



Dynamic Posture

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This paper has been written for developing kayakers of around 3 / 4 star white water and level 3 inland kayak trainee coaches. It has detailed ideas and exercises for understanding and practicing how having an understanding of dynamic posture can have a huge effect on your balance and success of key skills in a river environment. I have taken other sports postures in account that are not coached and feel they are very important to the paddle sport community.

I am looking at these following areas that require dynamic posture

- Edging
- Bracing

“Centre of gravity”

"Hovering over the sweet spot"

“Find the balance point for easier turning”

Dynamic edging

Lets look at how your posture can change edging in your kayak for dynamic turns, firstly how do you edge you kayak? Lift a knee? Drop a knee? Have you ever been asked to hold an edge on a scale of 1-5 of how much the kayak is tilted? I find that the body is not designed for lifting a kayak into an edging position and can cause discomfort and make the paddler feel unbalanced. This can cause the paddlers to wobble and hold back progression. The kayak needs a message sent to it from your body to create an edge, by just lifting a knee your message is very small compared to sending a big message. By using your bodies posture and weight you can apply an edge much more balanced and bring your body into a dynamic forward position.

Usually edging is coached or understood to be when you lift a knee and balance the kayak on side to create a sharp rail to turn on, this is quite a hard skill to take from flat water to a moving situation when more is trying to unbalance you.

Exercise 1.

Here is a task with two of you in an eddy or on flat water Sit next to each other and have paddler 1 to put the hand on the side that paddler 2 is going to lift to create an edge, As paddler 2 edges and lifts and balances as they would normally do paddler 1 puts weight on the lifted knee of paddler 2. Who wins with less energy? Paddler 1 is acting like the water on the outside edge of your kayak trying to grip the boat and unbalance you

Now try this! Paddler 2 places there chin over there right knee by leaning forward and pushing the edge of the kayak down with weight driving the edge in to the water and lifting the tail of the boat. Paddler1 now pushes down on the lifted knee. Who wins now with less energy? The one with active dynamic posture does.

More and more I have coached this technique for edging and the results from the learning paddler have proven that this works



This is why it works

By leaning forward the kayak settles into a dynamic position, which allows the paddler to change how it performs. Leaning forward lifts the tail to make the kayak lighter and easier to move. By leaning forward you also lower your centre of gravity to make a more stable platform to work from allowing a powerful dynamic position

By moving you chin over your knee the kayak turns around your feet area gripping the water for a smother turn allowing the boat to carve. By being forward at the same time allows the kayak to lock in this position and stay true to its line you are asking it to do



By looking at other sports that require and use dynamic posture we can compare and back up the need for the awareness of body form. This all using them for balance and stability.
By bringing your weight forward over your knees allows the edge to be adjusted to maintain its grip throughout turns and allowing the performer to go into aggressive dynamic posture but be able to bring balance and stability back under them self's after the turn builds.



Looking at the skier you can see his posture is forward and allows his weight to be transferred to the inside edge of his skis to grip. As with white water the sloping surface that we turn has bumps as the same as small waves and eddy lines, by being in this dynamic position allows the skier to adjust and maintain the carve of the turn.



Looking at the paddler you can see his posture is forward and has been adjusted for a very dynamic turn. As the turn is carried out the paddler will bring their posture back over the left knee to allow the boat to stabilize carve of the turn. By pushing the limit of the posture more weight has been transferred to the inside edge of the kayak.



A good example of this shows with the skier going from stable posture to dynamic posture and allowing more weight to be created from changing their position for more pressure to the inside edge. This can be recreated with your body posture in a kayak for a quick or aggressive carve.



Again the posture of the paddler is over the balance point allowing the correct weight to be transferred to the inside edge for the turn. Notice the shape of the water behind the performer (smooth carve of the turn shows).

By using dynamic posture the performer has the option to be aggressive or defensive in their surroundings, the paddler aggressive against external forces like waves or rocks and the skater/skier against bumps and differences in the slope. This all makes for a more environment aware performer.

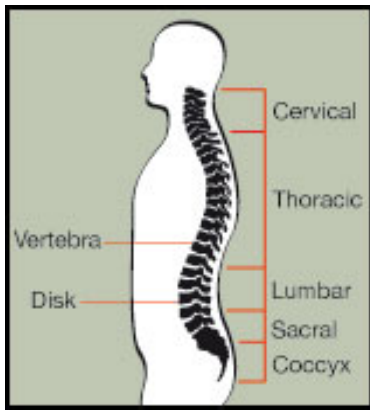


Skating and skiing have the same Dynamic posture for using the inside edge for grip.



Being aware of how your spine bends for posture for a protected performance is crucial to avoid injury and bad technique.

Common areas of this are in high / low bracing, sculling and rolling. For a protected and dynamic brace, again the body's flexibility and posture need to be explored.



An ideal posture:

- * Is stable; postural alignment maintains the body's mass over its base of support.

- * Minimizes stress and strain on tissues

- Statically; at rest
- Dynamically; during movement

- * Minimizes energy cost

With some kayaking skills the spine is taken into areas that for still growing adults, may up the potential for injury. Common areas of this are bad posture during bracing strokes.

Exercise 2

Sit in your kayak floating in a calm environment. Lean back and move your weight over one side. How balanced do you feel? How easy can you get back to your paddling position? How much have you moved your head away from the plum line balance point of your hips?

Now try this

Lean forward and move your weight over one of your knees. Lift your chin to keep your back straight. How balanced do you feel? How easy can you get back to your paddling position? How much have you moved your head away from the plum line balance point of your hips?

The results of this will be outweighed by the fact that your body and muscle frame will allow your posture to be regained by sitting up, as this is a natural action your spine likes. By leaning backwards you have to use more muscles and will feel unstable for a greater time until you reach your internal balance point.



By leaning forward the body is ready to be dynamic for a forward stroke or change to brace. This gives you a safe position to work from allowing your body to tuck up and protect your face. This also allows you to be in the correct position to start to roll back up.

Below is the dynamic posture at work whilst rolling a kayak, here you can see the body working with the blades to recover over the balance point of chin over knee finishing a protective way.