

WHY CARRYING MATTERS

Rosie Knowles tells us why holding a child, in arms or in a sling, is beneficial for both child and parent

Carrying matters: it matters for babies, for their parents, for the societies they grow up in. Yet carrying behaviours are in decline.

From the very beginning of the human story, children have been carried in their parents' arms, a practice that transcends evolution, history, geography, society and culture. A baby's natural habitat is his mother's body, the source of love, nourishment, safety and warmth. The urge to respond to a child's cry with loving touch is an instinctive activity from a caregiver to a vulnerable human being. It provides a sense of love and security that allows children to thrive.

The 'fourth trimester' – the first few months of a child's life in the outside world – is all about gentle transitioning from the peace and stability of the womb to active involvement in a new world. Limbs that have been confined are suddenly free to stretch wide, darkness has turned to light, the muffled gentle rhythmic sounds of the mother's body have been replaced by loud, unfamiliar noises or deep silence, and constant gentle motion has turned into complete stillness or sudden liftings into nothingness. This is why so many babies settle from their cries when they are held on a parent's chest or carried in a soft supportive sling. It simply feels right and familiar.

ANTHROPOLOGICAL HISTORY

This natural process of carrying has its origins far back in our anthropological history. Most primates use all four limbs for moving around, and their infants are unable to travel independently for some time, so they are adapted to hold onto the fur of their mother's belly with their hands and feet from birth. There is clearly a survival advantage for the infant ape to being able to cling onto the mother as she travels to find food and escape from danger.

Human pelvises altered over time from those of our great ape ancestors to allow us to stand upright and walk unsupported on two legs and leave our hands free for carrying and throwing rocks and spears, providing a major evolutionary advantage and survival aid.

Efficient bipedal locomotion requires a narrower, more lightweight pelvis with a smaller birth canal, but the increasing size of the human brain with growing intelligence means the skull has to increase in size. This has given rise to the 'obstetrical dilemma'. The human pelvic outlet has widened to allow the passage of the skull, but the overall size of the human infant at birth is nearly twice as large in relation to the mother's weight as would be expected for another similarly sized primate. After about nine months of pregnancy, the energetic demands of the growing human baby begin to surpass the mother's ability to fuel continued growth. Human babies are therefore born at an earlier stage of their development than their primate counterparts, and their brains are considerably less developed at birth. It takes many months for them to be able to walk, talk and feed themselves; they need adults for safety, provision of food, warmth and emotional development. To remain with the family unit, they need to be carried; there is no longer any maternal hair to cling onto.

The curled-up squat positions of newborns and their preference for closeness on the chest facilitate easy carrying in the early weeks. As children grow and become heavier, their mothers (traditionally the primary carers) begin to perch them on their hips for easier carrying while on the move. Evelin Kirkilionis, who has studied child development and promoted safe babywearing for over 20 years, calls this the "evolutionary slide": the changed maternal pelvis has developed wider iliac crests, which arch outwards, becoming an ideal place to rest a child, whose weight is now distributed through the mother's own major weight-bearing axes (the pelvis and the long bones of the leg). Kirkilionis suggests that the spread-squat position of young babies with feet angled towards each other (seen during nappy changes or when playing on their backs), which mimics our ape ancestors, enables the baby to perch astride and grip to make carrying easier. A child who can 'help' her mother hold onto her is less likely to slow the hunter-gatherer group down as they forage or move away from trouble. Furthermore, the angles of the natural spread-squat position that an infant adopts when carried astride the hip are almost identical to those recommended by orthopaedic specialists to encourage the healthy development of hips and help to correct hip dysplasia.

However, carrying a child in arms is hard work for prolonged periods, especially as the child grows. Carrying is, in fact, more energy-expensive than breastfeeding. Anthropologist Timothy Taylor has postulated that the early adoption of carrying aids >

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> made from natural materials such as animal skins or woven reeds would have instantly eased the burden of this in-arms carrying and allowed further evolution into the species we are today. This prolonged period of nurture for many months beyond birth allows language and creativity to develop – the things that make us human. It isn't hard to see how it has contributed to the enormous success of the human race.

Carrying children is part of our evolutionary history; and, more than that, it is part of our physiology. Kangaroo care is well known to save the lives of babies born too small or too soon, and, in fact, close contact and loving touch are vital to the normal physiological and emotional development of all babies. In my book *Why Babywearing Matters* I discuss some of the many reasons why close contact matters so much.

THE IMPORTANCE OF CARRYING

UNICEF and the World Health Organization recommend that all babies remain skin-to-skin for at least the first hour after birth. Babies who enjoy this early contact experience improved thermoregulation and temperature maintenance, cardio-respiratory stability with apnoea reduction, higher blood glucose levels, facilitated self-attachment for breastfeeding, and reduced distress responses to painful stimuli. They have shorter lengths of

stay in the NICU than their counterparts who don't have skin-to-skin time, fewer infections at 6 and 12 months, and advanced social, linguistic and fine/gross motor indices at 12 months. Improved brain maturation and better emotional and cognitive regulatory abilities have been noted, as well as greater weight gain and deeper sleep.

A 2012 Cochrane review of studies showed that babies exposed to skin-to-skin contact soon after birth interacted more with their mothers, cried less and had more successful and longer breastfeeding relationships than babies receiving standard hospital care. It is clear that close skin-to-skin contact is of great value in early infant development and should be encouraged as much as possible. Carrying a young baby around in arms or a soft sling while daily life continues is a very good way to meet this strong need for closeness.

Upright carrying helps with conditions such as reflux and reduces the risk of positional plagiocephaly (the soft bones of the infant skull becoming flattened from resting on firm surfaces for too long). Many families find that carrying helps their children to sleep and believe that their babies cry less (though there is no evidence that colicky crying is less in carried babies).

One of the most important reasons for carrying, however, is to encourage bonding. Close contact facilitates the release

A woman with dark curly hair, wearing a dark patterned dress and a purple sling, stands on a sandy beach at sunset. She is carrying a baby in the sling and looking down at it. The ocean waves are visible in the background, and the sky is a mix of orange and blue. Her reflection is visible in the wet sand.

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of oxytocin, one of the key hormones involved in newborn physiology and in building relationships, the bonding that is vital to emotional health. It is released during soft touch, as well as during breastfeeding, and it plays a part in reducing stress and anxiety for both parents. A wealth of observational evidence and increasing amounts of neurobiological evidence support the importance of attachment.

Babies need to feel secure and safe; this is a basic human requirement. A crying baby will calm and settle when he is held close to his parent's body and rocked and murmured to; his safety, social and esteem needs are met. Studies into the effects of deprivation in institutionalised children show the negative effect that a lack of loving contact and neglect has on a child's brain; growth is stunted and mental health in adulthood can be significantly impaired. Neglected children have smaller brains than children who are loved and well cared for, and the prefrontal cortex (the social part of the brain) is under-developed. Too much exposure to a lot of cortisol (the stress hormone) in the first three years has a lasting impact; it can be toxic to the development of neural connections in these vital years when pathways are being established. A child's experiences can alter his thought processes and neural pathways and have a major impact on his future. Attachment behaviourists are beginning to find evidence that lack of secure attachments in childhood leads to negative outcomes in teenagers and young adults. It seems clear that consistent, appropriate loving touch really does matter in the long term, both at the individual family level and in wider society.

It is important not to forget that parents and carers need to bond with their children too; this is also facilitated through oxytocin release from loving touch as well as breastfeeding, and carrying can be of enormous value if the natural cascade of hormone release has been attenuated by a complex delivery. It can be hard to find the motivation to make the effort to interact with a baby who just cries; but the act of providing skin-to-skin and carrying

(in arms or a sling) can be enough to trigger oxytocin and begin to create a bond. There is increasing evidence that carrying reduces post-partum depression and anxiety.

Carrying a child is a normal, expected daily interaction, and the vast majority of parents around the world in human history have carried their children until they could walk independently. Yet carrying behaviours have decreased considerably in the Western world over the last few centuries, due to the changing nature of industrialised societies and philosophical ideas about the role of children that still persist to this day. Also, we find it hard to carry our children for any length of time; our bodies, on the whole,

are not used to this level of daily physical exertion. We put our children down when they feel heavy, or because we fear that we will 'spoil' them by holding them close (which is a myth). There are many gadgets designed to make life easier and keep children secure, and it can feel simpler and more convenient to just use one of those. However, they have the

effect of creating distance and reducing physical interaction. It is alarming to read some of the data about how many minutes a day children spend actually being in close contact with their parents.

This is where a good, comfortable, safe and ergonomic sling that is designed to support a child in the natural spread-squat position can be so useful, helping us to meet our child's need for closeness while still having our hands free to be able to get on with the demands of daily life. Slings that ensure airway protection and respect infant spine and hip anatomy are easily accessible and can be borrowed from your local sling library, where someone will help you work out what is the best option for you.

Carrying matters, and a sling can meet the needs of parents and babies, even in our modern world. It is a traditional practice that has stood the test of time, but its ongoing value is supported by modern scientific research. It is a simple way to foster connection between parents and their children, to everyone's benefit. I hope that as more research emerges babywearing will come to be seen as an important public health measure as well as a joyful personal experience. ●

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Rosie Knowles is a mum of two, a GP, and a passionate advocate of the importance of carrying behaviour, which is facilitated by sling and carrier use. She founded the Sheffield Sling Surgery and, with her husband Rob, runs the online shop Sling Spot. They also run Sling Pages, a non-affiliated website listing all the sling professional resources in the UK and Eire, including sling libraries. Her new book, *Why Babywearing Matters*, is published by Pinter & Martin. www.slingpages.co.uk