

## Wash hanging

Firstly, what is it and why would we do it?

Simply put, wash hanging is riding a wave generated by another craft.

Why do it? The simple answer is it makes your life easier.

Boats displace water (to float) and create a wave when moving forward, you can ride this wave (like surfing) to either go the same speed for less effort, or to go faster than you could on your own.

Is it cheating? No! In most forms of flatwater & ocean racing it's allowed, in Sprinting the rules are framed to make it less useful. Those paddlers that feel its cheating are usually those that can't do it!

What is the aim? The aim is to sit on the wave and go along for less effort. This can mean taking a rest, lowering the heart rate and recovering whilst still maintaining the same boat speed as if you were leading/working. Think of those migrating geese taking turns to lead or cyclists in slipstreaming pelotons.



Alternatively, you can stay with people who are faster than you (usually up to 5% quicker is feasible) for the same amount of effort you'd put in to lead slower!

The easiest wave to start to learn on is the **tail wash**, this is the wave directly behind the kayak in front. This is easiest for several reasons

1. The wave is "square/straight" or "flat" to you – meaning it isn't at an angle
2. You can concentrate on the tail of the boat in front and just follow them, judge the gap
3. You have the wave pulling you but not turning/twisting you as on the side wash
4. You don't have to worry about hitting their paddles
5. You don't have to worry about the eddy from their paddles and getting clean water
6. Easier to take avoiding action

### Main issues:

It can be harder to **feel** when you are in the sweet spot and so easier to fall/slip off, going around a corner it can push you wide of the lead boat and you can fall/slip off, beginners often concentrate on the gap and not the feel so they don't get the benefit because they work too hard always climbing out of the sweet spot, or simply ramming the lead boats stern.

However, this **tail wash** is not the best wash in terms of return for effort.

A better wash is the **side wash**: this is a wave beside the kayak, generally the nose of your boat would be beside and slightly wider/behind the leading boats paddle exit. The faster they go the further back the wave. More detail to follow.

Main advantage, this is a bigger wave and gives you a better return

**Main issues:**

1. The wave is trying to turn (twist) you into the lead boats side (I'll explain why later)
2. You can easily hit the lead boats paddles and upset them
3. Inexperienced paddlers find it harder to know/feel where to sit and can wander in and out.

The next type of wash is the **Half V**. This is sitting behind the leader (like the tail/back wash) but with another paddler sitting on the leaders' side wash, both these waves combine to give you a bigger ride. This occurs in many situations but most notably going upstream along the bank, tucked out of the current, as the leader doesn't want to leave room on their inside.

**Main issues:**

1. The wave can push you away from the side paddler – not a huge issue unless there is a bank or obstacle on the opposite side.
2. The sweet spot can move around as the side paddler moves in and out or backwards and forwards on the leaders wash, or as you move past obstacles, shallow water etc.
3. It's often not as "nice" as the side wash
4. You can be boxed in with nowhere to go/escape or to take avoiding action

The best wash in terms of speed for return of effort is the **V wash**.

Sometimes called the diamond wash because of the shape of the waves. This is when you have a leader with two boats either side of them. You get a combination of the tail and two side washes. This has been proven to lower the heart rate by over 15% in elite athletes.

This is the best ride out there! You should be able to relax, recuperate and enjoy the ride.

**Main issues:**

1. Getting in there – it can take a lot of effort to climb into the hole/wash/V
2. Inexperienced paddlers can get pinballed around moving from side to side in a pendulum effect until they hit someone or fall out of the wash.
3. You can be tactically trapped, having to slow down to get out or take avoiding action

There is another type of **V wash**: between two paddlers.

Whilst not the same as the Diamond V wash, this one can be a very nice ride. It occurs when two boats are leading/going head to head with a gap between them. The two side washes combine literally in a V shape. The closer they are together the further forward the wave (& bigger) and so the further apart, the further back the wave (& smaller). This can occur in a few scenarios

1. Start of a race – when people are sprinting and not ready to slow down
2. Someone trying to get past the current leader
3. People racing to the finish
4. Sprint racing in lanes (although the V is quite far back due to the big distance between the lanes (but it is there!))
5. In training if two paddlers are going head to head.

## Main issues.

1. The V can be uneven, i.e. as one boat moves forward, backwards, closer or further away the intersection of the waves moves accordingly or from simply the different weights of paddlers this can make for an uneven wash (as in most group scenarios)
2. You can be a long way back
3. It can be almost impossible to climb out of the wash.

## How to wash hang:

We need to be riding **down** the wave created by another boat.

You need to accelerate your boat to match the speed of the wave for it to pick you up. You must maintain this whilst it picks you up, once your boat is at the same speed as the wave and riding it then you can start to ease off on the effort. Simple things to look out for are your paddle rate in comparison to the leader or others on the washes. Try to slow it down to the slowest rate without falling off and least amount of effort, which leads us to...

**Don't work too hard.** Many people don't gain a benefit from wash hanging as they are working just as hard as if they were leading themselves, ease off until you start to fall away, watch the nose of the boat it should **ALWAYS** be going downhill, when it goes flat or starts to rise you need to move forward on the wave. Start to **Relax**, get your breathing under control, practice good technique etc.

**Don't bury the nose.** Again, some paddlers work too hard by pushing their boat into the bottom of the wave and therefore constantly hitting/climbing the wave they should be riding. You need to be at the top of the hill not at the bottom. Think of it as a bicycle on a hill, plenty of potential energy at the top, not so much at the bottom!

You may need to **steer away** from the paddler whose wash you are on. This may need to be a constant correction as in effect you are riding along a wave at an angle (see diagram) or occasional correction. Try not to over correct and steer in and out, if the effort/strain is growing or the distance increasing to the leader or your boats nose is rising then you need to work a little harder/move forward on the wave.

Constantly check, are you going to hit the paddles of the person you are wash hanging. **DON'T.** If you are going to hit it's always best to warn them and apologise as you do it.

Some people have leans (especially true in K2) and sitting on one side or the other may help straighten the boat (occasionally make it worse).

Skilful wash hangers feel the wave and the load on the paddle, it is no coincidence that the best wash hangers also usually paddle well.

You need to be able to feel when the boat lifts and drops, slows and accelerates and how much you can ease off and still stay in the same place. This must be practised. Compare your rate with those on the wash or the leader, you shouldn't be rating faster than them (unless they are massively faster than you – div 1 versus div 5). You can't instantly slow down or ease off in case you fall off the wash but once your boat is up to the same speed you should be able to ease off and recover or relax.

**Climbing waves:** sometimes this is a necessary evil. There are ways to mitigate how hard it can be.

1. Try not to do it from a low speed – instead run down a wave to accelerate “pop” over the wave you need to climb.

2. Try not to climb it at its biggest point – the wave gets smaller the further from the source or as you climb you can steer across the wave putting you in front of the wave (see diagram).
3. Pop over at the smallest point and ride up/along the wave and repeat until you get to where you need/want to be.
4. If you are going to climb a wave don't do it from the bottom – get a run up from the wave behind think about rolling down a hill on a bike, this can get you halfway up the next one with the built-up speed. (like point1)
5. Boat set up – Don't set the boat trim to run nose up, this can make it harder to climb waves and the boat can be very wayward at the crest of the climbed wave. If you are long legged move the foot rest and not the seat.
6. Don't spend forever getting over the wave – as Yoda said *"do or do not, there is no try"*
7. Be prepared to keep working for a while once over, relax too early and you could slide back over that hill again.
8. The boat is seldom at fault, if you can't steer or are wobbly or unstable crossing waves, it's the wrong boat for your current level.

**Practice:** Set sessions up or situations within sessions to practice, take the chance (especially in summer) to ride motorboat waves, these are a brilliant way to learn (if you are safe – some have propellers sticking out the back! Some are driven by strange people!). Practice wash hanging in groups 4minutes x four 1-minute leads etc.

Practice in different conditions i.e. upstream/downstream, deep river/lake and shallow canal each of these has an effect. Get heavier people in the group (even if you have to bungee people to slow them down). Mix K1s in with K2s.

Try solid edges (concrete shuttering) vs soft banks and definitely around corners both inside and outside, upstream and downstream. Do all of these and in the various different positions so you know the differences and what to do and what is going to happen next.

**Racers:** is it worth the effort?

100% yes, to wash hang someone faster than you, can get you a long way into a race much faster and further than just you on your own. Even if you fall off it may take a long time for your natural group to catch you up, if ever. You have to be in it to win it so yes, it's always worth it.

What about in training? – This depends on what you are training for. Wash hanging can mean you can train with people faster than yourself, or you can train harder knowing you can recover on the wash on the next effort and not get dropped by the group. It also gives you a different load/coordination experience as the boat is moving faster than you could do on your own. So, whilst wash hanging a fast K2 in your K1 can help you go fast it can also mean you are not used to the slower rate and greater load when you are on your own.

You can make it harder for yourself too (on purpose) if you are the quickest and have slower people working in a group against you on your own. You can spend time in the back waves practising finding different sweet spots and learning how the waves behave in the groups and what happens when the group changes – remember you probably won't always be the fastest in the group (especially if you want to race internationally).

Practice running along the big waves behind groups, climbing waves along concrete shuttering, moving in and out as you chase people down, so as to stay in-front of the waves or climb the

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smallest etc. Look for the light and dark of the waves and learn where they are biggest and smallest depending on climbing or riding the wave.

However, I would discourage spending every session on the wash, you need to feel how the boat moves under your own power on the flat.

Wash Hanging in crew boats:

Wash hanging in K2 is arguably easier and more rewarding, you have a boat with two people, which isn't double the length of a K1 (or speed) so the wash is bigger. However, for the inexperienced this provides its own issues.

1. The waves are bigger to get over and there is more of your boat to get over that bigger wave.
2. There is a bigger twisting force from these waves.
3. The K2 may not steer as quickly as your K1, so you must pre-empt what is going to happen.
4. Changing around washes can be harder for timing and stability.

Wash hanging K4s: It's something that isn't done much in the modern era of racing, but it is possible, the waves are very long and so it can be hard to find and use, but it is worthwhile, the driver places the nose somewhere near the 4<sup>th</sup> paddlers, paddle exit. However, this again depends on both boats' weights and speed. In K4 racing it is a very long way to drop around the back (or change any position) and the boats react very slowly to steering inputs, so a lot of thought has to go into steering them in close groups. There are still plenty of long distance K4 races in Spain.

#### Simple wash hanging facts:

- Heavier people create bigger waves
- Faster paddled boats create faster moving waves
- The faster you go the further back the wash and the "narrower" the angle
- Waves angles change around corners – they slow and grow on the inside and decrease and move back on the outside
- On a turn being on the inside can "suck" you around, being on the "outside" can push you wide
- You might have to constantly steer or apply pressure away from the wash you are riding
- YOU WON'T ALWAYS GET THE BEST POSITION
- The wave gets smaller and slower the further away from the source (group or single paddler)
- There are always other washes behind the group – don't just fall off
- The depth of water effects the size of wave and its speed
- When catching other paddlers and climbing waves whilst on the wash, you can be going uphill whilst the leader is going down hill and vice versa, hang in there it'll get easier.
- Don't burn to come past from the bottom of the wave, run down from the top

**Wash hanging is a skill that must be practised and constantly be relearnt in different situations i.e. as your weight and speed increase and the same for those you are wash hanging.**