



Gateway to Suspension

A guide to partials and suspension
fundamentals by Magpie Kink Education



Who is Em?

Em (she/her)...

- joined the PNW kink scene in 2010 started suspending in 2017
- organized Seattle Suspension (progressions) Rope group 2018-2020
- presented at Conception 2018, Subspace, and Pan Eros

You can find her as [Mz_Magpie](#) on IG and Fetlife.



Who is Roxanne?

Roxanne (she/her) has been tying since 2016 and began topping suspension in 2018. She co-hosted the Witchy Rope Enthusiasts Group for four years, and she is an advocate for empowering tops of marginalized identities. She has performed for Friction and presented classes for Pan Eros

What we are covering:

- Negotiation
- Uplines and suspension gear
- Suspension frames and hardpoints (brief)
- Bondage anatomy: Blood flow and nerves (brief)
- Bottoming skills
- Beginning suspension ties (easy partials)

All of these could have been separate classes.... So be warned: it's intense.

What we aren't covering:

- Inversions
- Transitions/dynamic rigs.
- TKs and other arm-loading harnesses
- Using limbs as the primary upline (futos, strappados, single ankles, etc.)

All of these are advanced ties that require both the top and bottom to be skilled in suspension. We will not cover these things in this class, and we recommend you take several classes before attempting these on your own.

Why partials? These ties ...

...give tops and bottoms a chance to learn how harnesses feel under tension

...teach essential skills to practice

...provide a safer environment to fail



Suspension skills

Everyone: Nerves and anatomy, technical rigging
Tops: Upline management, load distribution, emergency descent
Bottoms: Triaging sensations

Structured harnesses, advanced floor work

Everyone: Nerve checks
Bottoms: Body awareness, pain processing
Tops: Body manipulation, structure

Core skills

Rope skills: Single columns, tension, frictions
Communication skills: General communication, consent, negotiation, boundaries

You only get one body

Suspension is a dangerous activity, just like football or roller derby. It can have serious impacts on you and your partner's body if you aren't careful.

We encourage you to **do lots of research so you know the potential dangers of this kind of play.** You may find some things are outside of your risk profile, and that's okay!

Make the right decision for you.



Hard on your bottom

→ Rope Harnesses involving arms:

- ◆ Strappados
- ◆ TKs/Box ties

Both Strappados and TKs require significant shoulder rotation and some flexibility, This increases the likelihood the tie will be unsustainable or injure your bottom.

Almost all the nerve injuries we see in rope incident reports relate to strappados and box ties. **Ideally, look for ties that do not go to the maximum range of motion.**

We recommend you don't attempt any tie which requires shoulder rotation without receiving direct in-person instruction and extensive practice.

Conditions that affect suspension



- Nerves
 - a. diabetes (peripheral neuropathy)
 - b. thoracic outlet syndrome (nerve impingement)
- High or low blood pressure
- Hyper mobility
- Pregnancy

Tell your doctor you're thinking about getting into "aerial arts" and see what they think!

Nerves: A layman's guide

Nerve Damage can be sensory (hot/cold/tingly/buzzing/sensation loss) Or functional (motor coordination).

The most common nerve injuries from rope are:

- Handcuff thumb (radial nerve damage),
- Wrist drop from (radial nerve damage)
- Ulnar nerve compression, (upper arm compression)

See a MD or PT for assessment and treatment!



Nerves: A layman's guide

Other less common nerve injuries include:

- Thoracic outlet syndrome (look for winging of the scapula and weakness in arm)
- Brachial plexus (affected by shoulder straps and ties that go into the armpit)
- Femoral nerve (inner thigh) injuries, numbness in the front & outside of the thigh
- Foot drop is caused by damage to the common peroneal nerve, just below the knee on the outside of the leg.

General advice? Avoid tying on or near joints



Nerve checks

Sensation Tests

Run index finger over back of thumb (down the length) to test radial
Run thumbnail against the inside of pinkie (down the length) to test ulnar.



Motor tests

Thumbs up against pressure - radial test.
Backwards wrist flexion for median.



Bottom grip test



Spread fingers against resistance

Negotiating for suspension

Risk profiles and risk mitigation examples:

- I only do suspension with people I've tied on the ground with first
- I use synthetic uplines
- I don't do inversions without padding
- I only do suspensions with a spotter or DM present
- I don't suspend with TKs because I'm not confident in my ability to tie them

Emergency plans:

- Medical insurance
- Emergency contacts

Negotiating for suspension

What do you both need for aftercare and post-play check-in?

How and when would you like to give/receive feedback?

Share how you are unique:

- o Abilities: "I have very flexible shoulders" or "I can withstand inversions very well."
- o Limitations: "I have an injured left shoulder" or "Inversions make me nauseous."
- o Triggers: "Don't cover my mouth with hands, gags, rope, cloth, etc."

Body rope types

Not safe for suspension

Sisal

Coconut

Cotton

Natural fiber $\leq 5\text{mm}$



Safer for suspension

Hemp $>5\text{mm}$

Jute $>5\text{mm}$

Nylon

Posh

Hempx

Suspension frames



Pagodas, aerialist A-frames, and tripods are all popular options due to their portability.

The key way most suspension frames fail are:

- Legs splaying out
- Tipping over (usually caused by user error, such as swinging)

Hard points

Things to look for:

- Hardpoints with rough edges that can cut your sling
- I-bolts (can become unscrewed)
- Anything for which you don't know the original purpose of the support.
 - Decorative beams (hollow or not attached to walls)

People might use the “Two big guys” test (jumping up and down on their upline to “test” the hardpoint). This just tells you it isn't failing now, not that it won't fail later. This test may even weaken the hardpoint.

Suspension Gear

Climbing gear is commonly used for suspension. Climbing gear ratings are usually in kN, which is a unit to measure force.

1 kN is approximately 220 lbs.

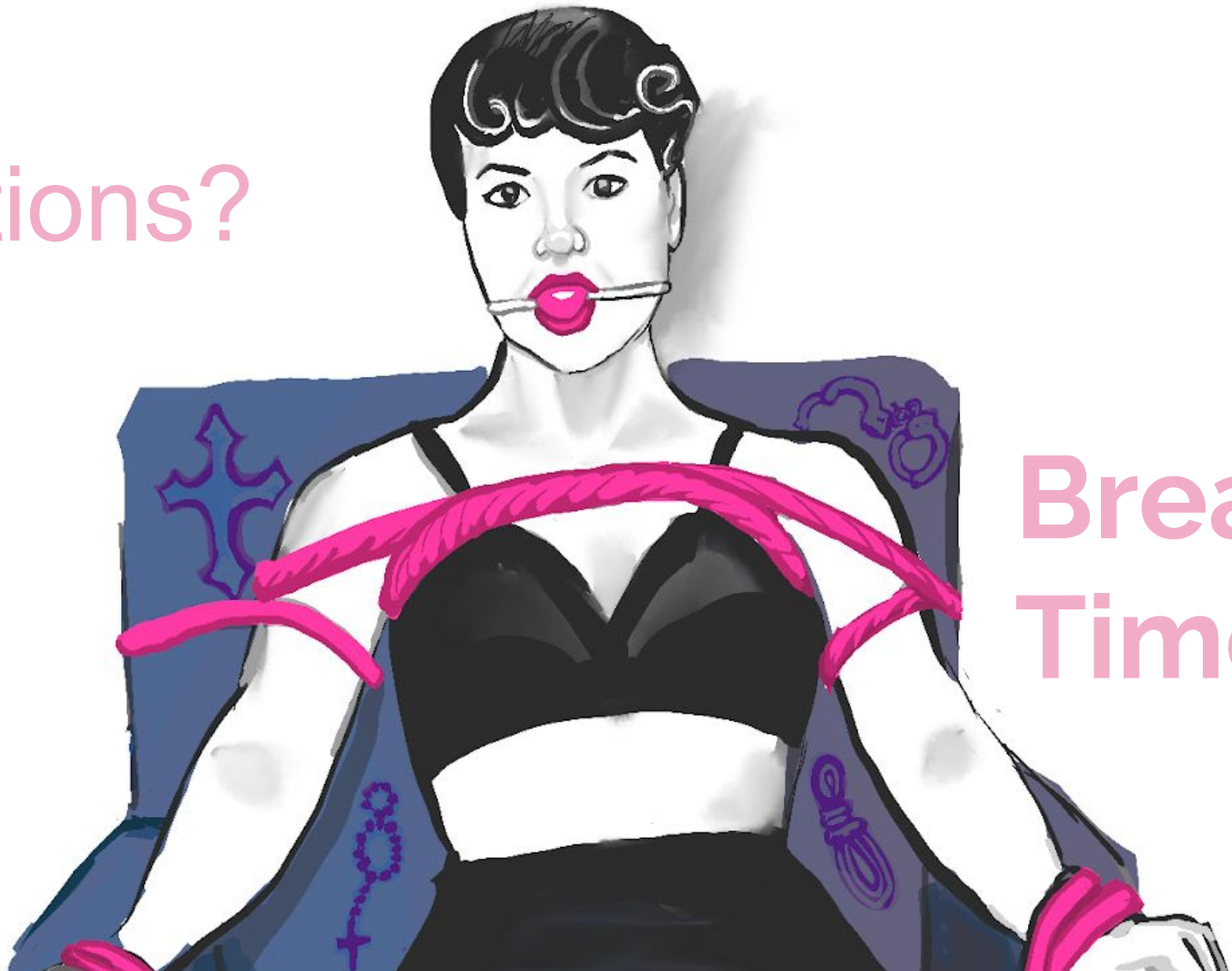
To maintain a 10x safety factor for suspending a person who weighs 200 lbs, you need a rating of 10 kN or more.

ALWAYS CHECK THE RATING. There are lots of water bottle and keyring carabiners that will never hold up a person.

Rated climbing gear



Questions?



Break
Time!

Uplines

Critical uplines should have a high safety factor (10x factor or more).

Recommended uplines:

- Nylon
- Posh
- Hempx
- Regatta Braid

Upline fundamentals

- Pass the rope between the ring and the bight in a giant circle, toward you at the ring and away from you at the bight. Keep the lines flat and running in the same direction.
- Create a munter at the top of the ring by crossing under the ring, circling the upline 360*, then passing the rope over the ring.
- Create a slipped half hitch around the uplines
- snug at the munter and lock it with a yuki knot (half hitch circled around the loop).
- Finish the ends below the friction either with a Naka knot or by tucking the tails.

Munter Hitch

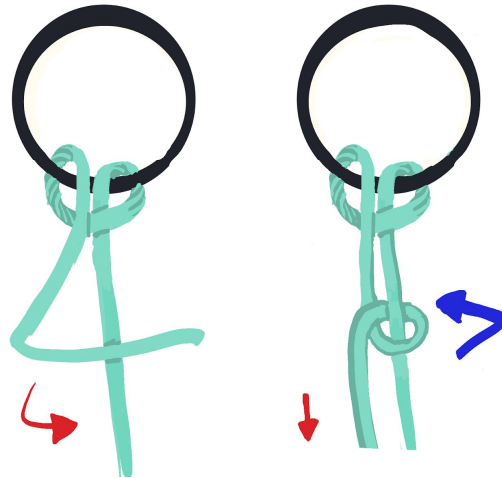
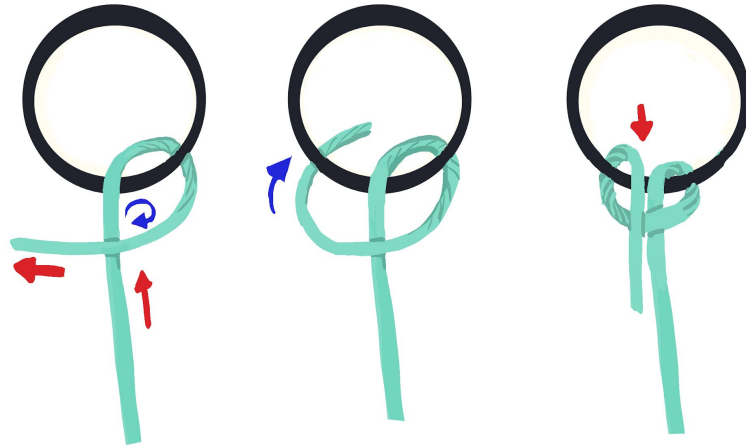
Pull rope through the ring

Pass underneath the ring

Circle the upline halfway (360
turn if wanted)

Pull through the ring

Friction below on upline



Bottom lock-off

Wrap three times around the upline

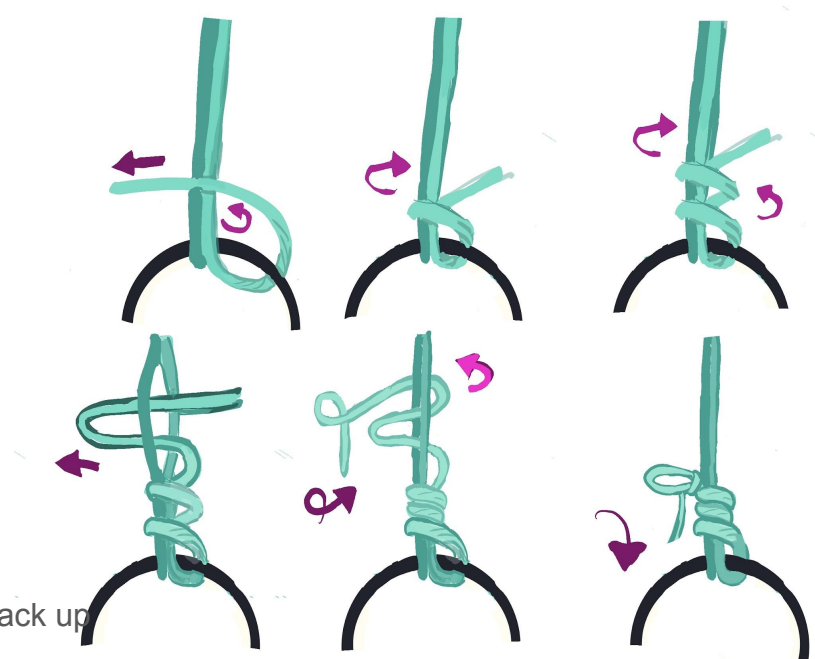
Split the line and pull through a small loop

Make a yuki knot and put it around the loop

If using a slippery material:

- pass the rope down and under the hanger, then back up

Finish the ends above the friction



Finishing ends

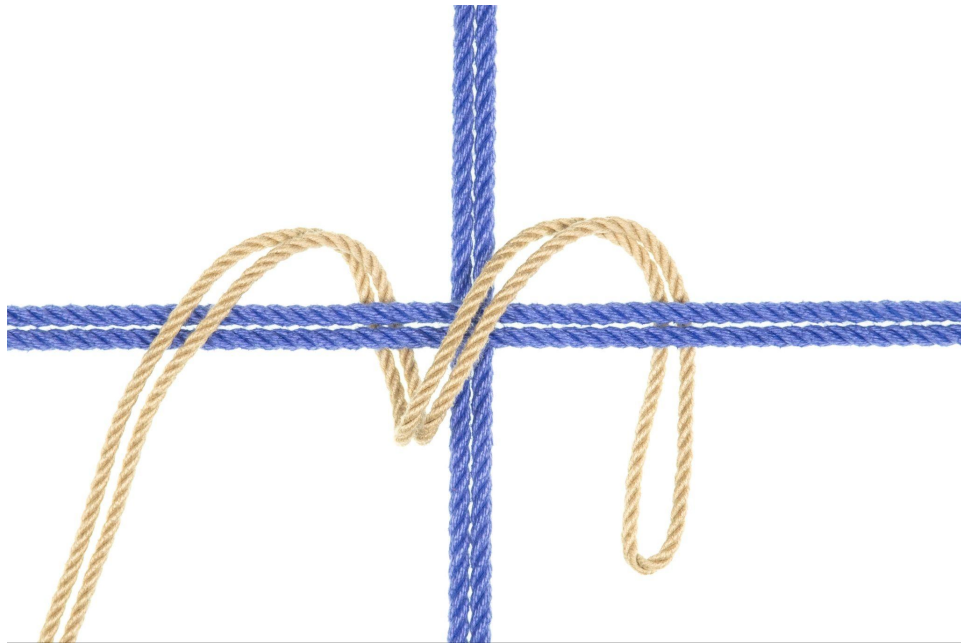
Tuck tails: split the upline pull a small loop through—do not pull through the entire line!

Naka knot: slip knot turned around the upline, facing downward

Potato: double rope with a slipped half hitch, then make Naka knot

Attachments at a stem.

Begin by spiraling clockwise to capture both the right and left sides of the rope intersection.



Then tie off your single column leaving room on your bight for a carabineer or rappel ring



Attachments the y- hanger

Begin by wrapping both lines of harness as if you were tying a somerville, however lift the lower band while tying the knot to create a two column somerville.



The somerville Y-hanger



Where to attach your upline

Consider:

- Directionality
- Load distribution on harness
- Attachment points and anchor points
- Where to use Y-hanger vs. epsilon hanger

Generally rope loads “down” ie if you attach on the top line of a three band chest harness in a upright orientation it will load all the bands

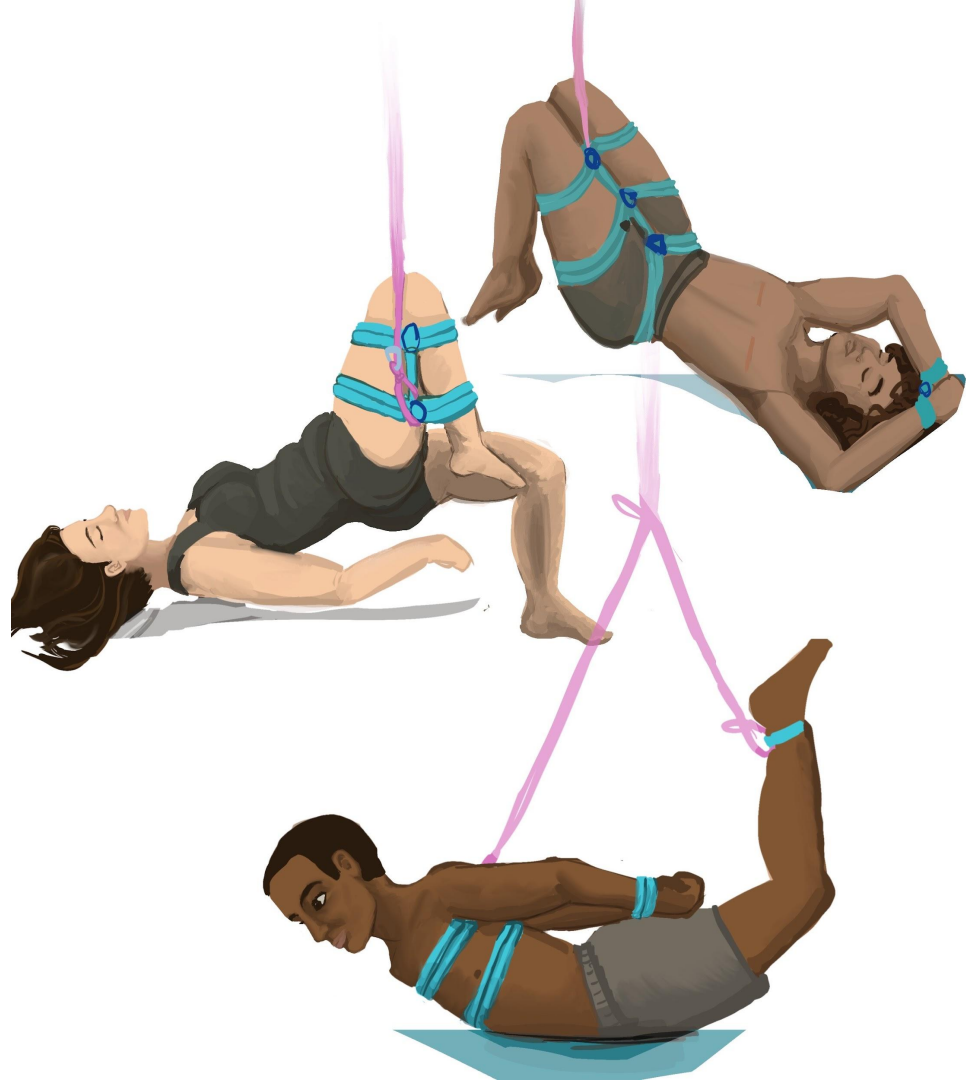


Exercise: tie your first upline
on your partner.

Up next: partials!

Pictured:

- Reclined mermaid (keep chest on ground)
- Futomomo (keep chest on ground)
- Hog-tie

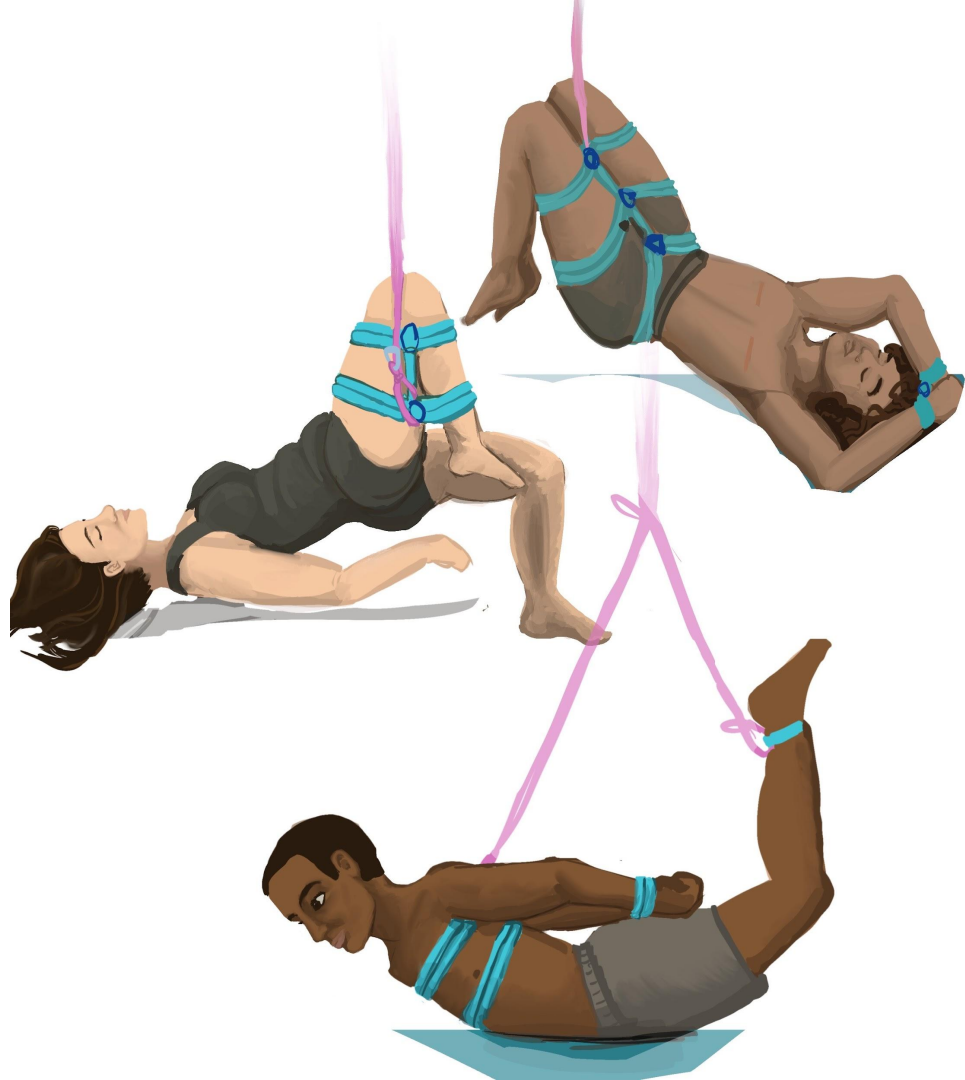


Upline Management

- Reduce friction and group your lines
 - Use carabiners and rappel rings
 - Create a pulley system
- Limit your excess rope (max 3 wraps of rope before you switch to another carabiner)
- Dealing with Jams
 - Picking
 - Lifting
 - Using another upline to unjam it
 - In rare cases, using safety shears

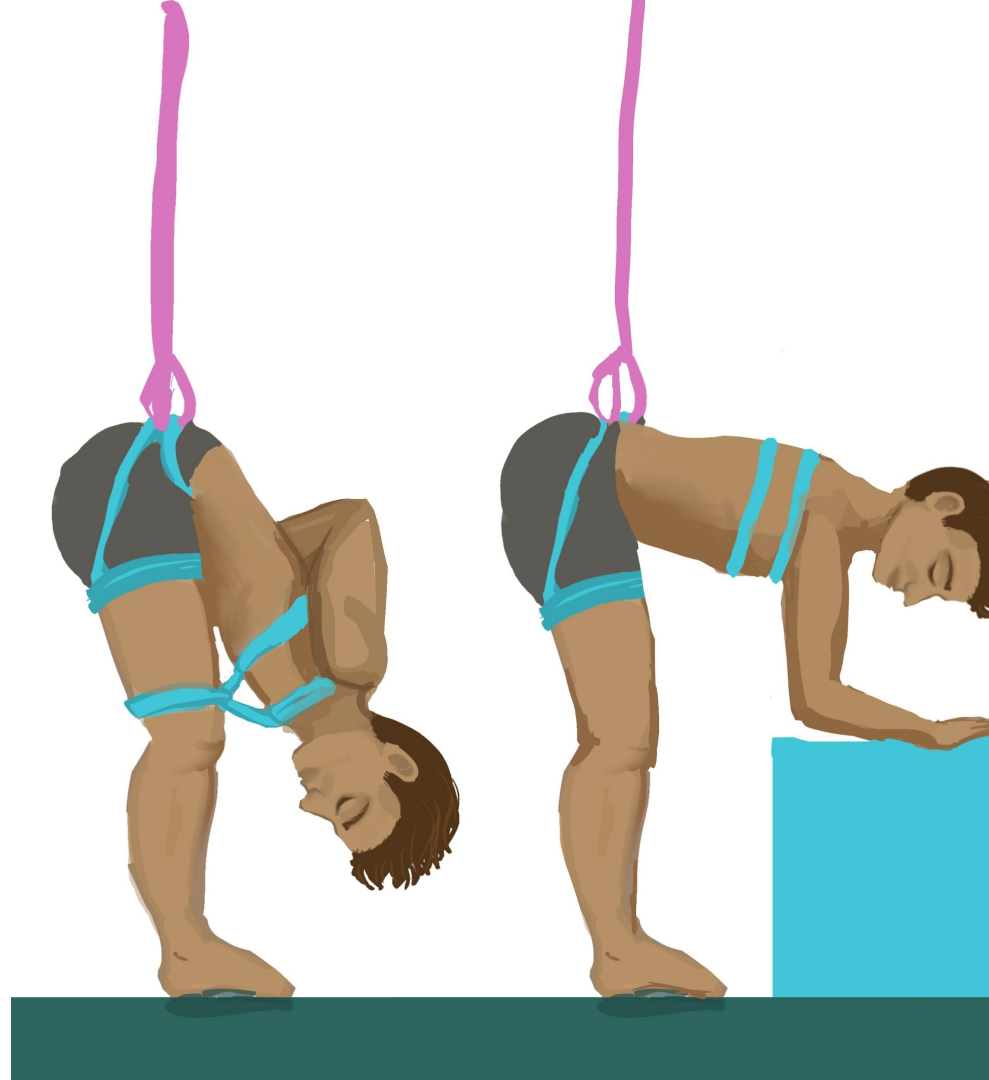
Partials to try

- Forced forward fold
- Hog-tie
- The reclined Mermaid (keep chest on ground)
- Futo (keep chest on ground)



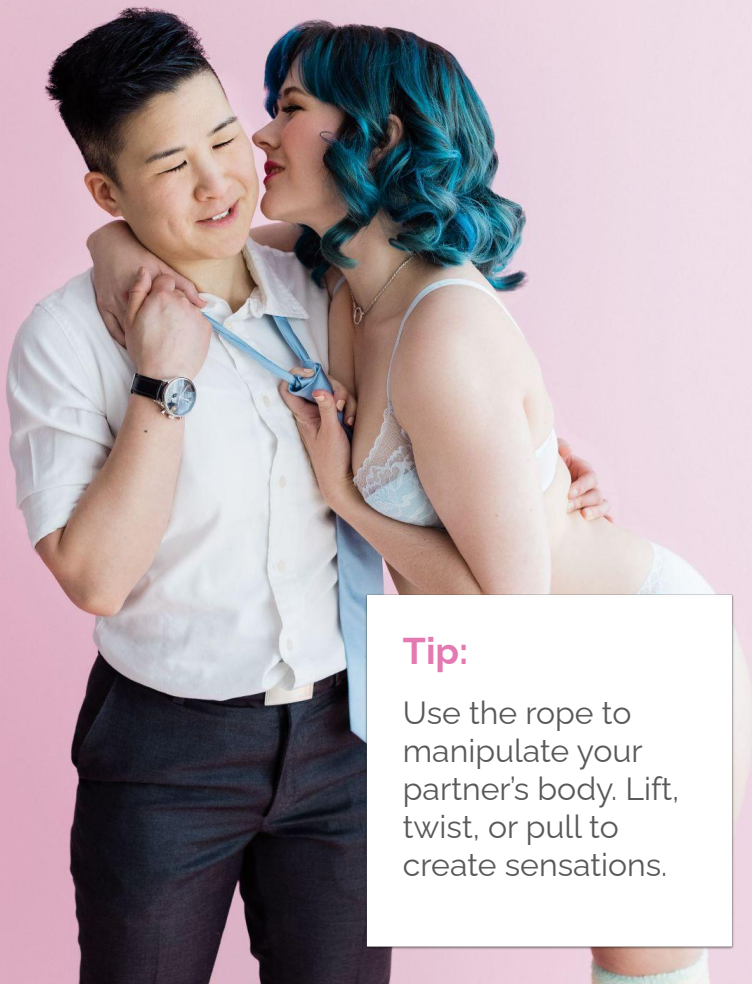
The bend-over

- Any kind of hip harness which can be grabbed from the back
- Tie the wrists to ankles loosely.
- Allows for penetration, impact play and predicaments
- If the bottom does fall over they can be easily righted and released.



Check in questions

- Has your harness moved up or down?
- Are the marks even?
- Did your uplines jam?
- Could you reach everything you needed to while tying?
- How can you get your partner down safely?



Tip:

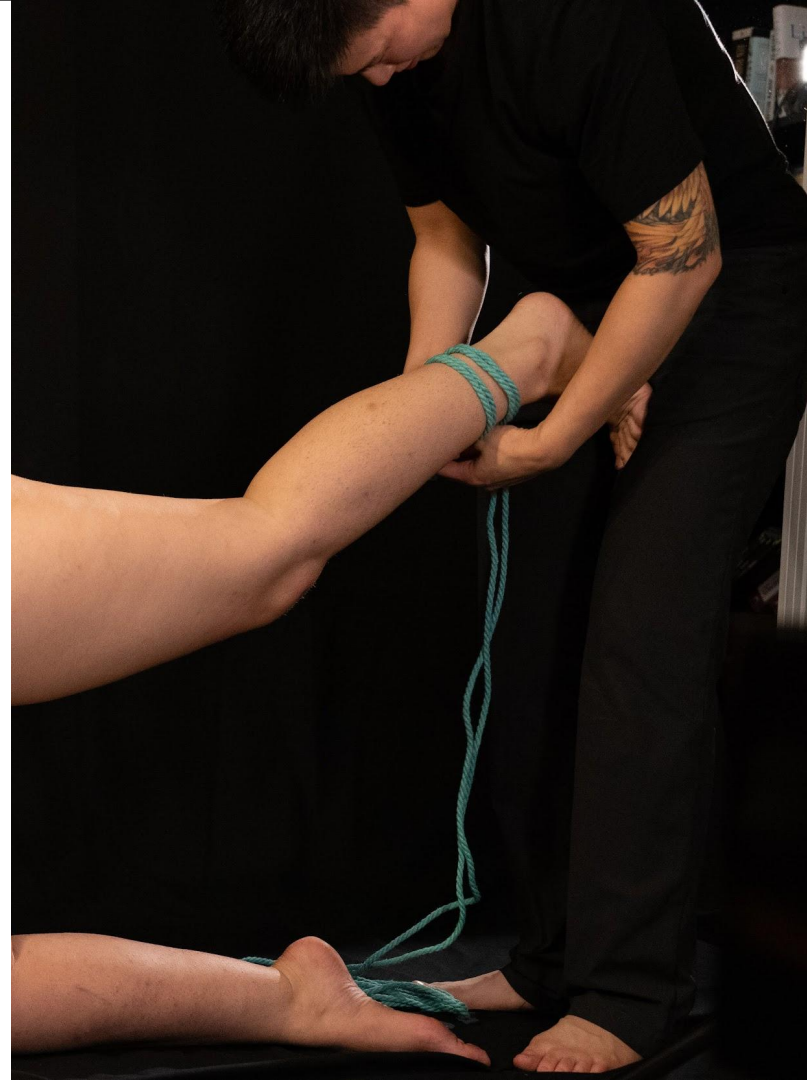
Use the rope to manipulate your partner's body. Lift, twist, or pull to create sensations.

Make time to connect

You are always limited by your skills. When doing something new, you need to make time before or after you practice these skills to play.

Managing your bottom

- Have your bottom hold onto the ring, not the rope.
- Lean against your bottom to ensure they don't spin when lifted.
- When tying place their limb against your body to help them keep it steady.
- A scarf can be a nice way to provide support for your bottom's head... just attach the scarf to a rope and attach it to your hard point.
- Bottoms shouldn't lift limbs on their own because it introduces slack into the upline, instead they should shift their weight into other limbs to make the limb easier to lift.



Managing sustainability

Bottoms: negotiate!

- Can you make micro- or macroadjustments?
- Can you hold the ring?

Tops: negotiate!

- How much should you restrict movement?
- Should you create predicaments?
- Should you make the tie challenging or comfy?

Exercise:

Tops: side suspension

Bottoms: timer exercise



The timer exercise

One thing bottoms are often asked is "How long do you have in this tie/position?" The timer exercise helps us determine how long we actually have.

When giving feedback it's helpful to frame it's urgency for the Top. For example:

*o I need this changed **now**. I feel dizzy.*

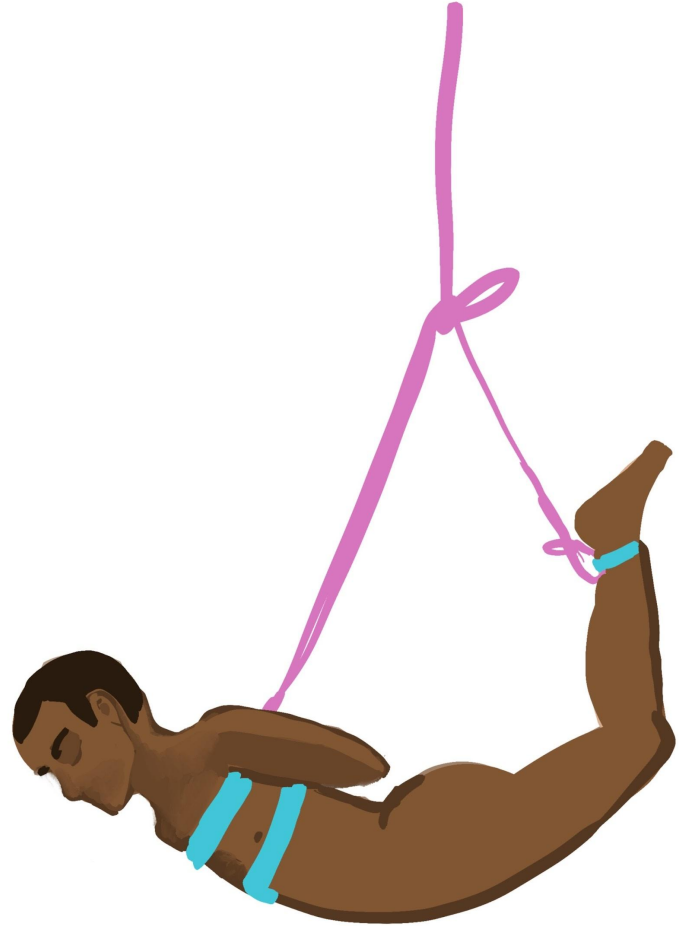
*o When you have a moment I'd like my chest line dressed **soon**.*

*o I might need to have my ankle lowered **later**.*

And remember ... **don't panic!**

The side suspension

- Side suspensions come in different styles
- For this position, load a chest harness from the side, raise a hip harness, then lift the ankles.
- Tops, be sure to to check in with your bottom regularly.



Lifting technique

- Use your legs (bend your knees!)
- When possible “drop” your partner into the suspension rather than lifting them into it
- Don't lift on a single bight; use a double bight (i.e., “better bight” or “Australian bight”), carabiner, or rappel ring to reduce friction and stress on the bight
- Get close to your partner to reduce angles–yay science!
- Pull up the harness while pulling down on upline tails
- Push body up from below using a knee or foot
- Bottoms: negotiate assisting, such as pushing up with feet when going from sitting to standing

Triaging session

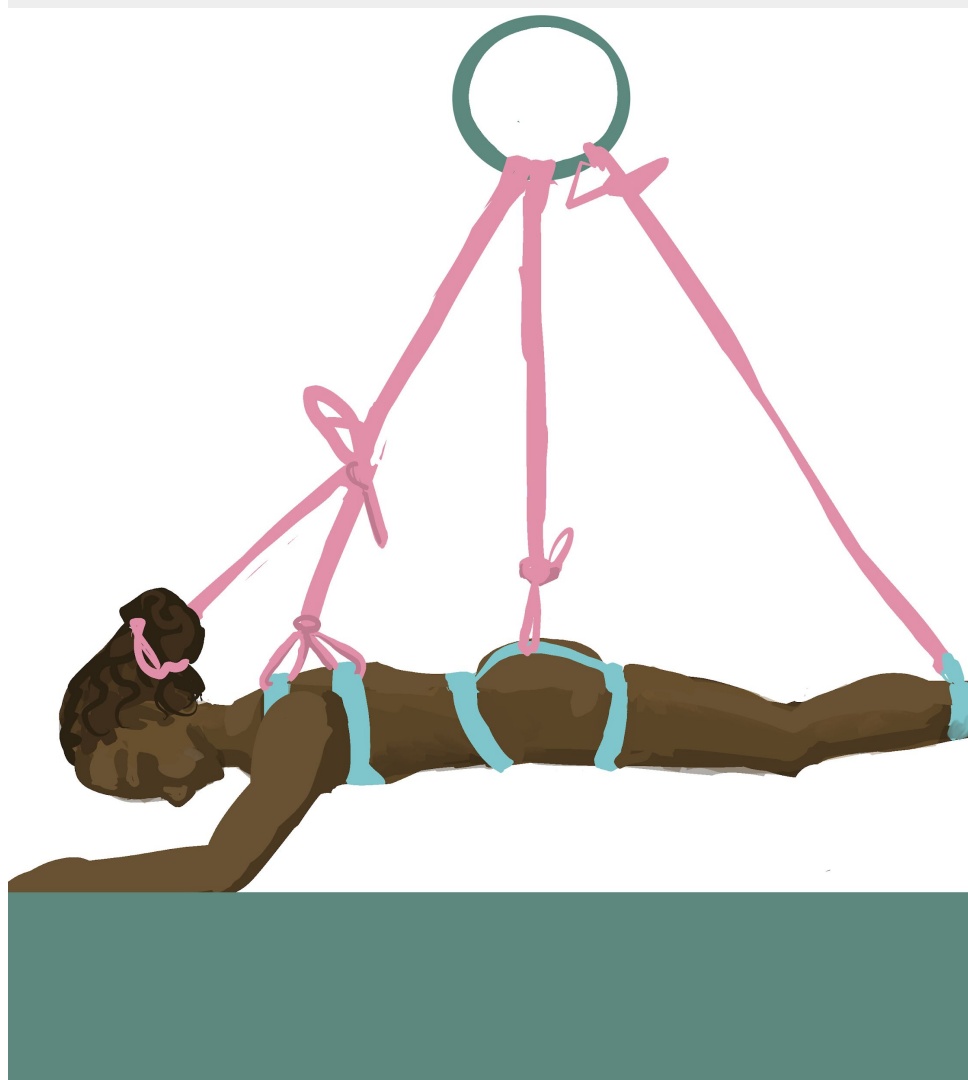
Bottoms need to learn how to triage sensations in their body and communicate it efficiently, much like a nurse in the ER knows to ignore the screaming baby and bring the man with half his face drooping first...not because he's loud but because he's having a stroke and it needs to be prioritized.

Some questions to ask about a new tie:

- o Where am I going to feel pressure from the tie?
- o What is the load placement and body position of the tie?
- o Does it restrict breathing?

The sugar glider

- This chest and hip harness combination allows you to practice both harnesses and two uplines.
- As a partial, the bottom is in a doggy position, allowing them to control when they lean into the rope. (This makes the position fuckable.)
- Can use upline at center of waist or Y-hanger across both thighs.
- To turn it into a full suspension, add both ankles.



The recliner (front-loaded M position)

- In a chair position, the chest and two thigh cuffs provide support.
- A hip harness can be used for additional support.
- First tie off the chest, then tie each leg.
- You may find the bottom prefers the legs higher or lower.
- This is a good position for the bottom to be penetrated if desired.





Good luck!

For more (free) tips, go to:

<https://www.twistedwindows.com/bondagesafety>

Full Circle Kink

Shibari Study

The Duchy

Created by Magpie Kink Education

Special thanks to Full Circle Kink and the Seattle Instructors Collective for feedback, review and photos of upline attachments.

We highly recommend Anatomy for Bondage and Technical Rigging by Full Circle Kink as supplementary classes.