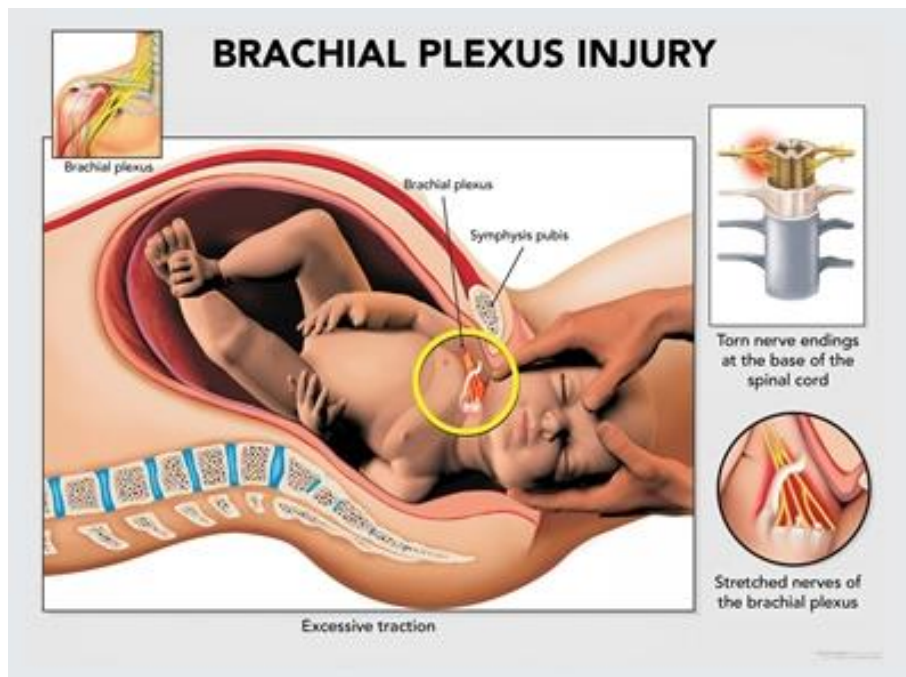


## Biomechanics for HCW's Providing Physical Assistance with Shoulder Dystocia During Childbirth

A Shoulder Dystocia is a complication that may occur during birth. As the baby's head passes through the birth canal, he/her shoulder can become lodged under the symphysis pubis of the mother. This can result in complications such as damage to the brachial plexus causing a traction injury specifically known as Erb's Palsy.



The current suggested treatment protocols include but are not limited to: Episiotomy, McRoberts Position/Maneuver (McRoberts), Suprapubic Pressure (<http://www.aafp.org/afp/2004/0401/p1707.html>)

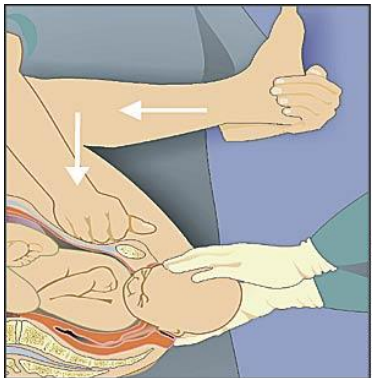
For the purpose of this document **McRoberts Position/Maneuver and Suprapubic Pressure** will be the focus of the biomechanical suggestions for positioning.

The HELPRR mnemonic is used to aid with following protocol:

H	Call for help
E	Evaluate for Episiotomy
L	Legs (McRoberts Position/Maneuver)
P	Suprapubic Pressure
E	Enter maneuvers (internal rotation)
R	Remove the posterior arm
R	Roll the patient

The McRoberts Position/Maneuver is described as “procedure involves flexing and abducting the maternal hips, positioning the maternal thighs up onto the maternal abdomen. This position flattens the sacral promontory and results in cephalad rotation of the pubic symphysis. Nurses and family members present at the delivery can provide assistance for this maneuver.” *Am Fam Physician*. 2004 Apr 1;69(7):1707-1714.

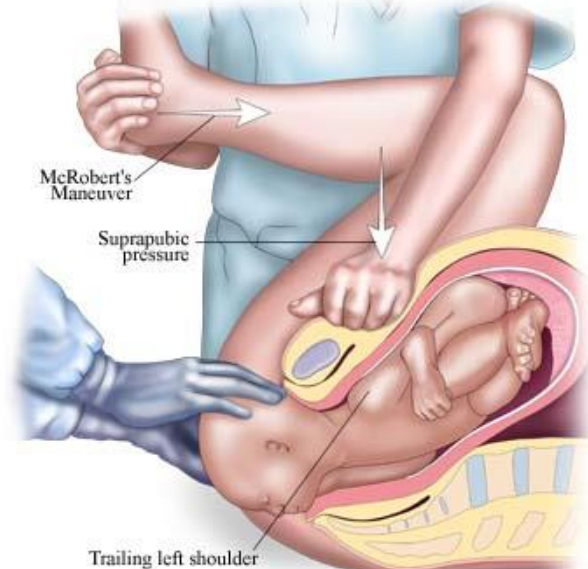
Suprapubic Pressure is described, as “The hand of an assistant should be placed suprapubically over the fetal anterior shoulder, applying pressure in a cardiopulmonary resuscitation style with a downward and lateral motion on the posterior aspect of the fetal shoulder. This maneuver should be attempted while continuing downward traction.” *Am Fam Physician*. 2004 Apr 1;69(7):1707-1714.



This illustration describes performing the McRoberts Position/Maneuver and Suprapubic Pressure simultaneously.

Being able to maintain the necessary hip position (hip flexion and abduction) during the McRoberts can pose physical challenges during difficult labor. In addition, Dr's will often request the HCW assisting with the delivery to perform or apply Suprapubic pressure in conjunction with the McRoberts.

When applying the McRoberts, placement of the hand over the heel of the patient to encourage or “force” hip flexion places the HCW at a potential risk for physical injury as it provides an increased mechanical advantage for the patient to push (hip extension) as is often the case. As the HCW's hand presses the heel, the patient is able to use her upper thigh (quadriceps) to extend the knee and in-turn assisting with pushing out the legs. Instead, a suggestion can be made for the HCW to place his/her hand or shoulder onto the rear upper thigh (hamstring) of the patient. This placement will reduce the mechanical advantage and number of muscles involved for the patient. The HCW is also encouraged to adopt a “lunge” type stance, as this will allow him/her to weight shift,



create a wider base of support utilizing more joints and muscles to perform the requested task.

When requested to perform Suprapubic along side the McRoberts, the aforementioned lunge position lends itself to allow the HCW adopt both techniques.

Reference:

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