Get Your Baby Lined Up!
Optimum Fetal Positioning

By Angela Horn, found at http://www.horns.freeserve.co.uk/ofp.htm

'Optimal Fetal Positioning' is a theory developed by a midwife, Jean Sutton, who found that the mother's position and movement could influence the way her baby lay in the womb in the final weeks of pregnancy. Many difficult labors result from 'malpresentation,' where the baby's position makes it hard for the head to move through the pelvis, so changing the way the baby lies could make birth easier for mother and child.

The 'occiput anterior' position is ideal for birth - it means that the baby is lined up so as to fit through your pelvis as easily as possible. The baby is head down, facing your back, with his back on one side of the front of your tummy. In this position, the baby's head is easily 'flexed', ie: his chin tucked onto his chest, so that the smallest part of his head will be applied to the cervix first. The diameter of his head which has to fit through the pelvis is approximately 9.5 cm, and the circumference approximately 27.5cm. The position is usually 'Left Occiput Anterior' or LOA - occasionally the baby may be Right Occiput Anterior or ROA.

The 'occiput posterior' (OP) position is not so good. This means the baby is still head down, but facing your tummy. Mothers of babies in the 'posterior' position are more likely to have long and painful labors as the baby usually has to turn all the way round to facing the back in order to be born. He cannot fully flex his head in this position, and diameter of his head which has to enter the pelvis is approximately 11.5cm, circumference 35.5cm.

This means that often posterior babies do not engage (descend into the pelvis) before labor starts. The fact that they don't engage means that it's harder for labor to start naturally, so they are more likely to be 'late'. Braxton-Hicks contractions before labor starts may be especially painful, with lots of pressure on the bladder, as the baby tries to rotate while it is entering the pelvis.

Posterior presentation is more of a problem for first babies and their mothers than it is for subsequent births; when a mother has given birth before, there is generally much more room for maneuver, so it is easier for the baby to rotate during labor.

Sutton notes that the rate of posterior presentation has increased drastically in the last few decades, apparently in line with changes in the way women use their bodies. Sitting in car seats and leaning back on comfortable sofas, together with less physical work, have combined to produce an increase in posterior presentations. Paying attention to your posture in the last few weeks of pregnancy can help to reverse this trend. Since keeping reasonably active in pregnancy, and practicing good posture, isn't going to do anyone any harm, this theory at least deserves to be considered.

When do you need to start doing something about this?

Pay attention to your posture at the time when your baby may be starting to 'engage,' which means its head will be descending into the pelvis. This means for the last six weeks of your first pregnancy, and the last two or three weeks of subsequent pregnancies. In your second and later pregnancies, the uterus is more roomy and the baby will not normally start to descend into the pelvis until later, and often not until labor starts.

What position is your baby in?

This is important because you need to know when your baby moves into a good position, so that you can encourage it to stay there! You can learn to tell what position your baby is in, by

asking midwives to show you what to look out for, and by practicing feeling for the baby yourself.

When the baby is anterior, the back feels hard and smooth and rounded on one side of your tummy, and you will normally feel kicks under your ribs. Your belly button (umbilicus) will normally poke out, and the area around it will feel firm. When the baby is posterior, your tummy may look flatter and feel more squashy, and you may feel arms and legs towards the front, and kicks on the front towards the middle of your tummy. The area around your belly button may dip in to a concave, saucer-like shape.

If you feel the baby move, try work out what body part was moving. Remember that heads feel hard and round, while bottoms feel soft and round! It may take a lot of concentration and trying to work things out at first, but you soon get the hang of it. You may find it easier to feel your baby's position if you lie on your back with your legs stretched flat out.

If your baby is posterior, you may find that you suffer backache during late pregnancy (of course, many women suffer backache then anyway). You may also experience long and painful 'practice contractions' as your baby tries to turn around in order to engage in the pelvis.

Practical steps to avoid posterior positions

The baby's back is the heaviest side of its body. This means that the back will naturally gravitate towards the lowest side of the mother's abdomen. So if your tummy is lower than your back, eg: you are sitting on a chair leaning forward, then the baby's back will tend to swing towards your tummy. If your back is lower than your tummy, eg: you are lying on your back or leaning back in an armchair, then the baby's back may swing towards *your* back.

For more detailed discussions of positioning, some good diagrams, and lots of tips for turning babies, please see the sources listed at the end of this article.

Avoid positions that encourage your baby to face your tummy. The main culprits are said to be lolling back in armchairs, sitting in car seats where you are leaning back, or anything where your knees are higher than your pelvis.

The best way to do this is to spend lots of time kneeling upright, or sitting upright, or on hands and knees. When you sit on a chair, make sure your knees are lower than your pelvis, and your trunk should be tilted slightly forwards.

- Watch TV while kneeling on the floor, over a beanbag or cushions, or sit on a dining chair. Try sitting on a dining chair facing (leaning on) the back as well.
- Use yoga positions while resting, reading or watching TV - for example, tailor sitting (sitting with your back upright and soles of the feet together, knees out to the sides). [3]
- Sit on a wedge cushion in the car, so that your pelvis is tilted forwards. Keep the seat back upright.[3]
- Don't cross your legs! This reduces the space at the front of the pelvis, and opens it up at the back. For good positioning, the baby needs to have lots of space at the *front*
- Don't put your feet up! Lying back with your feet up encourages posterior presentation.
- Sleep on your side, almost on your tummy supported by lots of pillows (the sims position), not on your back.
- Avoid deep squatting, which opens up the pelvis and encourages the baby to move down, until you know he/she is the right way round. Jean Sutton recommends squatting on a low stool instead, and keeping your spine upright, not leaning forwards.
- Swimming with your belly downwards is said to be very good for positioning babies [1] - not backstroke, but lots of breaststroke and front crawl. Breaststroke in particular is thought to help with good positioning, because all those leg movements help open your pelvis and settle the baby downwards. [3]

- A Birth Ball can encourage good positioning, both before and during labor. See Birth Balls article on the MomCare website at <http://www.geocities.com/momcare/birth_ball.htm> for more details.
- Various exercises done on all fours can help, eg: wiggling your hips from side to side, or arching your back like a cat, followed by dropping the spine down, and pelvic rocking. This is described in more detail in an article at <http://www.btinternet.com/~wellmother/backache.htm> - 'Exercise for relieving backache' by Suzanne Yates.
- More ideas from a Shiatsu teacher specializing in pregnancy care: Shiatsu and Optimum Fetal Positioning, again by Suzanne Yates at <http://www.btinternet.com/~wellmother/9909optfoep.htm> describing the importance of hands and knees crawling in pregnancy and labor.

(Nothing to do with baby positioning, but... if you're swimming, make sure you have goggles so you can swim in a good position, with your face partially or wholly in the water as you dip down. Doing breaststroke with your neck craned, holding your face out of the water, is bad for your neck and back at any time, let alone in pregnancy when ligaments are loose.)

If the baby is already posterior…

When your baby is in a posterior position, you can try to stop him/her from descending lower. You want to avoid the baby engaging in the pelvis in this position, while you work on encouraging him to turn around. Jean Sutton says that most babies take a couple of days to turn around when the mother is working hard on positioning.

- Avoid deep squatting
- Use the 'knee to chest' position. When on hands and knees, stick your bottom (butt) in the air, to tip the baby back up out of your pelvis so that there is more room for him to turn around.
- Sway your hips while on hands and knees
- Crawl around on hands and knees. A token 5 minutes on hands and knees is unlikely to do the trick - you need to keep working at this until your baby turns. Try crawling around the carpet for half an hour - while watching TV or listening to music. It is good exercise as well as good for the baby's position!
- Don't put your feet up! Lying back with your feet up encourages posterior presentation.
- Swim belly-down, but avoid kicking with **breaststroke legs** as this movement is said to encourage the baby to descend in the pelvis [3]. You can still swim breaststroke, but simply kick with straight legs instead of "frogs' legs."
- Try sleeping on your tummy, using lots of pillows and cushions for support.

The Kneeler-Rocker

If your baby is persistently posterior, Jean Sutton recommends using a special kneeler-rocker chair for the last few weeks of pregnancy. This is like a kneeling stool, which sits you in a helpful upright position with knees lower than your chest, but it has rockers underneath it. The combination of upright posture and rocking movement encourages the baby to rotate.
Try midwifery or doula organizations, or specialist back chair shops (which sometimes sell kneeler rockers, although they probably have not heard of them used specifically for this purpose). For example, Norwegian furniture company Stokke make a kneeler-rocker designed to encourage good posture at your PC or desk. It is not constructed specifically with pregnant women in mind, as Jean Sutton's rocker is, but would still be useful. You can see their *Stokke Variable Balans* online at <http://www.stokke-furniture.no/variable.html?61,39>, and get details of suppliers.

When your baby turns to an anterior position, you can encourage him to descend further into the pelvis - by walking around upright, massaging your bump downwards, deep squatting, and swimming - and now you can use lots of breaststroke “frogs’ legs” kicking.[3]

If your baby is posterior when you go into labor:

These movements can help the baby wriggle through your pelvis, past the ischial spines inside it, by altering the level of your hips. They are also helpful if the baby is anterior but has a presentation problem, eg: his head is tipped to one side (asynclitic).

- In early labor, walk up stairs - sideways if you need to.
- Rock from side to side
- March or ‘tread’ on the spot
- Step on and off a small stool
- Climb in and out of a birth pool [3]
- The positions listed below may also help.

For the second stage:

- Use kneeling or all-fours positions. Kneeling on one knee can help.
- Supported squatting in second stage, but the mother must be lifted quite high up; her bottom should be at least 45cm (18 inches) off the floor.
- Birth stool seats should be at least 45cm (18 inches) from the floor.
- Avoid lying on your back, semi-reclining, sitting or semi-sitting. These positions all reduce the available space for the baby to turn. Lying on the side is OK.

Is there any proof that this works?

Midwives and mothers who have learned about, and used, Optimal Fetal Positioning techniques are convinced that it works. There is a wealth of *anecdotal* evidence in favor of it. However, there have not been any trials or studies on the subject so far, because they would be extremely difficult to organize. Practicing techniques to turn a posterior baby can take a lot of commitment on the part of the mother, which could not be assumed in a randomized trial. There would also be ethical problems with a trial - would mothers in the control group be told not to adopt upright or forward-leaning postures? Or would they simply not be told that taking care with their posture could lead to an easier labor?

There has been one small study [4] which looked at the short-term effects of mothers adopting a hands-and-knees position, compared to sitting, when their baby was in a lateral or posterior position. Mothers were asked to go on hands and knees, or to sit, for a short period of time, and the position of the baby was noted ten minutes afterwards. *The study found that babies were far less likely to remain posterior after mothers had been on hands and knees.*

However, since the babies’ positions were only assessed for ten minutes after one session on hands and knees, this study doesn’t tell us very much about the longer-term effects of alterations in the mother’s posture. You can read the abstract in the Cochrane Pregnancy and Childbirth Database at <http://www.update-software.com/ccweb/cochrane/revabstr/ab001063.htm>.

Some good evidence for the effectiveness of the theory comes from its author’s own practice. When Jean Sutton was appointed Principal Nurse Midwife at a maternity unit in New Zealand, she emphasized antenatal education on fetal positioning. The transfer rate from maternity unit to hospital fell from 30% to 5% and the forceps delivery rate fell from 3-4 per *month*, to 2-4 per *year*, over a period of several years [2]. Jean now lectures regularly on her theory and will be visiting the UK for another tour in Autumn 2000.

Finally…

My first baby, Lee, kept trying to settle in a posterior position because his placenta was attached to the front wall of the uterus (anterior placenta). Babies generally tend to face the placenta, and most placenta implant on the back wall of the uterus (posterior placenta). So if your baby's placenta is on the front wall then you will need to be extra-careful about positioning as the baby's natural tendency may be to settle in a posterior position.

I would feel Lee turning towards my front as he got larger, and every time I would go down on all fours, rock my hips and wiggle around until I felt his back towards my belly button. Then I'd stand up and walk around to settle him there, massaging him downwards. Despite his best efforts to turn around, I won!! And had a 9 hour, straightforward, completely natural labor to produce a 9lb 6oz (4,250g) first baby... I was told that if he'd remained in a posterior position then I would probably have ended up a very hard labor, and probably major intervention and perhaps a cesarean given his size.

If your baby appears to be in a posterior position, you will probably need to put considerable effort into persuading him to move around. It is no use spending five minutes on your hands and knees every now and then, and then saying "I *tried* to turn him, but it didn't work..." Optimum Fetal Positioning should be a *lifestyle* for you, for those last few weeks of pregnancy, not just an occasional distraction. Adopting a 'good' position now and then will not make much difference if you are in 'bad' positions for the majority of the time. A 'good' position is not a magic cure, a pill that you can take to turn your baby. The only person who can get your baby into a good position is you, and unfortunately, *you* are going to have to do the work to make it happen!

It may be that your baby is going to stay 'sunnyside-up' and will just refuse to turn; perhaps that's the way he/she needs to be. However, it can't hurt to try to get the baby to turn. If you *do* end up having a posterior labor (and they're not all dreadful, but many are harder than they would otherwise be), at least you'll know you did all you could to make things easier for you and the baby.

More information online:

Posterior Babies - what mothers can do - from the UK's Association for Improvements in the Maternity Services (AIMS) <http://www.aims.org.uk/posterior.htm>

Article on posterior babies, with photos of a pregnant mother's tummy when carrying a posterior baby, and tips on how to spot a posterior presentation:
<http://www.geocities.com/momcare/pos_sym.htm>

Posterior Presentation - A Pain in the Back! Article by midwife Valerie el Halta on posterior babies and how to turn them anterior for faster, easier labors:
<http://www.geocities.com/momcare/pos_pain.htm>

UK Midwife Archives page on presentation, from the Association of Radical Midwives
<http://www.radmid.demon.co.uk/presentation.htm>

The Midwife Archives on the gentlebirth.org website have an amazing collection of wisdom and experience on just about every subject related to pregnancy and birth. The pages on positioning start at <http://www.gentlebirth.org/archives/position.html>

Article on positioning and how to improve it, with good diagrams of baby in womb and pictures of exercises for mum: <http://www.cefcares.org/fetal/position.htm>

References:
All data and recommendations in this article are from [1] below unless stated otherwise.

[1] '*Understanding and Teaching Optimal Foetal Positioning*' by Jean Sutton and Pauline Scott, in New Zealand: Birth Concepts, 1995. From Midwiferytoday.com for $12.50 (I also have it in my lending library.)
<http://www.midwiferytoday.com/Merchant2/merchant.mv?Screen=PROD&Store_Code=MT&Product_Code=OFP&Category_Code=OTBK>

[2] *Modern Midwife*, January 1997 Vol 7 No 1, article by Mary Nolan

[3] Recommendations from other sources, including antenatal classes I have attended, and discussions with midwives and antenatal teachers, which are not specified in Jean Sutton's 'Optimum Foetal Positioning.'

[4] Hofmeyr GJ, Kulier R. Hands/knees posture in late pregnancy or labour for fetal malposition (lateral or posterior) (Cochrane Review). In: The Cochrane Library, Issue 2, 2000
<http://www.update-software.com/ccweb/cochrane/revabstr/ab001063.htm>