

HUMAN DEVELOPMENTAL MOVEMENT PATTERNS

(Collated by Michelle Wilkinson www.movingnaturally.co.uk)

After fertilisation, the single cell starts a process of dividing and travels to create its home in the womb. Here it starts to change shape and elongate forming the 'primitive streak' at around 2 weeks to 15 days. This is the initial head and spine growth not too dissimilar to the organisation of the fish.

As the foetus develops it resembles the evolution of other living creatures. This process is known as 'ontogeny recapitulating phylogeny'.

Between 4-8 weeks the foetus is connected to the mother by the umbilical cord which grows from the navel to the placenta which is attached to the womb wall. This organisation is found in the starfish which radiates limbs from a central mouth.

Both the starfish and the foetus have a radial symmetry from a central mouth or navel for the intake of nourishment and the expulsion of waste.

It is from the navel that foetal movement is organised. It forms the foundation of human developmental movement patterns.

In the amniotic fluid foetal movement flows between limbs flexing and compressing into and extending and opening away from the navel. The limbs move independently (the individual) but are integrated into the whole (the community) through the navel.

The navel provides a sense of upper and lower body and movement is initiated by both arms or both legs. These Homologous Patterns are found in frogs and rabbits and when humans dive into water.

The navel passes through the midline giving a sense of right and left sides with the movement of the right arm and leg and the left arm and leg. These Homolateral Patterns are seen in many reptiles.

Through the navel the opposite arm and leg are connected giving a sense of diagonals. In human walking this oppositional movement occurs with a right leg step and left arm swing. Known as Contralateral Patterns, they are found in human crawling and are the walking gait of most mammals.