From birth your baby is ready for action.
get a move on, baby

Here's a guide to what makes him get up and go.

By Denise Porretto
Photography by Anna Palma
MASTERING BASIC MOVES

A newborn enters the world primed for activity. What constrains her from moving is that heavy head, small trunk and limbs, and soft bones, which make it difficult for her to support and control her body, says Michael Wade, PhD, professor of kinesiology at the University of Minnesota, Twin Cities campus. Plus, she isn’t yet able to determine which muscles are needed for a given movement—to get her fist to her mouth, for example—so too many of them contract at the same time. That’s why her fist may bounce off her cheek and chin before it finally finds her mouth.

The movements she does have down pat are mostly reflexes. She can suck, swallow, and grasp. If facedown, she can squirm to keep her nose and mouth free to breathe. (Even so, it’s dangerous to put a baby facedown to sleep.) If you stand her up on your lap, she’ll “walk” her legs. This stepping reflex gradually disappears, but it proves that the framework for walking is present before your baby’s soles even touch the ground.

A newborn’s other jerky motions look random, but experts say they aren’t. When you put an object in front of a 1- or 2-month-old, she directs her flailing toward it, says Carolyn Palmer, PhD, associate professor of psychology at Vassar College in Poughkeepsie, New York. So by the second month, most infants’ movements have purpose and direction, but underdeveloped muscles and bones hold them back from really doing much.

Another task an infant works on is finding rhythm, which is essential for walking. “A newborn’s sucking has a beat, and in the coming weeks her repetitive arm and leg motions take on a beat as well,” says Eugene Goldfield, PhD, a research associate at Children’s Hospital and Harvard Medical School, in Boston. In order to walk, a child needs both rhythmic limb movements—right, left, right, left—as well as strong posture.

An infant begins to work on stable posture at about 3 months. She’ll start by figuring out how to control her head against the force of gravity. Place your

Country vs. City Baby

DO BABIES IN BIG HOUSES WALK FASTER THAN BABIES IN SMALL APARTMENTS? Karen Adolph, PhD, associate professor of psychology at New York University, in New York City, compared the motor activity of babies growing up in the suburbs (with stairs and a backyard) with babies living in tiny New York City apartments. First, she found that suburban babies didn’t have full run of the house; generally, second floors, stairs, and certain rooms were gated off. In fact, the babies spent 80 percent of their time in one area, such as the family room and kitchen. So the accessible floor space turned out to be similar for city babies and their country cousins.

SECOND, WHILE URBAN BABIES MADE SHORTER TRIPS, they were presented with the same general challenges as suburban kids. They had to learn to steer; go over, around, and under obstacles; and adjust to a variety of surfaces. The lesson? “Your child is going to learn to walk no matter what,” says Carolyn Palmer, PhD, associate professor of psychology at Vassar College and the mother of 16-month-old twins.

EVEN A FRILL-FREE HOUSEHOLD IS CHALLENGING for a baby learning to walk. It has variable geography, nooks and crannies, furniture to pull up on, siblings or adults walking around, toys scattered on the floor, pillows to move over, maybe a pet or two to chase, perhaps a staircase to climb. And that’s just inside.

INCIDENTALLY, BABY WALKERS, even stationary ones, will not promote earlier or better walking. Besides the safety issue of walkers with wheels, many experts believe that the devices put young babies in a position they’re not ready for and prevent them from seeing their feet move, an important component for learning how to walk. What will give your child a far bigger boost is your enthusiastic encouragement.
What Brains Have to Do with It

At about 7 to 8 months—about the same time a baby starts to crawl—his brain begins to help him think in a more organized way. "It's possible that that's when they begin thinking about getting somewhere, and those thoughts motivate them to try walking," says Eugene Goldfield, PhD, a research associate at Children's Hospital and Harvard Medical School, in Boston.

So do smart babies walk earlier?

Milestones are reached when all the necessary systems in the body have developed sufficiently—no sooner, say experts. And each system progresses at its own rate, varying from baby to baby. Because so many factors go into locomotion, normal, healthy, smart babies start walking anywhere from 9 to 18 months of age.

"The timeline and the bumps along the way may vary a bit. But the general pattern is about the same with every child," says Michael Wade, PhD, professor of kinesiology at the University of Minnesota, Twin Cities campus. "Parents should recognize that though the package is assembled differently in each kid, it all comes together at some point."

3-month-old belly-down and she'll push up on her arms and lift her head. After that, she'll start to develop trunk control, a base from which crawling begins, says Dr. Goldfield.

Movement in the first months also teaches your infant about cause and effect. Studies of 2- to 3-month-olds have shown that when a mobile is tied to a baby's ankle, she'll figure out quickly that her kicks make the mobile move, so she'll kick more frequently.

All kicks and wiggles, intentional or not, provide practice for activity to come. "Every time a newborn puts her hand to her mouth, she's carving a path, on a neurological, muscular, and perceptual level. So the movement becomes more and more deeply ingrained," says Karen Adolph, PhD, associate professor of psychology at New York University, in New York City. "A movement may make the muscles stronger, develop postural control, and give a baby a feeling of mastery."

NOW BABY'S ON A ROLL

Your newborn may be motion incarnate, but moving doesn't get him anywhere until he can use his energy to go in a certain direction. And that often begins with a simple roll. At about 4 months, your baby will flip from belly to back (or vice versa). It may look accidental, but it's an inevitable consequence of his experimentation with movement. Whatever your baby's reaction—pleasantly surprised or suddenly frightened—he'll realize that he's on to something. "Rolling may be sort of a chance discovery, but sooner or later he'll be able to control it," says Dr. Palmer.

Admittedly, though, rolling won't take your roadster very far very fast. Most babies progress to crawling or creeping or scooting or wriggling or something else altogether. "There is an incredible variety of ways kids move around," says Dr. Palmer. And they're all normal, as is skipping crawling and going straight to walking.

Classic four-on-the-floor crawling, however, seems to be the most popular mode of early transportation. "Crawling around is not only efficient and fast, but balanced—a baby can see things well from a hands-and-knees position," Dr. Palmer says.

Well, it eventually becomes balanced and efficient. There's a period when a baby is learning to crawl when he is down on all fours but essentially stuck. He'll rock back and forth (working on rhythm), but he can't figure out how to propel himself forward. If he kicks his legs, he falls forward. If he raises a hand, he falls forward. If he presses his feet against the floor, he folds in the middle, butt up. Then, aha! If he pushes with his hands, he finally does manage to move an inch. But wait, it's in reverse!

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Let's Get Moving

Make your child's experiments with locomotion more fun.

1. LESSONS IN CAUSE AND EFFECT Give an infant good reason to move purposefully. Fisher-Price Kick & Play Piano (birth–36 months; $25; 800-432-5437).

2. SO MUCH TO SEE! A baby will crawl down this “road” to see what’s beyond each bend. Tiny Love 1-2-3 Discovery Lane (3–18 months; $50; 888-TINY-LOVE).

3. A LITTLE SUPPORT Practicing walking is less scary when baby has some friends to lean on. Playskool Teletubbies Tubby Go Round Walker (9 months and up; $30; 800-PLAYSKL).

4. NOW YOU'RE OFF! Your little bundle of energy can rock this toy when it's on its base or use it off the base to push himself around the room. Little Tikes Rock & Scoot Zebra (12–36 months; $45; 800-321-0183).

5. ALONG FOR THE RIDE Now that baby can walk, he'll want toys he can pull behind him, like this Fisher-Price Sesame Street Toys Quack & Waddle Rubber Duckie (12 months and up; $13; 800-432-5437).

Crawling presents babies with a kind of biomechanical puzzle. They solve the dilemma, Dr. Goldfield believes, by pushing themselves back so that they lean on their legs. This removes some weight from their hands, making it easier for them to lift one arm. Then, while rocking back and forth, they'll reach forward with that hand and land on it without falling. With an alternating hand/knee pattern, they eventually start to move.

SO MANY REASONS TO KEEP ON GOING!

What will motivate a baby to crawl once she's physically mastered it? Many times it's to get to something or someone—an intriguing toy, say, or Daddy. Or it may be to find a place to pull herself up onto her legs.

The amount of time a baby spends crawling is not very long. Babies don't want to be down on the ground when they see older children and adults standing up. "Their goal is bipedal locomotion," says Dr. Goldfield. "That's where babies really seem to have a sense of achievement."

The powerful social pressure to walk comes in two ways: explicit urging and observational learning. Parents—when they get down on their knees, arms out, saying, "Come to me!"—provide the first; peers and siblings, the second. Research indicates that children who go to day care, and see other kids toddler about, try to imitate them and start walking sooner. There's no specific evidence that second children walk earlier than older siblings, but experts suspect it's true.

Motivation to walk may be spurred by jealousy (He walks, so he gets to toys before I can); curiosity (What's in that drawer up there?); and a need for approval (I hope Daddy gives me a hug when I walk!). Also, the simple desire to do more spurs babies on. "Moving allows a different set of opportunities. If you can't move, exploration is limited," says Dr. Wade. Dr. Adolph's research shows that 90 percent of babies' crawling trips are one-way, as opposed to round-trips or free-form loops: "Most of the time they seem to crawl somewhere with the intent..."
to stop and do something once they get there,” she says.

UP, UP, AND AWAY

Many parents watch for those first unaided steps, but there is no one magical walking moment. Rather, there’s a steady and inevitable integration of different systems of the body—musculoskeletal, neurological, optical, and perceptual—each developing at its own pace.

Walking is a challenge, for sure. When he’s crawling, a baby has three points of contact with the ground (one limb is up at a time). Once he shifts to taking a few tentative steps, he has only one point of contact. And to move forward, he has to, in a sense, fall. “Walking is essentially falling and catching yourself,” says Dr. Goldfield. “Eventually his muscles and bones become strong enough to support him upright in motion. Walking is his body’s victory over the force of gravity.”

Once they’re up, babies love the feeling. You’ll see your baby standing up and crouching down repeatedly or your toddler cruising the same course over and over. She could be practicing, strengthening her muscles. Or maybe she just gets pleasure out of her movements. In either case, she’ll be wearing a proud, joyful grin.

What’s to come? Let’s put it this way: A typical toddler takes 500 to 1,500 steps an hour. So get some sleep and eat your Wheaties. A baby in motion stays in motion until, well, until she grows up.

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What Goes Up Must Come Down

It causes tears and fears and skinned knees, but falling is part of learning how to walk. For the most part, you should allow your baby the opportunity to move, and therefore fall, independently, says Carolyn Palmer, PhD, associate professor of psychology at Vassar College.

When baby is inside, on carpet or vinyl floors, you can let him take a few tumbles without worrying much about injury. Gravity is an important challenge for him, and he needs to learn how to fight and master it. Outside, though, where terrain is uneven and surfaces are hard—concrete, slate, rocks—babies require more supervision, because falls can be dangerous.

If your baby gets a boo-boo, wait for his reaction before making a big deal out of it. Sometimes a baby will cry based on your look of horror instead of actual pain. Of course, if he is really hurting, offer plenty of solace and check him over for signs that he may have to visit the doctor.

Does falling deter a baby from trucking on? Overwhelmingly, no, says Karen Adoiph, PhD, associate professor of psychology at New York University. She’s seen babies with legs or arms in a cast—even one with a huge scab on his face from tumbling down the stairs—go merrily, if not a little awkwardly, on their way.

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