

Relaxin, what happens, Pre & Postnatal?

Relaxin is a pregnancy hormone. It is produced in the early stages of pregnancy by the corpus luteum (the shell of the egg left behind after ovulation), and then by the placenta from about the twelfth week onwards. This hormone is evident in the body from as early as the second week of pregnancy, when it is produced in large amounts during the first trimester, then reduces by 20% but continues to be produced post-birth. Your body will still carry high levels of the hormone relaxin for up to five months - and longer if you're breastfeeding.

Collagen is the main component of connective tissue found in cartilage, tendons and ligaments. The stability of all joints is maintained by ligaments which are made up of these dense, fibrous strands of connective tissue. During pregnancy relaxin increases the water content of collagen fibres, increasing their size and elasticity.

What effect does this have on the joints? Ligaments are normally inelastic, a quality necessary to maintain joint stability and prevent unnecessary movement around the joint. Under the influence of relaxin the ligaments become more supple and pliable, allowing increased movement, which in turn reduces joint stability.

Which joints are most at risk? The symphysis pubis and sacroiliac joints of the pelvis are fibrous joints. Very little space separates the ends of the bones in a fibrous joint, and in a non-pregnant state very limited movement, if any, takes place around the joint. Additionally, fibrous joints have no joint cavity and rely solely on ligaments for their stability. The resulting increased range of movement of the symphysis pubis and sacroiliac joints, together with the progressive pressure exerted by the growing baby, places these joints in an extremely vulnerable position.

What about the abdominal and pelvic floor muscles? Collagen is also found in the connective tissue of the abdominal and pelvic floor muscles. This is necessary for the abdominal muscles to stretch and allow the uterus to grow out of the abdomen, and for the pelvic floor muscles to stretch to deliver the baby. However, this adaptation severely reduces the support previously given by these muscles and has major implications.

So, a word of warning..... relaxin softens the muscles and ligaments. This means you could easily overstretch softened muscles, causing injury.