

Benefits of Water Immersion for PREGNANCY, LABOR, and BIRTH

Buoyancy, Hydrostatic Pressure, Heat and Decreased Blood Pressure

A body immersed in water loses weight equal to the weight of the water that is displaced. When the body is immersed at chest level, about 75% of the body weight is displaced.

Water immersion relieves the woman of supporting her full weight, facilitates her movements and allows her to relax more deeply. It can create more space in the pelvis because the mother's ability to move is enhanced and muscles tend to work more efficiently under water. Buoyancy assists in the spontaneous rotation of the baby and equalizing of pressure usually means that perineal tearing is reduced. Pressure on the cervix from the baby's head is decreased because gravity is not operative. Relaxation minimizes pain and decreases anxiety as adrenalin levels fall and oxytocin levels rise. After 20 to 30 minutes of water immersion, there is an increase in endorphins that results in a drop of mean arterial pressure and subsequent decrease in blood pressure.

When the body is immersed in water, the pressure is the same in all directions and equally distributed at any given depth beneath the surface of the liquid. This phenomenon is known as hydrostatic pressure which is proportioned to the depth of the water.

It is partly responsible for the noted reduction of pain that most women experience upon entering the water. Submersion also includes a redistribution of body fluid; (Enning 2003) estimates that edema is reduced by 600 to 1000 ml.

- **Reduced Swelling:** Hydrostatic pressure helps reduce swelling. Research has shown that just being in the water can reduce swelling as effectively as drugs. One study found water aerobics had diuretic and edema-relieving effects similar to static immersion. For some women who develop edema of pregnancy, Aquatic fitness may be a good option for relieving this condition.
- **Improved Circulation:** Varicose veins and hemorrhoids develop as a result of venous pressure; exercise in the water has been shown to reduce this venous pressure. The combination of water pressure and movement of the muscles helps return blood from the veins in the lower extremities. The hydrostatic force of water also produces an increase of uterine blood flow that is essential to grow a healthy baby and placenta.