



Pain-Relief Secrets

Whether your child is getting a shot or having surgery, there are ways to protect her from unnecessary agony. But your doctor may never mention them.

BY DARSHAK SANGHAVI, M.D.

One of my professors in medical school told me the practice of pediatrics is a lot like veterinary medicine. Neither animals nor babies can talk, so in order to help them, doctors need to speak with their caregivers, look for subtle physical clues, and express compassion without words.

But consider what pediatricians with even the best intentions do to babies. To greet them immediately after birth, we jab their thigh with a syringe of vitamin K. Before they leave the hospital, we prick their foot with a razorlike lancet to collect blood for screening tests. At many hospitals, doctors cut off newborn boys' foreskin without a topical anesthetic. And every few months, babies feel the

antiseptic dab of alcohol, followed invariably by multiple vaccine injections. The cries of little children are the sound track of a pediatrician's life.

And that's just when kids are healthy. Fever can be a sign of meningitis in infants, so they may need a spinal tap—usually without any anesthesia—to rule out the serious infection. Many pediatric emergency rooms employ orderlies called “holders,” whose primary job is to physically restrain struggling babies and toddlers during painful procedures like a bone-marrow biopsy. To treat deep cuts, we sometimes have to strap young children into a papoose-like contraption, pinning their arms down as we carefully stitch lacerations on their face.

It's hard to imagine that doctors would ever treat older kids or adults this way. Perhaps we neglect pain in the very young not because we're heartless but because we subconsciously think that they're not yet fully human and thus are incapable of really experiencing or understanding pain. As a result, children suffer needlessly in hospitals and clinics, and even in their own home.

Lessons From a Painful Past

For decades, doctors believed that babies didn't feel pain, based on flawed studies showing that sleeping infants didn't respond to light pinpricks. In fact, until the 1980s, many newborns who had heart surgery received no pain medication—they were only given paralytic drugs that forced them to lie completely still, though fully aware, as their chests were opened. These practices greatly disturbed Kanwaljeet Anand, M.D.,

director of Arkansas Children's Hospital Research Institute Pain Neurobiology Laboratory, in Little Rock, who noticed babies had a rapid pulse and low blood pressure after cardiac surgery without pain control. "They appeared incredibly stressed," he recently told me. Two decades ago, Dr. Anand published a study showing that using proper anesthesia during infant heart surgery dramatically reduced deaths. His findings helped change how doctors think about neonatal pain, and today general anesthesia is standard for babies undergoing surgery.

More recent research has proven that even mild pain can have a major impact. Canadian doctors, for example, found that newborns who were circumcised without local anesthesia developed a form of post-traumatic stress disorder. Another study published in the *Journal of the American Medical Association* showed that newborns who received frequent

blood tests would become upset as soon as they were swabbed with an alcohol wipe. And according to surveys of hospitalized kids of different ages, they reported that getting an IV caused some of their worst pain. "The science is increasingly clear that untreated pain can cause harm," says Gary A. Walco, Ph.D., professor of anesthesia at University of Washington School of Medicine, in Seattle. In articles for medical journals, he has argued that proper pain control for children is a basic human right. "In the overwhelming majority of cases, there is no need for kids to feel pain from medical procedures," he says.

Unfortunately, this message hasn't caught on widely enough yet. In 2006, a survey of newborn intensive care units found that doctors only checked for pain in 10 percent of newborns after major surgery, and many children received no pain medications to comfort them. Babies in intensive care had an average of 14 painful procedures per day.

Take the Sting Out of Shots

METHOD	HOW IT WORKS	PROS	CONS
EMLA cream	Topical anesthetic that deadens pain. You request it before the visit and apply it beforehand.	Works very well and most pharmacies carry it.	Must be applied an hour before the shot, so it takes some planning.
Vapocoolant spray	Rapidly cools a small area of skin to help reduce the pain of needle pricks.	Works within seconds.	Many pediatricians don't keep it in their office. Some studies show it doesn't reduce pain nearly as well as EMLA.
Numby Stuff (Iontophoresis)	An anesthetic similar to EMLA is applied to the skin, and a device uses a tiny amount of electric current to speed its absorption.	Numbs the skin in about 15 minutes.	The electric current feels funny to some kids and can cause mild irritation. Most doctors don't have it in their office.
Pacifier dipped in sugar water	Start giving it to your child a few minutes before a shot to distract her with the pleasant taste.	Cheap and easy, it works within two minutes.	Not as helpful with older toddlers and doesn't eliminate pain entirely.

Pain Can Be Avoided

If you ask any parent whether her child's doctor offers special treatment before administering immunizations, blood tests, or other procedures, you're likely to get a blank stare in response. One fascinating study found that most parents would be willing to stay an hour longer at their pediatrician's office to avoid pain for their child, and three quarters said they'd pay \$15 for any method to eliminate pain. (A third of parents would pay more than \$100!)

"It's important to be an advocate for your child," says Dr. Walco. But the truth is that even parents who know about available pain-relief options don't always insist on them. Dr. Anand remembers when his own daughter was born in a Boston hospital and needed a blood test. Before pricking her foot, a nurse told him, "Don't worry, she won't feel any pain." Dr. Anand replied, "But I know that babies do feel pain." The nurse smiled at him condescendingly and said, "You're just being a dad." With that rebuke, Dr. Anand remained silent as the nurse drew the blood.

Sometimes, I think back with regret on how aggravated I've become while

looking into an uncooperative toddler's ears or listening to a screaming baby. Faced with distraught children, it's easy for parents and pediatricians to get frustrated, but our own tension can send kids into a downward spiral. It's not hard, though, to do blood tests or give vaccines painlessly. No major medical breakthroughs are required, and the costs are minimal. As I've learned, you just need to prepare.

Recently, for example, an infant in my pediatric cardiology clinic needed a blood test, and her mother requested that it be as pain-free as possible. Before the appointment, as I often do, I called in a prescription for a topical anesthetic cream called EMLA (the cost at a local pharmacy was \$2 per dose), and the mother applied it to her baby's arm an hour in advance of our visit. The cream gets absorbed into the skin so the prick doesn't hurt.

A few minutes before the needle stick, we gave the baby a pacifier dipped in sugar water, which is thought to promote the release of pleasure-producing endorphins in the brain. (Research has shown that sugar solutions alone eliminate needle pain in up to 80 percent of infants.) We then wrapped her in a blanket, exposed her arm, and her mother distracted her with pictures on her cell phone. Our nurse tied on a small tourniquet and drew a quarter-teaspoon of blood.

Remarkably, the baby never cried. Not only did we spare her from pain, but in some small way, I think we also enhanced their mother-child bond. Instead of feeling helpless, her mother felt empowered because she had successfully comforted her daughter.

What Parents Can Do

Doctors are increasingly aware of simple techniques that make a big difference. But parents may have to push to make sure physicians use them.

For routine checkups A few days before your appointment, call your pediatrician to ask about pain-free strategies. For shots and blood draws—most children have about two dozen before kindergarten—there are several options to

make them less painful and scary (see “Take the Sting Out of Shots”). Also ask how you can help the doctor or nurse by comforting your child using techniques like swaddling, breastfeeding, distraction, and proper positioning.

In case of common infections With ailments like ear infections or strep throat, it often takes days for antibiotics to relieve the painful symptoms. Ear infections are particularly distressing for babies (imagine suddenly descending in an airplane and not being able to pop your ears), yet studies have found that many are never given prescription anesthetic ear drops like Auralgan or even acetaminophen. Since most over-the-counter children's pain medicines underestimate the most effective dose (an attempt to err on the side of caution, in case families make a mistake), ask your doctor to calculate how much you can give your child based on his weight. For at least the first day of the illness, give medicine on a regular schedule.

During hospital procedures If your child needs minor surgery, a fracture setting, or a bone-marrow biopsy, ask if the hospital has a “pediatric sedation team.” As a medical student, I once pushed a large needle through a baby's pelvis to extract bone marrow, using no anesthesia. Today, there's no excuse for that. The sedation team can give your child short-acting medication to make him fall asleep and feel little pain, without needing general anesthesia. Certain drugs can even erase short-term memory, so he'll forget the entire procedure.

Immediately after surgery, some hospitals use nurse- or parent-controlled analgesia, which releases small pulses of precisely dosed narcotics like morphine through an IV. (For decades, doctors avoided using narcotics in babies, but we now know they're safe when used properly.) Request that your doctors give you a clear plan to manage your child's pain after you go home.

Like many parents, I wish that all children could be spared from harm. Of course, that's an impossible dream. But the avoidable pain of needles in the emergency room or pediatrician's office is certainly a good place to start. □