General PT Positional Recommendations for Labor & Delivery

In general: things that can slow labor are maternal anxiety, exhaustion or stress; Dehydration or lack of calories can impact this. An IV can provide you fluids, but limits your mobility.

Birth Partner: 4 ounces of fluid an hour is a target for fluid intake for mama, and sports drinks and juices (except for Orange Juice, which can cause nausea) are recommended, as they replace electrolytes and sugar, as well as hydration.

Birth Partner: When the woman is hydrated, she will need to empty her bladder every 30 minutes or so. Please remind her.

Birth Partner: Try to have woman take in about 100 cal an hour to replace calories lost from effort of birthing

Stage of Labor	Potential Medical Interventions to be aware of:	Activity Recommendations During This Stage	Position Recommendations	Comfort Measures-Things Birth Partner Can Do to Help
Prelabor (Early Labor): Regular contractions up to 15 seconds long, 10-30 minutes apart, dilation up to 3cm.	Rarely, medication is prescribed here for the mother to sleep	-Relaxing in a tub -Going for a walk -Visiting friends -Watching a movie -Preparing meals for post-delivery -Doing a project -Playing games	Positions that facilitate the fetus engaging into the pelvis, so that open the top of pelvis and rotating in the inlet. -child's pose with open knees -sit on chair, lean forward with arms onto table, with open knees -stand with arms on counter, lean backward into flexed torso position with wide legs with knees out-wardly rotated -leaning backwards in	-Is car packed (if going to hospital is planned) -if home birth, hospital bag should still be packed, 'just in case' -If you are keeping others informed of progress, who is 'one' point person for communicating birth progression? Let them know things are starting.

			long sitting -manual abdominal lifting	
Stage 1 Active Labor (contractions up to 45 seconds, 5-10 minutes apart, 3-8cm dilation): Typically lasts 5 hours in first time moms, shorter in subsequent babies --**Studies show no negative baby effects by TENS use here, and T10-L4 recommended for early labor, and S2-4 (lower by butt) in later labor. -BURST mode for TENS has been shown to be most effective for L/D**[1]	-artificial rupture of membranes -IV drip of oxytocin-pitocin -analgesic use of meperidine, fentanyl, morphine or epidural -sometimes gels might be applied to the cervix to soften it -sometimes, the membranes may be artificially ruptured to speed labor process	-walking and activity are encouraged if medically cleared -Rest in warm bath -**The 3 R's: Relaxation, Rhythm and Ritual** -If a mom has a 'comfort place' (image of smiling child, animal, favorite vacation place), visualize that during breathing. --**Hip external rotation opens pelvic inlet**	-Lean forward over therapeutic ball, desk, chair, toilet in sitting, or standing, lean against counter. -squat, with support -to rotate baby, knee to chest position and quadruped (hands-knees) with pelvic rocking	-Gentle massage to mama -hot-cold as they desire -TENS electrodes to low back and-or T10-12 are (bottom of ribcage). **If one set of electrodes, pick one level; if two sets, put one at T10-12 and one at S2-4.** -instruction in belly breathing, relaxing lower abdomen and pelvic floor (especially back of pelvic floor) -counterpressure to lumbar (low back) and sacrum (lowest back) -**pressure to lower sacrum (tailbone) and lower hips to open the TOP of the pelvis** -lengthwise pressure down femurs in a bent-hip position
Stage 1 Transition:		-**Hip internal rotation**	-counterpressure to	-heat and

[1] Lee EWC, Chung IWY, Lee JYL. The role of transcutaneous electrical stimulation in management of labour of obstetric patients. *Asia Oceania J Obstet Gynaecol* 1990;16(3):247-254

(dilation from 8-10cm, contractions lasting 90 sec and 1-2 min apart); **Avoid Forced Pushing**		**opens pelvic outlet**	lumbar (low back) and sacrum (lowest back)	counterpressure over lumbar (low back) and sacral (lowest back) area. -TENS -massage -breathing
		If baby is in occiput posterior, Simpkin et al recommends mother lay on side towards which the occiput is directed, with baby's back towards the bed. This increased the rate of fetus turning and normal vaginal delivery, as opposed to mother laying on her other side[2]		
Stage 2: Delivery. Wait for spontaneous urge to push (or if epidural, wait to see head OA)	-**Hip internal rotation opens pelvic outlet** **-lateral sidelying is associated with greatest frequency of intact perineum[3]**	-pressure to extend the coccyx or nutate the sacrum can increase the anterior-posterior diameter of the pelvis by up to 1cm![4]	-lean forward while sitting; kneeling -supported squatting -dangle position with legs over side of bend -pelvic press against ilium	-TENS at S2-S4 -heat or ice -massage, breath cues -**counterpressure, now higher up on ilia and sacrum to open BOTTOM of pelvis.**
Notes on Pushing Positions:	-sidelying is associated	-McRobert's Maneuver,	-Lithotomy Position has	-Squatting, while great

[2] Wu X, Fan L, Wang Q. Correction of Occiput Posterior by Maternal Postures During the Process of Labor [abstract]. *Zhonghua Fu Chan Ke Za Zhi* 2001;36(8):468-469

[3] Samuelsson E, Ladfors L, Lindblom B. A Prospective Observational Study on tears during vaginal delivery occurances and risk factors. *Acta Obstet Gynecol Scand.* 2002;81(1):44-49

[4] Fitzpatrick M, McQuillan K, O'Herlihy. *Influence of Persistent Occiput Posterior on delivery outcomes. Obstet Gynecol* 2001;98(6):1027-1031

	with highest rate of intact perineum	lithotomy position and squatting position for delivery, were all associated with high rates of perineal tearing, lumbar injuries and lower extremity nerve injuries (1,66)	highest episiotomy rate of all positions. (1)	for labor, is associated with the greatest amount of tearing, especially for first time moms. (62) –use a backrest, blocks, or something under heels
	Clinical experience suggests a benefit of counterpressure to perineal body during Stage 2, but evidence-based trials are needed to validate this			
Stage 3: Afterbirth. Should occur within one hour of delivery of baby	-If these are not expelled fully, hemorrhaging can occur	-baby suckling -nipple stimulation		
Other Physical Considerations		**Positions to Avoid**	**Positions to Try**	
1. **Disc herniation**	-avoid compressing the injured disc -avoid valsalva maneuver (holding breath and pushing). -**Try to breathe with open glottis–making low growl-grunt to ensure you are not valsalva-ing.**	-Avoid excessive trunk flexion. -squatting and hyperflexion -semireclining with knees to chest -lithotomy -hands and knees if nerve tension is an issue	-standing or leaning against wall -sitting backwards on chair or toilet with back in extension -Tall kneeling at end of elevated bed -semi-reclining with lumbar support in neutral (ab mat, McKenzie half rall, or	

			small rolled towel) -side-lying -hands and knees if nerve tension is not an issue	
2. Spinal Stenosis (narrowing of spinal canal)	-opposite of disc herniation, as here we want to avoid extended positions, and instead focus on flexion-biased exercises	-extension exercises	-partial depth squatting with a bar -hand and knees with spinal flexion -can use pillows to open facets in sidelying	**-caution with full squat with bar, as end range flexion might traction spine, which could be provocative here.**
3. Spondylolisthesis	-treatment depends on severity and person specific factors	-standing positions that increase extension	-any flexed position	
4. Sacroiliac Dysfunctions (deep low back pain)		-don't walk during stage 1 -semireclining with lower extremities in FABER position (bent up and out to side), unsupported -lithotomy	-any position where lower extremities can be symmetrically supported -hands and knees, if tolerated -upright kneeling, if tolerated	-don't do McRoberts maneuver (manual technique to flip baby)-this can make SI dysfunction worse
5. Pubic Symphysis Dysfunction (front of pubic bone pain)		-sidelying, especially if legs are super abducted (separated) -squatting -lithotomy -McRobert's Maneuver	-sidelying, if legs are <45 degrees abducted (separated) -semireclining with knees supported by pillows -hands and knees, if tolerated -upright kneeling, if tolerated	

6. **Coccyx Dysfunction (tailbone pain)**		-semireclining -lithotomy	**Any position where the coccyx is free to move** -sidelying -squatting -hands and knees over a ball -upright kneeling -standing -supine on a soft mattress	