

## ARTICLE "Proper Cane Use Is Critical"

This week we are going to discuss something which is not as anatomically detailed as some of the previous articles but entirely as important. The topic this week is proper use of a cane. Anyone who has ever watched television knows that use of a cane for entertainment purposes is not always proper and the limp which occurs as a result are often worse than the underlying supposed condition. One example of this is the television show "House" in which a "doctor" has a bad leg and uses a cane to get around. If you ever noticed, this television doctor leans over his cane and limps in an inordinate fashion. The reason that the actor is unable to feign his limp is that he is using the cane on the wrong side of the injury. The actor has an injury on the right side of his body and uses the cane on the right side causing a significant limp. The truth is that an injury which occurs on the right side requires use of the cane on the LEFT side. Now, that can't possibly be true you say...you need to use the cane on the side of the injury to support it. This would be your natural response and of course was the response of the actor on the television show. However, as he found out and as you would find out with a real injury, this does not work.

Using the cane on the same side of the injury does not unload the injury enough to provide proper gait pattern and in fact using the cane on the opposite side provides significant leverage allowing the pelvis to be carried level and the limping to be minimal. On the opposite side, you say? Why does this work?

The muscles controlling the pelvis particularly the glut medius work in reverse to level the pelvis during ambulation and to increase the moment arm and leverage of the gluteus medius as a hip adductor, the cane is used on the side you are attempting to assist. In most cases this is the opposite side of the injury which lifts and levels the pelvis through the use of physics and the enhancement of the lever arm.

You can observe this in patients with injuries simply by sitting in the mall or in the airport and watching people walk. People who have an injury to the hip often "waddle" side to side simply because the gluteus medius has not enough lever arm to carry the injured hip along. The gluteus medius gait is called a compensated glut medius gait pattern or a Trendelenburg gait pattern, both of which have to do with insufficiency of the gluteus medius. Patients who waddle side to side generally have an injury on the side to which they lean either in the hip or in the knee and as such, require a cane on the opposite side to sufficiently unload the affected hip or knee.

In summary, if you are using a cane for a hip, knee or ankle injury to unload the joint, first try the cane on the side of the injury and then switch the cane to the opposite side and see how much easier it is. You will find that this unusual situation is often the best way to unload the injury. Don't be embarrassed if you did not know this as I have found over the years that most people do not know to use the opposite side.

Save this bit of information for the future as at some point you may need to use a cane to support an injury.

Thank you

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