Translation Please!

In some of my CrossFit classes, I discuss the importance of abdominal bracing, especially with lifting heavy loads. Sometimes I will use exercises such as "dead bugs" and "hollow rocks" to help feel where the abdominals are during warm ups.

This article looks into the effects of abdominal bracing in different environments and the effect it has on the lumbar spine (lower back), leg muscle contraction (hips, knees, and ankles), and its effect on ground reaction force (the amount of force the body experiences during impact, i.e. landing from a box jump).

What they found was that abdominal bracing had no effect on the way the low back responds to landing, however "reduced peak knee and hip flexion and increased (ground reaction forces) during drop landing." Translation: when you brace your abdominals, it affects your ability to bend your hips and knees to help "give" with the landing.

Imagine jumping and landing with stiff legs where they are straight…it hurts a bit and feels very awkward. There is an increased ground reaction force because you have no "give" into your jump. However, when you jump and let your hips and knees bend a bit, it doesn't hurt as bad, therefore decreasing the impact or ground reaction force. This article is saying that if you include the abdominal bracing while you are landing a jump, it is more likely to force your legs to contract and not allow the movement they need to "give" with the jump. Although this is not directly related to injury, over time it may have effects, however further research is needed.

So is abdominal bracing bad? Not necessarily. For all movements, it's good to have general body awareness to help with your control during movements. I personally think it is still beneficial to know where your abdominals are to use them to help lift heavy objects and keep the spine stable. However after reading this article, the active act of abdominal bracing may not be as beneficial in decreasing injury with gymnastic type movements that involve landing, such as box jumps or dismounting from the pull up bar.