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Promoting physiology of the second stage of labour

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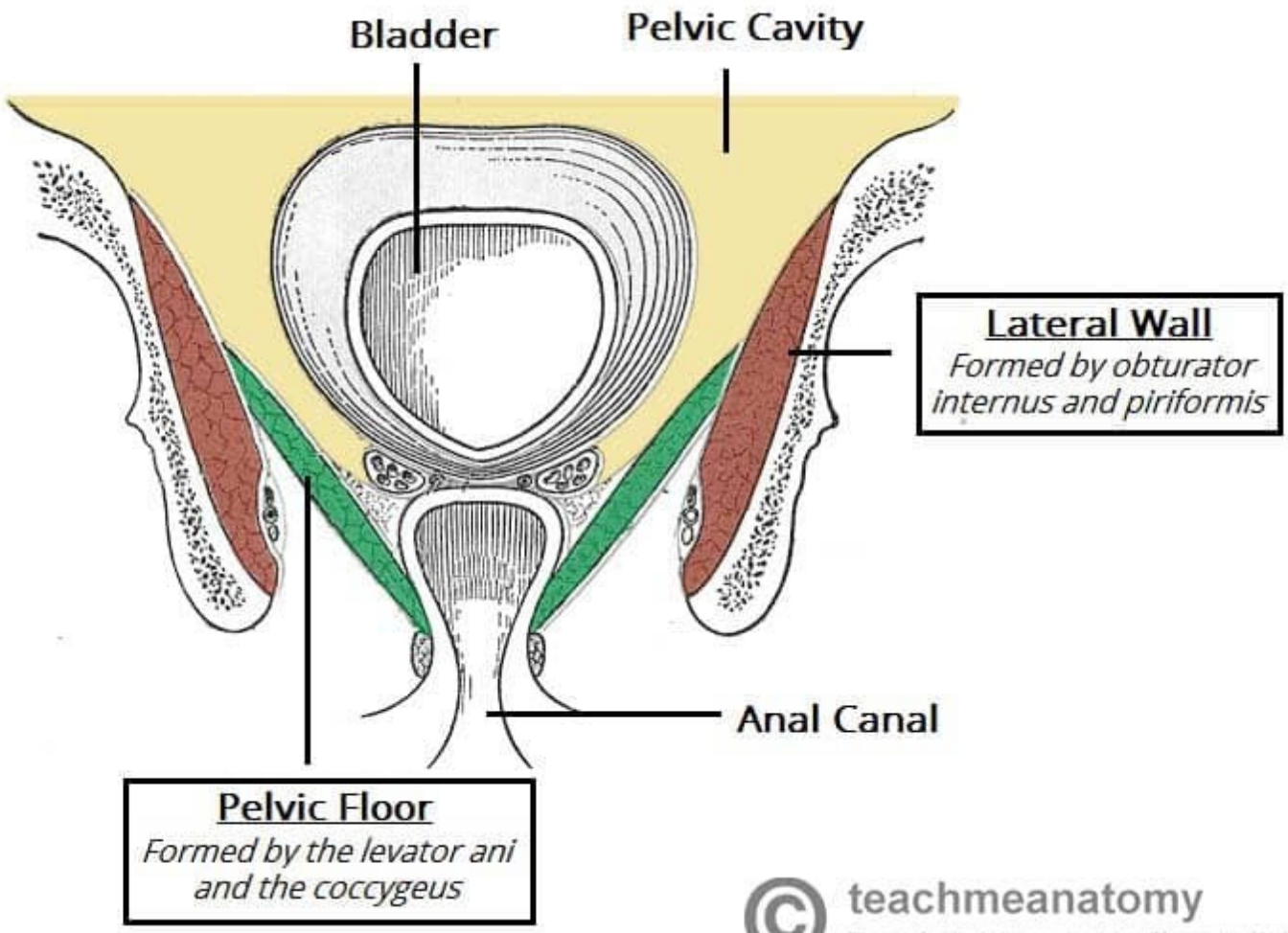
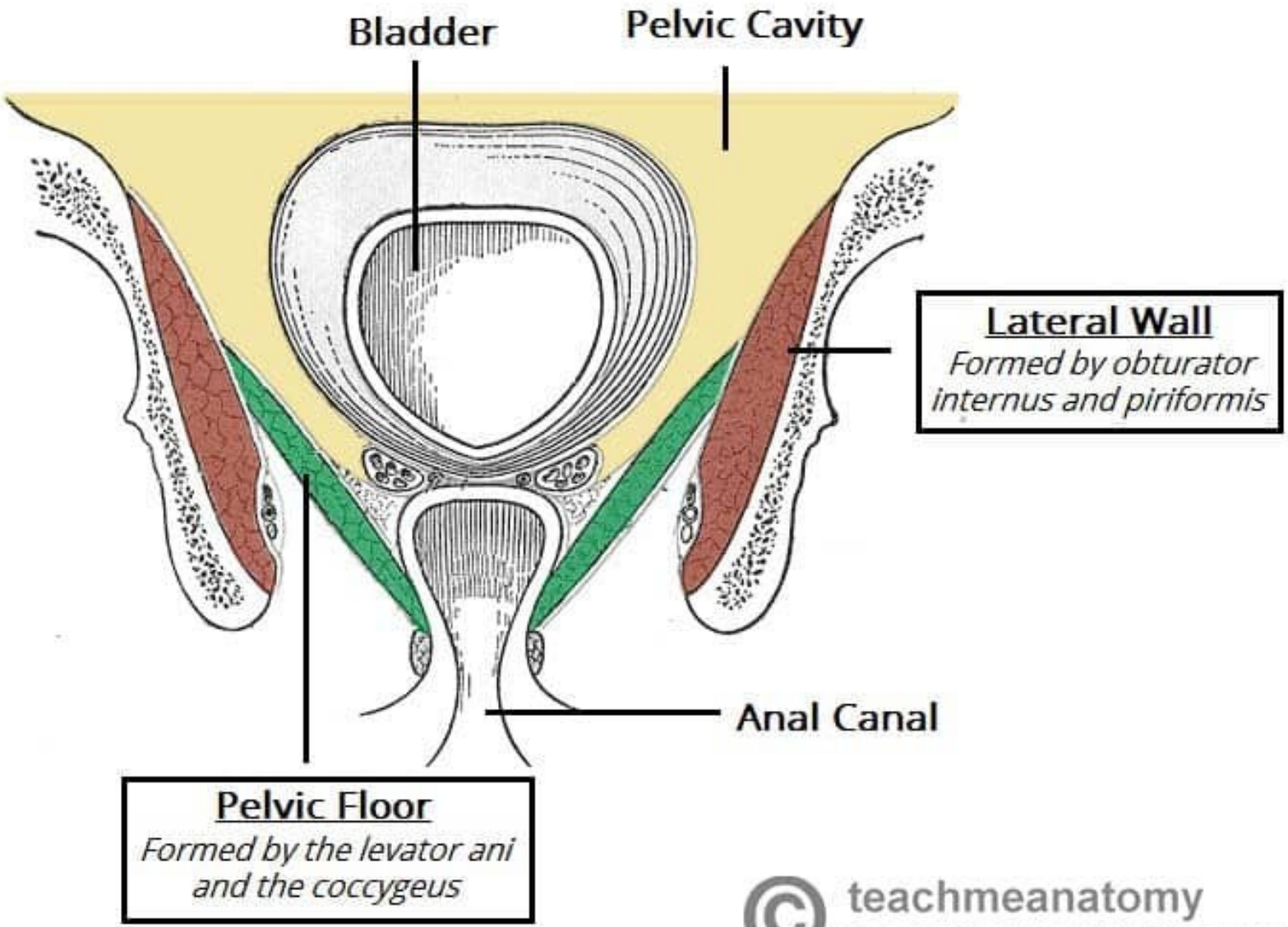
Aspects of physiology

- The function of the pelvic floor in rotation
- Artificial oxytocin or none?
- Upright positions versus supine
- Spontaneous pushing or directed?
- Fundal pressure?
- Support of the woman

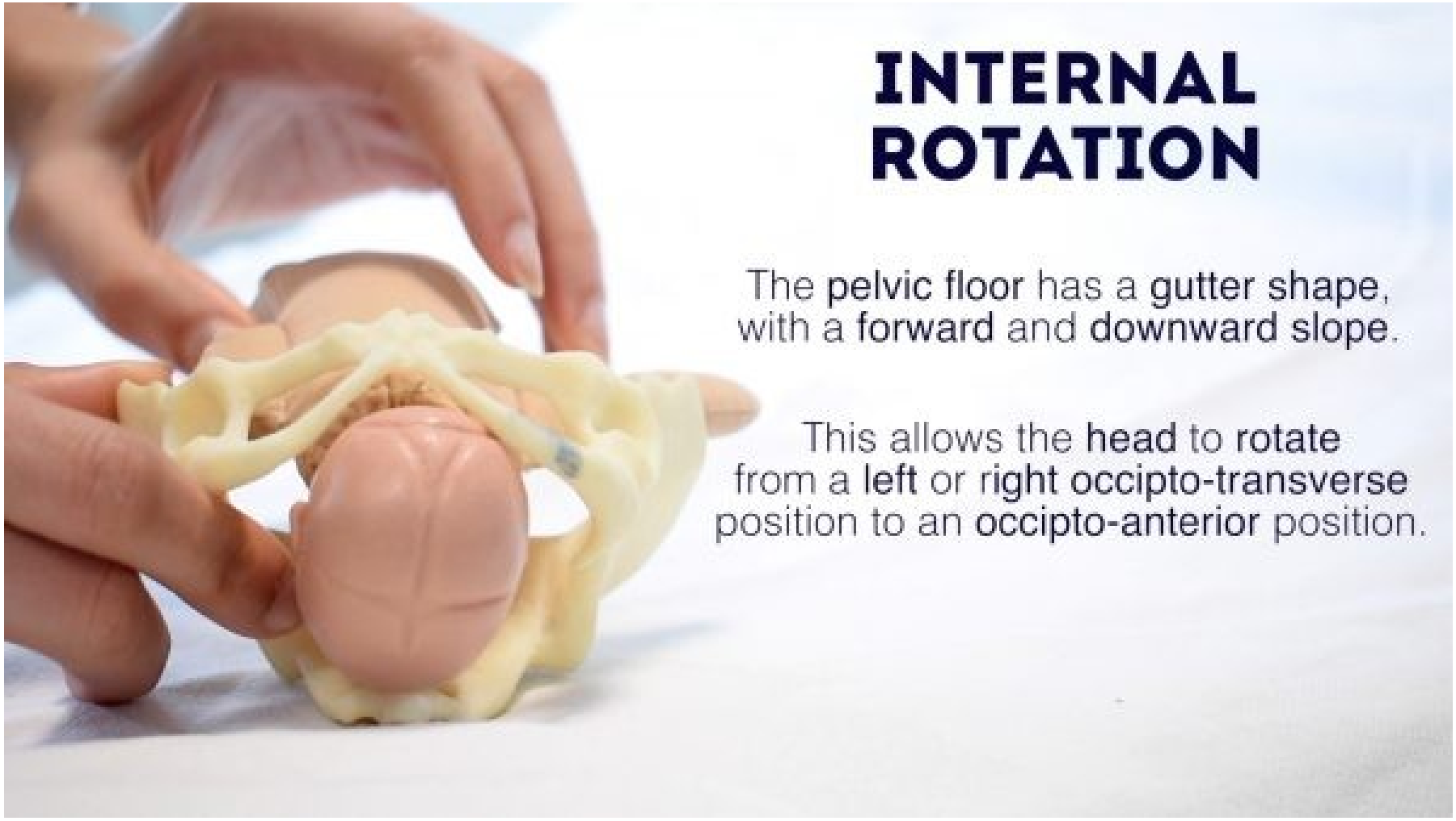
The function of the pelvic floor in rotation



The pelvic floor is gutter-shaped, weakest part at the front



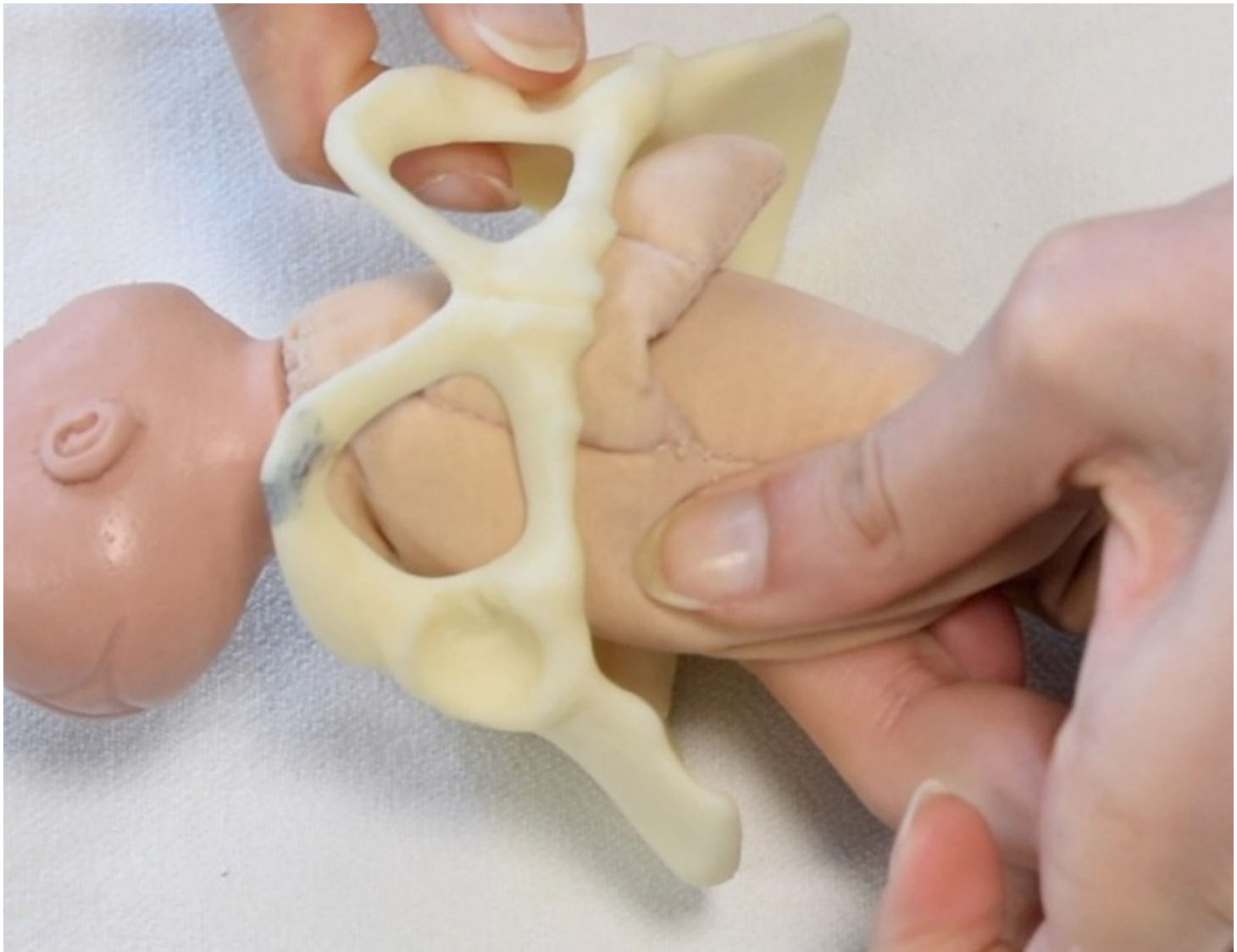
The part that reaches the pelvic floor first, rotates forward



When the head is born it turns a little to one side “restitution”

- This is undoing the twist that happened to its body inside, as the head rotated forward
- DO NOT pull on the head or shoulders until the head has rotated externally (see next slide)

When the anterior shoulder reaches the pelvic floor, it rotates forward (and you will see the head rotate outside and know the shoulders are ready to be born).



Use gentle downward traction then to birth the anterior shoulder…

…and then gentle upward traction to birth the posterior shoulder

Try not to use artificial oxytocin

In a population-based cross-sectional analysis of 42,950 births in Victoria, Australia, induction of labour in medically uncomplicated nulliparous women at term carries a more than **double the risk of emergency CS, compared with spontaneous labour, with no impact on perinatal mortality** (Davey and King 2016)

Try not to use artificial oxytocin

However, the Cochrane review showed that a policy of labour induction compared with expectant management is associated with **fewer deaths of babies and probably fewer caesarean sections;** with probably little or no difference in assisted vaginal births (Middleton et al 2020).

Try not to use artificial oxytocin

Discontinuing intravenous oxytocin in the active phase of induced labour (>5 cms) may result in fewer CSs, probably because

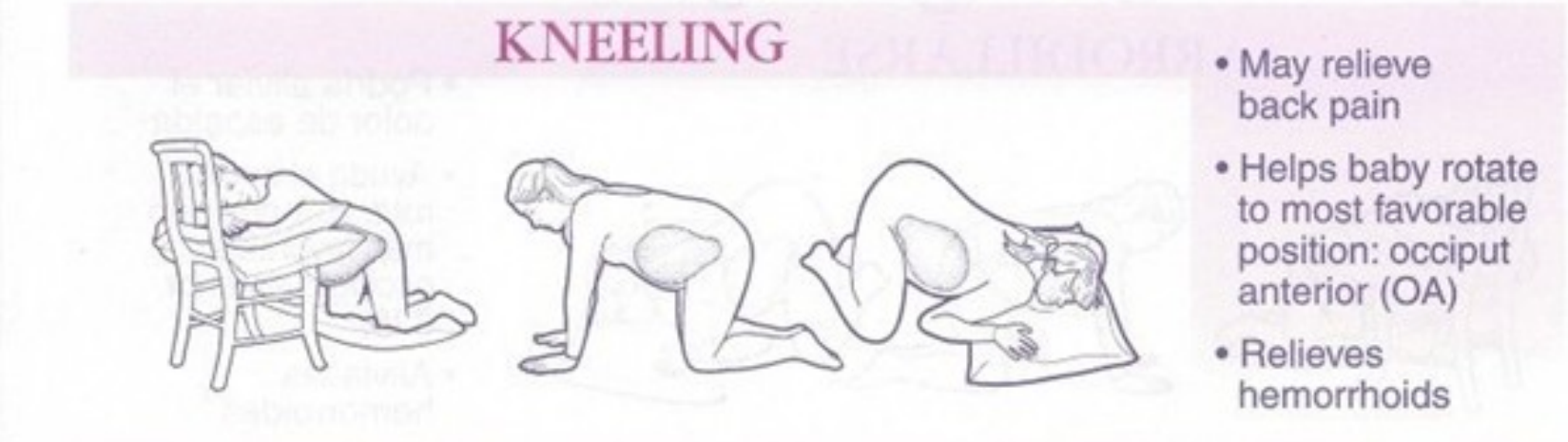
- uterine tachysystole combined with abnormal fetal heart rate is reduced and
- CTG abnormalities are reduced (Boie et al 2018)

(Only 26 minutes longer in labour)

Upright positions

Upright positions are associated with a reduction in duration of 2nd stage, in assisted births and rates of episiotomies, with fewer abnormal fetal heart patterns.

No difference in rates of CS, and no clear difference in the number of 3rd/4th degree perineal tears or in number of babies admitted to neonatal ICU.



Upright positions

A possible increase in second degree perineal tears, and an increase in estimated blood loss over 500mls was seen (Gupta et al 2017).

Upright positions

A study of free-birthing women found that most of them used a low, leaning forward position which incorporated some form of kneeling, using the end of the bed, the headboard, a wash basket, or the backrest of the sofa, or leaning forwards over the edge of the pool with the bottom halves of their bodies submerged in the water. (McKenzie and Montgomery, 2021)

Upright positions

A biomechanical study showed that kneeling, standing, squatting and sitting positions, are more beneficial for the bone structure of a woman's pelvis as they allow a higher coccyx movement and lower widening of the pubic symphysis (Borges et al 2021).

“All fours” particularly good

Data from 3,756 births in Brisbane, Australia found that the semi-recumbent position was associated with the need for perineal sutures, whereas all-fours was associated with reduced need for sutures; these associations were more marked in first vaginal births and newborn birth weight over 3,500 g (Soong and Barnes 2005).

Spontaneous pushing, not directed

Spontaneous pushing in the second stage of labour reduces the rates of Caesarean section and extended episiotomy, with no difference in fetal or maternal outcome (Yao et al 2022).

Fetal ejection reflex

With a quiet environment and an undisturbed birth, the fetal ejection reflex happens; there is no conscious, active pushing and the baby is effectively expelled from the mother's body.

Odent describes this as ‘a very short series of irresistible, powerful and highly effective uterine contractions, without any room for voluntary movement’ (Odent 2016, 20).

In one study of women freebirthing, thirteen out of the sixteen participants described speedy, instinctive births that appear to reflect the fetal ejection reflex.

Fetal ejection reflex

Some quotes:

Nadia commented that she felt she needed to *“just hum [baby] out, sing it out, breathe it out. You know there's no need to push.”*

Cat stated that she *“didn't push at all.”*

Ophelia also commented that *“there's no need to push”* and for Georgia, after her baby's head emerged, there was *“maybe … 30 seconds”* before her baby *“just came out in one go.”*

Marion only *“pushed for about one minute… it was really quick”*

Fetal ejection reflex

“I didn't really do anything, my body just pushed… I felt like, at the end of [a ‘push’], I'd sort of do a little, 'Ooph,' it felt like that, but I wouldn't say I was pushing it was just, kind of, a, 'Urgh,' like, at the end…. So, like, when you're being sick you, kind of, go with it and try and get everything out.” (Ivy)

“I used to say with my friend, 'I, sort of, vomited the baby out,' because I remember the noise came out of my mouth, and I, sort of, imagined it coming out down there, as well. It was, sort of, like, 'Ugh,' with each contraction, but it was beautiful. It was really normal and no hard pushing…” (Alicia)

“Your body kind of does do a, 'Err,' it does it on its own…” (Ophelia)

(McKenzie and Montgomery, 2021)

Fetal ejection reflex

Don’t ruin it!

No fundal pressure

Fundal pressure does not reduce the incidence of forceps, ventouse or CS, and is uncomfortable for women (Hofmeyer et al 2017)

Provide support

- Continuous support in labour may improve outcomes for women and infants, including **increased spontaneous vaginal birth, shorter duration of labour, and decreased caesarean birth, instrumental vaginal birth, use of analgesia, low 5-minute Apgar score, and negative feelings about childbirth experiences**.

- (Bohren et al 2017)

- Support can be given by midwives, doulas, partners, friends….but the midwife needs to be “with” the woman.


Thur. Oct 20
—Tue. 25th
9am-9pm

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So:

Let the mechanism of birth happen

Try not to use artificial oxytocin

Use upright positions, especially all fours

Spontaneous pushing, not directed

No fundal pressure

Support the woman, be “with” her