Biomechanics for birth – helpful techniques for pregnancy and labour

During pregnancy and in childbirth, changing your position and using specific techniques can create movement in the pelvis and encourage your baby into the best position. This is called biomechanics for birth. This guide has been created to help you try these techniques at home from your third trimester onwards. It will explain when, how and why each technique can be used. If you have any questions, please speak to your midwife.

Why would we suggest trying biomechanics?

If labour is progressing as expected and there are no concerns, then these techniques may not all be necessary, but can help achieve and maintain the best position for your baby. Sometimes labour might be slow, delayed or not progressing because of your baby's position. The midwife may know this after feeling for your baby's position through your bump or during a vaginal examination.

These techniques can help relieve discomfort and help your baby to get in the best position for labour and birth to progress smoothly, and may reduce the chance of needing interventions, for example, a birth assisted by forceps.

Most peoples' bodies have a dominant side, and day to day activities such as carrying bags, driving a car, and how we sit can cause tightness in our ligaments and muscles. Soft tissue biomechanics techniques, such as 'side lying release', 'jiggle' and rebozo, can also be comforting and relaxing and can help ligaments and muscles to work as best as possible for birth.

Anyone performing these techniques for you should have your full informed consent. You should be comfortable, and these techniques should never cause pain or discomfort.

Where is your baby located in the pelvis?

Your midwife can assess how high or low your baby is in your pelvis. Different positions and techniques can support your baby's position, depending on whether your baby's head is in the opening of the pelvis, mid pelvis or in the lower pelvis.

Baby is at the opening of the pelvis:

- Abdominal lift and tuck
- Knees apart, soles together

- **Baby is mid-pelvis:**
- Side-lying release
- Forward leaning inversion
- Open knee chest
- Lunge

Baby is in the lower pelvis: • Knees in, soles out – you can also use peanut ball • Side-lying release early in second stage
• **Baby is 'back-to-back':** • Side-lying release • Dip the hip • Abdominal lift and tuck (mid pelvis to inlet) • Lunge (mid pelvis) • Forward leaning inversion
Baby is off to one side (OT): • Forward leaning inversion • Side-lying release • Lunge • Squatting • Resting in upright/forward position

RELAX, BREATHE – preparing for the techniques

Before beginning any of the biomechanics techniques described in this leaflet, breathing techniques can relax your muscles and bring a sense of calm.

Resting breath

- As you breathe in, slowly count 1, 2, 3. As you take a longer breath out, count 1, 2, 3, 4.
- As you get comfortable doing this, your breath might become longer and deeper. You can count more slowly, calming your nervous system.
- You might find that words help you focus on the breath. As you breathe in, think "Breathing in, I am calm. Breathing out, I am calm, I am relaxed". You might not feel calm at the beginning but using the words will help you focus on that possibility.
- Repeat as many times as is helpful.

Golden thread breath

- Breathe in through your nose. Breathe out through your mouth, with the lips and jaw relaxed. Imagine lots of golden threads, moving with your breath, out of the mouth to slowly fill the whole room.
- Rather than pursing the lips like you are blowing out a candle, let your face be as relaxed as possible. Yawning is good as it relaxes the jaw muscles. Imagine the lower jaw becoming heavy.
- Repeat as many times as is helpful.

Biomechanics techniques

THE JIGGLE – improving rotation and descent of your baby

It is important that you feel comfortable before trying the Jiggle and when you do, you can give consent for the person to touch you on the mid-thigh and/or the outer hip. Guide your partner to the top of your hip bone. A scarf may also be used over your hip to support this movement.
They will move their hands gently to produce a 'Jiggle' – think how you soothe a baby by jiggling them gently, not shaking. Other parts of the body can be included in the motion if you give consent, including:

- The lower back muscles
- Buttocks
- Sitz bones (sitting bones you sit on!)
- Thighs
- Hips
- Sacrum (above tailbone /coccyx)

This fluid movement is increasing hydration within the fascia and circulation around the muscles. It also help to relax you and promote oxytocin, which drives the contractions.
Jiggling for 5 to 10 minutes on one area is adequate. Remember to do the same movement on the other side of the body, after turning safely over.

SIDE LYING RELEASE (SLR) – body balancing

- Lying on your side on a flat, firm bed as close to the edge as possible. This will mean that your bump is over the side of the bed. The midwife or your partner can stay by your hip to ensure that you will not fall off.
- Ensure the hips and shoulders are 'stacked' (one on top of the other) the bottom leg should be straight with toes up if possible. The top leg should drop over the bottom leg and be left to hang, you will observe the ligaments lengthening and the leg drop lower.
- Support the hip through three contractions, or for ten minutes and then repeat on the other side. Ensure safety by using the bar on the bed or asking your partner to support. SLR can be done with an epidural but will require support by stabilising hips and resting the leg on a chair/partner's lap. It is also recommended to support the leg if you have hypermobility.
  DO NOT TRY THIS if you have significant pelvic pain or have ever had back/spinal injuries.

ABDOMINAL SIFTING (using the Rebozo) – for body balance, in pregnancy and labour

- You will need to be able to move into an all fours position (on hands and knees) on a mat on the floor or on the bed.
- A large scarf is passed under your abdomen (over your bump) and held on each side. The scarf is very gently lifted and moved **slowly side to side** to relax the abdominal muscles. This technique is good when baby has their head turned to one side and needs help to turn.
- It is usually comfortable to have the movement between contractions during labour. The length of time doing this is up to you. It can also be used during pregnancy, daily if you enjoy it from 32 weeks onwards.

  DO NOT TRY THIS if you have any bleeding, or sharp pain (this is likely to be continuous pain rather than the feeling or pain that comes and goes with contractions). Speak to your midwife if you have an anterior placenta (a placenta located at the front of your uterus)

SHAKE THE APPLE TREE (using the Rebozo) – as part of body balancing in labour and during pregnancy

- You will need to be in either an all fours position (on hands and knees) or leaning on to something like a chair or bed. It can also be carried out in the forward leaning inversion.
- The scarf is put over your hips and buttocks and hands are squeezing into your hips.
- Gentle jiggling and rhythmically rocking the hips and buttocks will relax ligaments and muscles to create space for your baby to move.
- This can be done for 10 to 20 minutes or however long feels comfortable.
- It can also be done without a scarf with the hands on either side of the hips.

  DO NOT TRY THIS if you have a previous history of hip/back surgery/issues.

FORWARD LEANING INVERSION – for use in labour if slow or no progress

- This technique should be done slowly and safely, it is good for a swollen cervix, or if baby's head is tipped to one side. You can use the hospital bed with the end lowered down, or if at home, use a firm sofa or bed.
- Come down slowly onto your hands, with your partner and/or midwife supporting your shoulders if needed. Your hips needs to be higher than your shoulders to have the required effect. If you experience any pain or dizziness tell someone and you'll be helped up to an upright position.
- Continue through one contraction if you are able to, allowing the head to hang freely. You can sway the hips during a contraction if it feels comfortable. Try to keep a flat back rather than rounding.
- Come up with support so that you come up evenly and do not twist or lean to one side. It's important to finish the technique by resting in an upright kneeling position for a contraction to allow the baby to settle back down. You can repeat the technique through another contraction or between contractions if needed. This can be used during early/active labour and the second stage of labour (pushing). While in labour, your baby's heartbeat should be listened to before and after the technique.

  DO NOT TRY if you have had eye surgery, if you have any bleeding, high blood pressure, polyhydramnios or suspected placental issues. DO NOT TRY directly after eating.

OPEN KNEE CHEST – alongside or substitute for forward leaning inversion

- This can be used instead of the Forward Leaning Inversion if that feels uncomfortable or not possible.
- You will be on the bed or mat, on all fours, then lower yourself onto your elbows and, if comfortable, onto your chest. Use a pillow under your head if needed. Ensure your knees are spaced apart. And hips are higher than the shoulders. This can help reposition baby's head if stuck mid pelvis.
- You can also use the rebozo scarf to 'shake the apple tree' or 'jiggle' with the thighs in this position. You can use both during and between contractions for up to 40 minutes.

LUNGE – to enlarge the space in the mid pelvis

- Standing, place a foot on a stool or lowered bed to the side of you. Make sure you feel stable, holding onto something or someone if needed. During contractions, rock back and forth towards the raised knee. Make sure the lunge is to the side, not in front.
- Rest the leg back down to the floor between contractions, switching legs depending on whether the situation has changed. This technique is good for when baby is back-to-back or their head is facing the side, it can be used during a contraction for around 10 contractions.

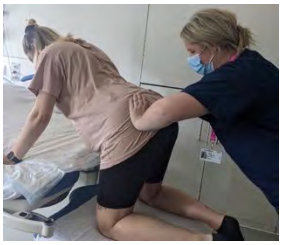
ABDOMINAL LIFT AND TUCK – to encourage baby to move into the pelvis during early and active labour

- Have your back as flat as possible against a wall or have your birth partner support you from behind. With two hands interlocked under the abdomen (bump), gently lift the bump up and back towards the spine, whilst tucking your hips/ bum under and knees a little bent.
- You can do this through a contraction and then gently release your bump. Repeat this through ten contractions, relaxing in between.
- **This technique must be performed during a contraction to encourage baby into the pelvis against the cervix.**
  DO NOT TRY at home if you had fast labours before.

COOK'S COUNTERPRESSURE

- With permission, hand placed firmly on the Sitz bones (your sitting bones) and apply firm pressure. This helps to relax the pelvic floor and is helpful for when babies head is lying to the side. Consider this if your baby needs to rotate, or you have any back pain. This is good during the pushing stage of labour.

HIP SQUEEZE



- For the hip squeeze find the bit where your bone sticks out on the side of the hip, and with their palms turned in ask your partner/midwife to apply pressure by pushing up and in. This helps to relieve tension in ligaments and opens up more space in the mid pelvis.

DIP THE HIP

- Figure of 8 movements support the rotation of the baby, this can be done standing you're your knees in the pool or on a birthing pool, just keep the body forward, the slower the better. Ensure the hip drops down whilst doing this. The movement needs to be up and down rather than side to side.

Resources

For more in depth information please find more information at: www.spinningbabies.com
www.optimalbirth.co.uk www.mamastefit.com
Tulley G, Changing Birth on Earth, Maternity Publishing House, 2020

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

Original version created by Katie Thurlow, Midwife.
Service user version created with L Cox, Lead Preceptorship and Retention Midwife and coproduced with T Venuti Sanderson (Parent Rep, Royal Berkshire Maternity and Neonatal Voices Partnership)
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