun?)

As wingsuit flocks get bigger, it's becoming ever more important to spread the gospel of bird traffic control. If you want to fly the suit and not let the suit fly you, it's essential to learn the basic maneuver of transitioning from belly-flying to back-flying. The core element of the transition is to continue flying the wingsuit through the transition while maintaining lift, which will ensure the transition is smooth. Smoothly rotating from your belly to back while maintaining your flight is significantly different from throwing your body over and catching yourself on the other side.

Although throwing your body over and catching yourself may work to get you from one side to the other, it does not make for a clean transition, and it is unlikely that you will maintain altitude and speed. Flying the suit through the transition allows you to maintain control, and it's just an all-around better way to transition. You won't lose speed or altitude, you'll look cooler, you'll have more fun and you'll be a safer flyer.

Here, you will learn the proper body position for doing a transition and the proper techniques to use when practicing in the sky. Invest your time wisely in the beginning to get more out of every jump. If you have questions, ask an experienced wingsuit coach. You'll want to practice with a partner for a frame of reference. If you make solos, you'll have no idea if the transition was good, bad or ugly (with "good" defined as maintaining level flight, altitude and speed). Your transitions may be sloppy in the beginning, but with enough practice, they will become beautiful and smooth.

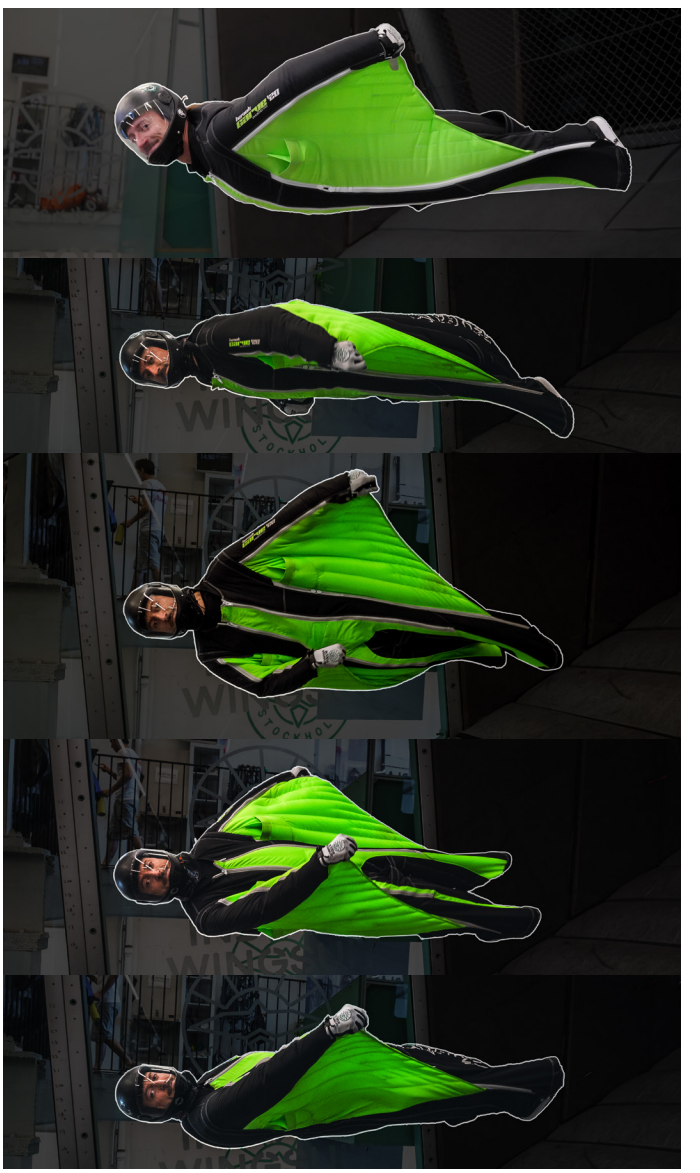
Your body and wings give you lift. In a smaller suit such as a Phoenix Fly Havok, Phoenix Fly Carve, Squirrel Sprint, Squirrel Swift and the like, your body will be the main driver of lift. You'll gain lift with your shoulders, chest, stomach and leg wing. Your arm wings will keep you flying level and stable. (Although you can actually accomplish a transition without wings, we won't go there. It's weird and incredibly difficult.)

BELLY TO BACK

A good transition starts with an efficient flying position, which means keeping your arms and legs straight, head fixed and stomach flat (see first image). Your body will provide the necessary upward and downward motion needed to accomplish the transition. You will fly your body and use the suit to supplement it. Your body gives you lift, and the wings allow you to control the lift more effectively than with the body alone because of their larger surface area.

You can accomplish the belly-to-back transition by removing one wing (i.e., arm) from the airflow by sliding a hand to the hip and across the stomach (see second image). Allow the suit to continue to fly normally by keeping the other arm straight (to gain lift on that side) and keeping your legs straight. Let the suit to do the work. When you remove the lift from one side of the suit, it will rotate to the other side, from belly to back, and—if you hold the position—from back to belly. The finish of the transition is a strong back-fly body position. (Stay tuned for a future article on that topic.)

When performing a belly-to-back transition, the important thing is to continue flying the suit and allow it to rotate you. A common mistake is pushing down with one wing and throwing the opposite shoulder in the direction of the transition. Although this can accomplish a transition, it usually means you'll lose altitude and speed because you stopped flying.



BACK TO BELLY

Your process will be similar when transitioning from back to belly. You'll remove one wing from the equation and, once again, use your body and wing to gain lift, which will cause you to rotate. While flying on your back, bring your elbow to your side and your hand to your chest (see second back-to-belly image). As you rotate from your back to your belly, you will extend the closed wing again into a strong belly-fly position (see third and fourth images). Your head should remain fixed throughout the transition. Keep your legs straight, and let the suit do the work.

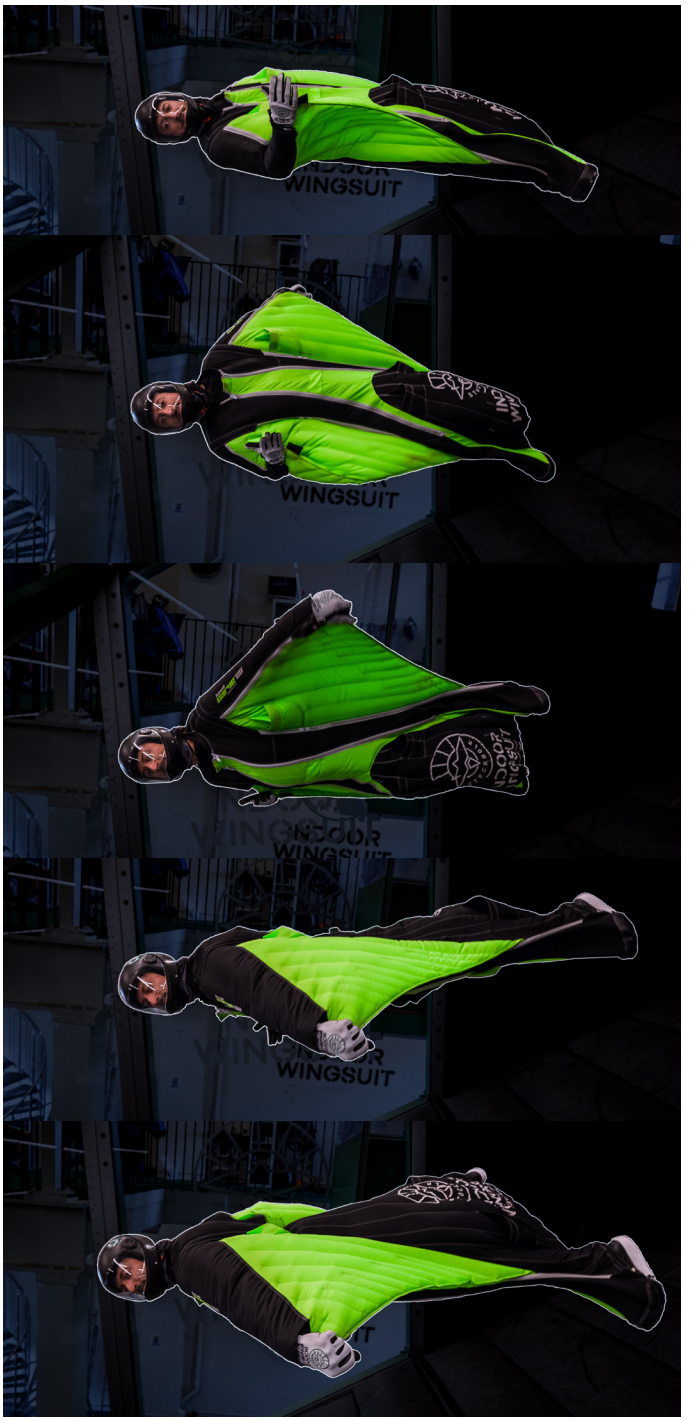
The belly-to-back and the back-to belly transitions are similar because they involve removing one wing from the airflow—allowing the lift from the other wing to rotate the body—and extending it again to stop the rotation. However, there is a slight difference in the positioning of the arm: For back-to-belly, you're placing your arm on your chest with the elbow to your side, while for belly-to-back, your hand is on the hip and extends during the transition.

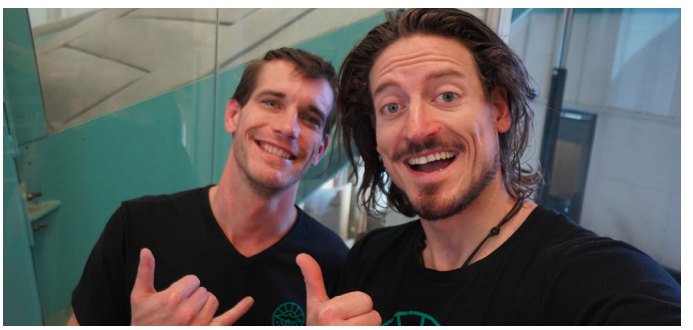
The back-to-belly transition is important to learn early in wingsuiting, because one day you will find yourself on your back, perhaps accidentally, near deployment time. You'll definitely want to avoid any of the potentially dangerous consequences of deploying on your back in a weird body position by learning how to do a back-to-belly transition.

Safety Tip: Although it can be somewhat dangerous to deploy on your back, it is a better choice than going low. Stay altitude aware during the whole skydive. *Do not wait to pull just because you are on your back!* If you have reached your deployment altitude, *deploy your main canopy*, no matter your body position, and prepare for a possible cutaway.

If you do end up chopping, let your main canopy do as much work as it can to stabilize you. It is safer to deploy your main and slow yourself down, even if the main canopy malfunctions, than going straight to your reserve, which increases the chances of a reserve malfunction. That could be a catastrophic situation. Let's not go there. There's also the possibility in a wingsuit that your vertical speed may not be high enough to fire your automatic activation device. This is another reason to deploy your main parachute at your deployment altitude, no matter what your body position.

When you're flying with your friends, you don't want to make a transition at the expense of altitude and speed, or you'll end up flying alone. Your goal is to fly relative with your friends by making an in-slot transition. Practice in-slot transitions when flying with someone else so you can gauge how successful you were. The key is to maintain smooth and controlled flight. The smoother you can perform the movements, the better the transition will work. This is tough to do at first, so don't be discouraged if it doesn't work on the first try. Find a good coach or visit the wingsuit tunnel to really hone your skills. With more confidence in the air, you will have more fun and be safer while flying!





ABOUT THE AUTHORS

Patrick Kramer, D-35559, is an AFF and tandem instructor with more than 3,000 skydives. He is the chief instructor at Indoor Wingsuit and won the 2021 Indoor Wingsuit Games, setting a couple world records in the process. His team also won the German National Championship of Acrobatic Wingsuit Flying. He has flown more than 1,200 hours in a wingsuit in both the air and tunnel, equivalent to more than 36,000 wingsuit skydives.

Alex Knaub, D-39443, is a coach in the wingsuit tunnel and in the sky. He has more than 680 wingsuit jumps and many hours of wingsuit tunnel flying.