Diving From a Springboard: part 3 - Basic Dives

Introduction - In our last two articles, we discussed the forward and backward approaches. In this article we will look at the 5 basic dives: front dive #101, back dive #201, reverse dive #301, inward dive #401, and twist dive #5111. These five are the basic dives in all four directions (no somersaults), plus the forward dive 1/2 twist.

Terms - Dives are numbered. Forward dives are 100s, backward dives are 200s, reverse dives are 300s, and inward dives are 400s. Twist dives are 5000s, because more numbers are required to identify the dive. Here's how they work: Dive number 101 is a front dive, 102 is a front flip, 103 is a 1 1/2 somersault, 104 is a double, etc. For twist dives, the first number (5) identifies the dive as a twist, the second number is the direction, the third is how many rotations, the fourth is how many twists. So, dive 5111 is a twist dive, forward direction, 1/2 somersault, 1/2 twist. One more example of a twist dive: 5233 - Twist dive, backward direction, 1 1/2 somersaults, 1 1/2 twists. Positions for each dive are described by a letter after the number: A = straight, B = pike, C = tuck, D = free. Free position is used for complex twist dives, such as 5233 just defined, and is a combination of positions. The position combination is usually open pike and straight. The two positions are needed to complete both somersaults and twists in the same dive. For example, the complete number for a forward dive in tuck position is 101c, the twist dive previous is 5233d. Divers usually pike over into an open pike position to accelerate the somersaulting action and then twist in straight position. We also pike back over into open pike at the end of the twist to "square up" for the entry.

Body alignment - As in the approaches, body alignment remains a critical element in successful dives. Defining the position of each dive, while maintaining proper alignment is often the difference between an average and an excellent dive. For the basic dives described here, defining the dive position is done at the apex/top of the flight. The dive position is being formed during the ascent to the top, and is crisply defined at the top. During the descent to the water, the position is opened back up, to stretch for the hand grab and entry. Alignment is often lost during the open/kick-out phase of the dive because divers often kick out too hard, relax their abdominals and arch their backs. Controlled kick-outs with tight abdominals keep the back straight and make for much prettier, no splash entries. Even with back or reverse dives where a slight arch is allowed, too much arch will result in poor alignment and a splashy entry.

Dive 101c: Forward Dive, Tuck - Starting with the maximum board deflection position at the end of the board, your arms are up and legs are nearly straight. As the board recoils, straighten out your legs to accelerate the lift, lean slightly forward, but don't "fall off" by leaning too much. Your dive should go nearly straight up, and out just enough to prevent contact with the board; about 4-5' away is good. As you gain experience, the angle of take-off will become more consistent and your dives will go high, yet safely away from the board. Now, as the board begins to lift you off, gently pull your arms down toward your knees. Remember that you must allow the board to lift before you begin to pull down. This creates the rotation needed to go head first. I call this motion the "push-pull." Push your body up, then immediately pull down with your arms to create the rotation. Don't "throw" your arms down. You'll

over-rotate and crash. If the push and pull are done at the same time, the opposing forces cancel each other out, and you will likely do a nice belly flop. What happens at the point of take-off is the most crucial stage of every dive. Proper extension, lean, and timing of the pull (or throw) make the dive work. As you ascend to the top, continue to pull your arms all the way into a tight tuck position. Don't tuck your head. At the top, you should be tucked, and horizontal, looking straight down at the entry. As you come back down, open up into a straight position (the kick-out). This should be done with a lateral kick-out, which means your arms are swept out to the sides and closed overhead into the hand grab position shortly before they hit the water. A lateral kick-out is used to slow the opening up and help you maintain great body alignment - flat back, legs straight and together, toes pointed, arms in line with your shoulders - one straight line. Your rotation should be developed so that your entry is just short of vertical. The more the rotation force needed for the dive, the more short of vertical you'll likely need to be to keep from over-rotating the dive. Upon submerging, you'll do a swim out to help pull the splash down and pull your feet up into a vertical position for submersion. A swim out is a forward somersault done below the surface. As your waist submerges, release your hand grab and sweep your arms out and down, pulling your legs up to a vertical position as they go under. The combination of a hand-grab and swim out make up the "rip entry." Usually, the timing of your swim out is about when the waterline is approximately at your waist. As just mentioned, the exact timing will depend upon the amount of rotation, and how much the legs need to be pulled up to create the vertical position at submersion. One word of caution on swim outs - somersaulting too soon creates a fold-up at the point of entry and actually makes a very big splash...obviously not what we want.

Dive 401c: Inward Dive, Tuck - I've listed this dive next, because it is so similar to the first one. An inward dive is a forward dive with a backward take-off. Again we'll start at maxiumum deflection, where you're arms are straight up and your legs still slightly bent while being extended. As the board comes up, lean slightly back, making SURE that you extend your body into a straight line as you are leaving the board. Safe distance is maintained by a good follow-through here. With your center of gravity outside the end of the board and your body straight, you'll get both excellent height and safe distance from the board for executing the inward dive. The push-pull sequence is very important here. Extend straight as the board is lifting you, but BEFORE you leave the end. In one smooth motion, bring your arms back down as you come off the board. As before, continue the pull into a tight tuck position, which is defined at the top. Kick out laterally on the way back down, and stick the entry with a tight hand grab and swim out. To begin with, inwards will feel close and even "over the board" until you get used to them. The angle of take-off and body extension are even more important here, to get good height and safe distance. A key thing to remember on inwards is to push your feet into your hips, and your hips into your shoulders (again the one straight line principle). Never stick your bottom out as you take off, and/or push your feet out to get safe distance. This will ruin your height, may cause you to slip, and maybe even to hit the board. Remember to "ride the board" when you are taking off. Rushing and not getting your arms up will ruin your height and may also be dangerous.

Dive 201c: Back Dive, Tuck - Although the principles are the same for back and reverse, the take-off position is different, and is often described by coaches as the "backward C" position. That's because your body is arched into a crescent as it leaves the board. Here, the angle is again critical for safe distance and good height. A back take-off

should not be rushed. A slight lean back, nice lift and follow-through is essential to get the dive up in the air and maintain safe distance from the board. Now, as you are coming off, continue your arm swing into a gentle pull back. After leaving the board, pull your legs up to your chest as you ascend to the top. Bring your arms around into a tight tuck at the top. Again, you're horizontal, but now looking straight up at the sky/ceiling. As you begin to descend, sweep your arms out laterally for the hand grab and look back at your hands as they close together. Since a back dive requires very little rotation, a very gentle pull back into an elongated C is all that's needed to get it to go head first. It's with back and reverse dives that our familiar kick out mat drill of "kick-look-reach" pays dividends. By looking at your feet before the kick out, you'll maintain better control of your alignment. Never throw your head back to open up. You'll wash over and crash. Your head should be in a neutral position, squeezed between your upper arms. Focus your eyes on your hands as you close into the hand grab. Keep your head between your arms and maintain your one straight line. As with the tuck forward or inward, you'll tuck on the way up, define it at the top, and kick out on the way down. The entry for back and reverse does not follow with a forward somersault swim out, because your rotation is the opposite direction. To pull your legs up that are well short of vertical, divers use a technique called a "knee save." With dive number 201 or 301, a knee save isn't needed to get the dive straight up, since a slight arch in the back is acceptable for back/reverse entries. This slight arch will provide the vertical adjustment that your legs need, provided the dive is properly rotated.

Dive 301c: Reverse Dive, Tuck - The reverse dive tuck is performed the same as the back dive tuck. The take-off is the only thing that is different. Practice doing a few jumps with your forward approach and looking up as you come down into the water. Leave your arms up in their take-0ff position as your enter. Check your height and distance. Remember that you MUST follow-through and establish the straight line position before your pull your arms back to create the backward C position and reverse rotation. Reverse dives are notorious for poor take-offs that are rushed, with little or no lift, and pounding the board with your feet. Instead - come down from your hurdle onto the very end of the board, with toes pointed. A silent, soft landing onto the balls of your feet is required. Now, swing your arms all the way up and RIDE THE BOARD up, extending your body into the one straight line position as the board begins its recoil to lift you off. As you are coming off continue your arm swing into a gentle pull back. As in the back tuck, pull your legs up to your chest as you ascend to the top. Bring your arms around to establish a tight tuck at the top. Again, you're horizontal, but now looking straight up at the sky/ceiling. As you begin to descend, sweep your arms out laterally for the hand grab and look at your hands as they close together. Keep your head beween your arms, and maintain straight, tight legs as you enter. Hold your position until your legs are under. A slight arch in the back is again acceptable on this dive and will help pull your feet into the vertical position at the point of submersion. A word of caution on reverse dives: rushing, and doing what I call the "banana peel" take-off is very dangerous. Resist kicking your feet up in front of you as you reach the end. You might slip on the end of the board. If it looks like you slipped on a banana peel placed at the end of the board, you can get hurt. Wait! Get your arms up, lean slightly forward as the board is coming up for take-off to get height and safe distance.

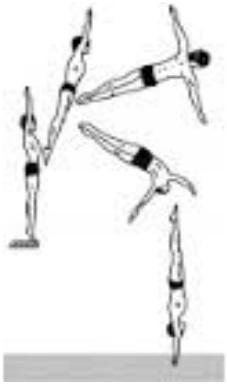
Dive 5111A: Forward Dive 1/2 Twist, Straight - The final basic dive is not so basic to many divers! This dive is confusing and awkward until the concept of how to turn it over is mastered. The concept is this: 5111 is a forward dive

in straight position that is turned over into a back dive in straight position. This turn over is done very smoothly, and begins at the point of take-off. As always, finish the approach at maximum deflection with your arms straight up and legs slightly bent (finishing their extension). As the board begins its recoil, extend your legs into the one straight line position. Your arms have virtually NO pull down, but go instead into a T/set position at the point of take-off. You body should be completely straight. Do a soft kick/lift of your feet to create the rotation as your take off. The angle of take-off is identical to any other forward dive. The higher this goes, the better it works. As you leave the board and establish your T, turn slowly onto your side. The ascention to the top is a 1/4 turn into a side-lying position. Keep your body totally straight, and arms in the T. As you ascend, turn your head to the side; so once at the top, you are looking straight down your bottom arm at the entry point. In the side-lying position, your bottom arm points straight down, and your top arm points straight up. This position at the apex is the key to making this dive work. On the descent to the water, your bottom arm remains still, and your body will line up next to it as you finish rotating onto your back. Your arms will go from a T to an L, then finally to an I, when closed into the hand grab. The T is at the top, the L is when you first turn onto your back, and the I is as you approach the water for the entry. The most common mistake on this dive is what I call a cartwheel. This is caused by leaning too far forward, reaching out, not up on the take-off, and/or overkicking the leg lift. Since this dive enters the water as a back dive, a slight arch in the back is again acceptable, and will help put the dive in vertically as you submerge. This dive is difficult, compared to the other four basic dives, as evidenced by the degree of difficulty assigned to it: 1.8. For comparison, 101c is 1.2; 201c is 1.5; 301c is 1.6, 401c is 1.4. A forward 1 1/2 SS in pike is just 1.7!

Summary - Before embarking on developing a diving list, get a knowledgeable coach, who can teach you safe technique while developing great height. Similar to freestyle skiing, diving is a unique combination of patient disciplined precision, and reckless abandon. Beware of impatience, and trying to throw awesome tricks before you're really ready. The approach and consistency must be in place first, so you can perform the trick and live to do it again! I think the reason that many athletes don't stick with diving is that they don't have the patience for it: body alignment work is tedious, progress can be slow, and crashing really DOES hurt (water isn't all that soft when hit at high velocity). You can see how an active kid would love the reckless abandon part, but quickly grow tired of the tedious drills and body alignment work that is required to be any good at it. I've also had kids in diving who were quite cautious, but very good at the self discipline part needed for the repetitions. Diving is a graceful and challenging sport, that requires both reckless abandon and exceptional self discipline & concentration. It's a combination that appeals to just a select few athletes, but boy those athletes are fun to watch!

Happy diving!

Greg Schmidt, EWU Aquatic Center Manager



Top for forward/inward dive tuck

Top for back/reverse tuck

Sequence for fwd dive 1/2 twist