

BJJ MENTAL MODELS

Mechanical Models of BJJ: A Crash Course

Steve Kwan here, from BJJ Mental Models. Thanks for checking out our crash course!

This document serves as a brief introduction to the most important mechanical models of Brazilian Jiu-Jitsu. It serves as a crash course to bring you up to speed on the terminology and principles we discuss on the BJJ Mental Models podcast.

“Where do I get started?”

As of this writing, BJJ Mental Models offers **hundreds of hours of free educational content** on our podcast and website. There’s nothing wrong with starting from episode 1 and listening all the way through! But if you’re looking for a faster way to get introduced to our concepts, check out our **Intro to Mechanics** audio course. It’s **the fastest way** to get familiar with BJJ Mental Models.

Get the Intro to Mechanics audio course here: 📌

<https://bjjmentalmodels.com/intro-to-mechanics/>

Now with that said, here’s a quick crash course on the primary mental models you’ll need to know if you want to truly understand the mechanics of Jiu-Jitsu.

Mental Model: Theory of Alignment

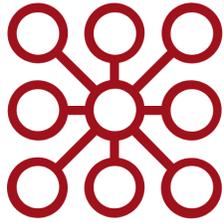
Alignment is the “grand unified theory” of Jiu-Jitsu. First described by Rob Biernacki from Island Top Team, alignment is a framework that fully encapsulates all the mechanics of the gentle art.

The theory of alignment tells us that all mechanics in Jiu-Jitsu can be described as a combination of three factors:

1. **Posture:** effective positioning of your neck and spine
2. **Structure:** effective positioning of your legs and arms
3. **Base:** your ability to absorb and generate force relative to your goals.

Jiu-Jitsu can be described as a game of alignment. Really, there are only two goals:

- Goal #1: **Maintain your own alignment.**
- Goal #2: **Break your opponent’s alignment.**
- **Do not proceed to goal #2 if you are failing at goal #1.**



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Read more: <https://bjjmentalmodels.com/theory-of-alignment/>

Mental Model: Core Mechanics

If the theory of alignment is the “why” of Jiu-Jitsu, the core mechanics are the “how.” Core mechanics explain exactly how we maintain and break alignment in practice.

There are six core mechanics in Jiu-Jitsu:

1. **Frames:** creating strong structures to keep your opponent at a distance
2. **Levers:** exploiting a limb or the neck to create maximal force
3. **Wedges:** taking away space to restrict your opponent’s movement
4. **Clamps:** locking onto your opponent to restrict their movement
5. **Hooks:** Connecting with your opponent to track and off-balance them
6. **Posts:** Using part of your body to maintain base from top or bottom.

All techniques in Jiu-Jitsu can be described in terms of these six core mechanics.

Having a common language across all techniques makes it far easier to absorb and understand them.

In the database: <https://bjjmentalmodels.com/core-mechanics/>

Mental Model: Anatomic Hierarchy

The human body has six main areas. They are, from strongest to weakest:

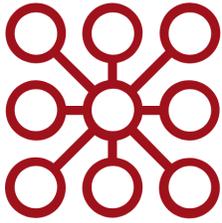
1. Your core
2. Your two legs
3. Your two arms
4. Your head.

When attacking, you want to **use the most powerful parts of your body, especially the core.** Avoid attacking your opponent’s core directly; it’s better to isolate a limb or the head.

Read more: <https://bjjmentalmodels.com/anatomic-hierarchy/>

Mental Model: Types of Guard

There are many variants of guard, with more being created every year. That said, they can all be categorized as one of the following:



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- **Hook-based:** Uses a hook to track and check your opponent's movement. Butterfly guard is an example of a hook-based guard.
- **Clamp-based:** Tethers your body to your opponent's in order to hinder movement. Classic closed guard is an example of a clamp-based guard.
- **Frame-based:** Uses your limbs to keep your opponent at a comfortable distance. Spider guard is an example of a frame-based guard.
- **Hybrid:** Combines hooks, clamps, and frames. De la Riva guard is an example of a hybrid guard.

Read more: <https://bjjmentalmodels.com/types-of-guard/>

Mental Model: Breaking Mechanics

Breaking mechanics describe how to efficiently apply submissions to an arm or leg. Generally, there are four steps:

1. **Isolate a lever**, such as an arm or leg
2. **Prevent predictable defenses**
3. **Maximize leverage** by immobilizing the joints in the limb
4. **Apply overwhelming force** with your entire body.

Read more: <https://bjjmentalmodels.com/breaking-mechanics/>

Mental Model: Choking Mechanics

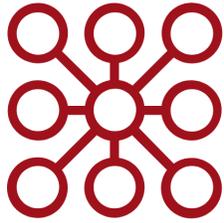
Choking mechanics describe how to efficiently apply chokeholds. There are generally five types: **air chokes, blood chokes, cranks, compression chokes, and hybrid chokes.**

Blood chokes require pressure against each carotid artery and a wedge behind your opponent's neck, pushing the head down. This breaks posture and makes the choke tighter.

Read more: <https://bjjmentalmodels.com/choking-mechanics/>

Mental Model: Ratchet Control

One of the best ways to control a lever is to add rotation. **Almost any submission can be made more powerful by adding rotation.**



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Read more: <https://bjjmentalmodels.com/ratchet-control/>

Mental Model: Controlled Breathing

Controlling your breathing is extremely important, especially from bad positions. It helps you control your energy expenditure, stay relaxed under pressure, and prevent your body from going into a fight or flight response.

Read more: <https://bjjmentalmodels.com/controlled-breathing/>

Mental Model: Staying Loose

It's critically important to relax your muscles by default, and only tense them when the time has come to apply force. You want to be like a whip: loose most of the time, but able to produce quick bursts of power when needed.

If you're too tense:

- your muscles will fatigue
- it'll be easier for your opponent to control you via a lever
- you're telegraphing your intentions to your opponent.

Read more: <https://bjjmentalmodels.com/staying-loose/>

Mental Model: Limb Coiling

As a general principle, keep your head and limbs coiled in tight to your core. If you leave your neck or a limb dangling you are giving your opponent a path to control or submission.

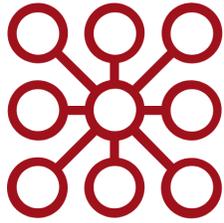
Only extend your limbs when:

- **doing so intentionally and for a good reason**, and when
- **you can extend your limb safely** without giving your opponent lever control.

Read more: <https://bjjmentalmodels.com/limb-coiling/>

Mental Model: Elbow-Knee Connection

The elbow-knee connection is a specific and very powerful example of limb coiling. The idea is to keep your elbows and knees relatively close together. This has two main benefits:



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1. it makes it harder for your opponent to **exploit your arms or legs** as levers
2. it prevents your opponent from **accessing your belly**, which prevents guard passing.

Read more: <https://bjjmentalmodels.com/elbow-knee-connection/>

Mental Model: Solid Frames

When framing, ensure your joints cannot be exploited as weak points. Good frames rely on **bone structure**, not muscle or joints.

For example, it's often unwise to frame by directly pushing against your opponent with a straight arm. This type of frame has two major weaknesses: the wrist and the elbow. Both of these can be exploited by your opponent, which can break the frame and lead to injury.

Read more: <https://bjjmentalmodels.com/solid-frames/>

Mental Model: Kinetic Chains

Limbs are stronger when connected together. You can create stronger frames, or stronger attachments to your opponent, by connecting your limbs together. Two limbs connected are stronger than one limb alone.

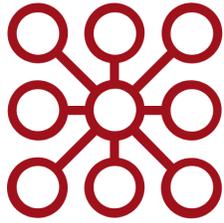
Read more: <https://bjjmentalmodels.com/kinetic-chains/>

Mental Model: Body Tethering

Be wary of any technique requiring you to tether your body to your opponent's core. Much like a tetherball, if you tie yourself to your opponent, you might go for a ride.

Techniques involving body tethering are easily reversed, sometimes in devastating fashion. This is especially true against a larger opponent.

If you're going to use a technique that requires body tethering, such as triangle chokes or closed guard, **ensure you've broken your opponent's alignment first so you don't get lifted or stacked.**



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Read more: <https://bjjmentalmodels.com/body-tethering/>

Mental Model: Inside Channel Control

Getting your arms and legs “inside” of your opponent’s often yields better control. For example, when you swim for underhooks or play butterfly guard, you are fighting for inside channel control.

Read more: <https://bjjmentalmodels.com/inside-channel-control/>

Mental Model: Single vs. Double Lever Control

Attacking a single lever affords **more damage**, whereas attacking two levers affords **more control**.

This is why **smaller grapplers often prefer single-lever submissions** when fighting larger opponents, such as armbars, guillotines, footlocks, or rear naked chokes. Against someone bigger and stronger, you need all the power you can get.

A larger grappler, on the other hand, may prefer double-lever attacks against a smaller opponent, such as triangle chokes, arm triangles, D’arce chokes, and anaconda chokes. When fighting a smaller opponent, you may not need maximal power to finish a submission, and your priority may be controlling your potentially more agile opponent.

Read more: <https://bjjmentalmodels.com/single-vs-double-lever-control/>

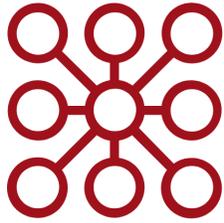
Mental Model: Overwhelming Force

When attacking a submission, attack it with your entire body. It’s a common mistake to attempt a submission using only your arms for leverage. **You want to use your entire body, including your legs and your core.**

Read more: <https://bjjmentalmodels.com/overwhelming-force/>

Mental Model: Surface Area

Force is more effectively applied when using a smaller surface area. For example, instead of laying on your opponent like a blanket, focus all your force through your



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shoulder or your knee. **A smaller surface area is a more effective application of force.**

Read more: <https://bjjmentalmodels.com/surface-area/>

“How do I apply all this?”

How did you fare with the above info?

If it seems like a lot to take in, I have some good news: while there's a lot of info here, **it's still a lot easier than trying to memorize every single technique.** A concept-based approach like the one we've discussed here will, over time, help you learn and organize knowledge much more effectively.

And I have some more good news: **this document is just the start of your journey into mental models.** For next steps, I'd recommend the following.

Join BJJ Mental Models Premium!

If the ideas in this crash course spoke to you, the best investment you can make now is joining our Premium subscription. With options as low as \$5USD/mo, **this is the single best investment you can make in your Jiu-Jitsu journey.**

Join BJJ Mental Models Premium to dig deeper: 📌

<https://bjjmentalmodels.com/premium/>

And as mentioned at the beginning of this crash course, we've got an entire audio course that digs deeper into these mental models.

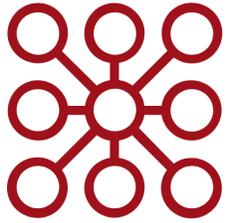
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And, of course, our website is chock full of some of the best free educational BJJ material you'll find anywhere, including the legendary BJJ Mental Models podcast and database.

Check out the BJJ Mental Models podcast and database: 📌

<https://bjjmentalmodels.com/>



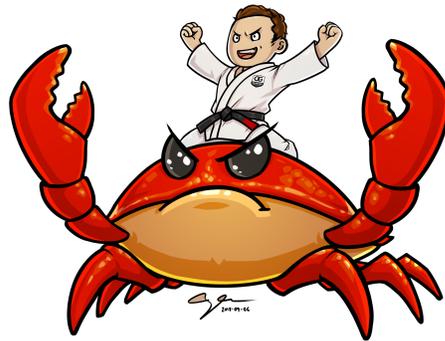
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Thanks for supporting our work! We hope you found this crash course useful. And if you have any questions or comments, please give us a shout at: info@bjjmentalmodels.com

— Steve and Matt Kwan



Steve Kwan



Matt Kwan