

## Technical Corner - Biomechanical Concepts

In the last couple of months, I have been thinking a lot about concepts. The reason for that is a belief that concepts are a force multiplier when it comes to learning. The conversion ratio of a solid concept to a solid technique can be up to 100:1 because the best concepts transcend techniques.

I found that the concepts can be categorized mainly into two buckets - strategic concepts and biomechanical concepts.

In this edition, I want to share three of my favorite concepts. You can use these immediately in your rounds without having to dive deep and study kinematics or kinetics.

### Concept 1: Where the head of the snake goes, the body must follow

There are few things in grappling that feel less comfortable than a well-applied crossface pressure. Particularly effective from top side control and half guard, it feels almost paralyzing, and it makes it impossible to hip escape and face the opponent.

The reason it works so well is that the body must follow the head. From bottom side control, the prevailing escape path is to hip escape and face the opponent. To then start getting to your knees or regaining guard.

But when the shoulder of justice is pointed at your jaw, turning the head away from your opponent, the hips become completely immobilized. That's because the hips directly attach to the spine and by immobilizing the upper part of the spine, at the neck, you're also immobilizing the lower.

This concept is particularly useful when passing guard, but it extends to many other situations, so keep an open mind and look for opportunities to move the head and see the body follow it.

### Concept 2: Put a strong arm behind its owner's back, and it becomes a weak arm

This concept has been understood for millennia as a method of restraint. Nowadays, law enforcement typically puts handcuffs on someone behind their back for this very reason.

In a grappling context, you're probably thinking about the kimura. It has to be the best example of the arm being compromised the moment it slips past the ribs. Here, the body positioning plays a big factor, as well as the fact that two arms are attacking one.

However, this concept can help us in other areas as well, beyond established control points and submissions. There are guard passes where we can trap an arm under someone's back, we can try to get it there during scrambles. When we're attacking from the back, some of the best hand-fighting techniques will have us grab the hand and use it to pull the arm behind the back with some powerful leverage.

A helpful tip that should help you utilize this concept is to understand that the best leverage for moving an arm anywhere - typically comes from a grip on the wrist or, in some cases, at the hand.

### Concept 3: Understand the hierarchy of your anatomy

We know that certain body parts are stronger than others. It's not exactly a shocking revelation to say that a leg is stronger than an arm. Having a constant awareness of this hierarchy and using it while grappling is a great way to find a lot of success without the need to learn techniques.

The hierarchy goes as follows:

1. Core
2. Two legs
3. Two arms
4. Head and neck

The core, which includes the hips, lower and upper torso, is the most powerful and attacking it is almost never a good idea. Going after the neck and limbs is much more effective.

Whenever we grapple, we want to use as many body parts as possible to attack.

For example, in an armbar, the legs are clamping, both arms are holding the wrist in place, and the hips are finishing the job.

When analyzing your rounds, ask yourself: How could I have engaged more body parts?  
What could I have done to bring my core to the party?