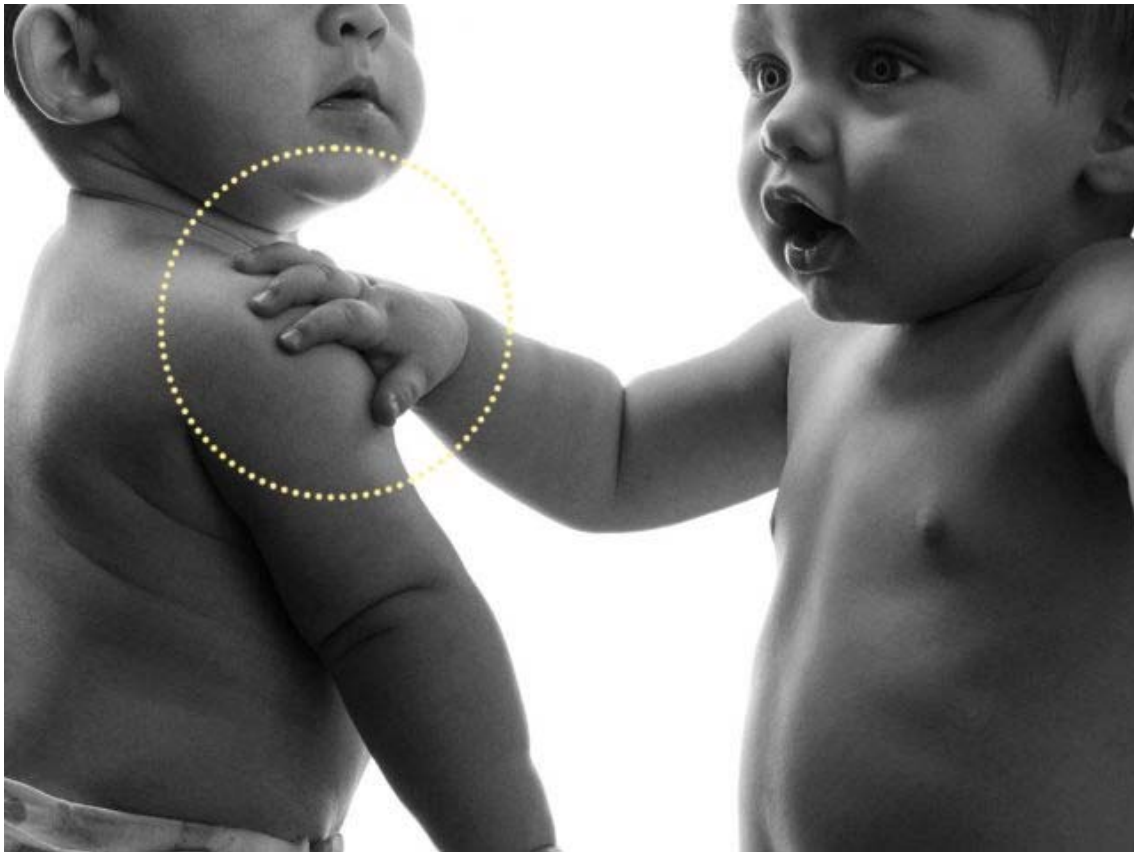


The Power of Touch

Touch is the first sense we acquire and the secret weapon in many a successful relationship. Here's how to regain fluency in your first language.

By Rick Chillot, published on March 11, 2013 - last reviewed on February 23, 2016



You're in a crowded subway car on a Tuesday morning, or perhaps on a city bus. Still-sleepy commuters, lulled by vibrations, remain hushed, yet silently broadcast their thoughts.

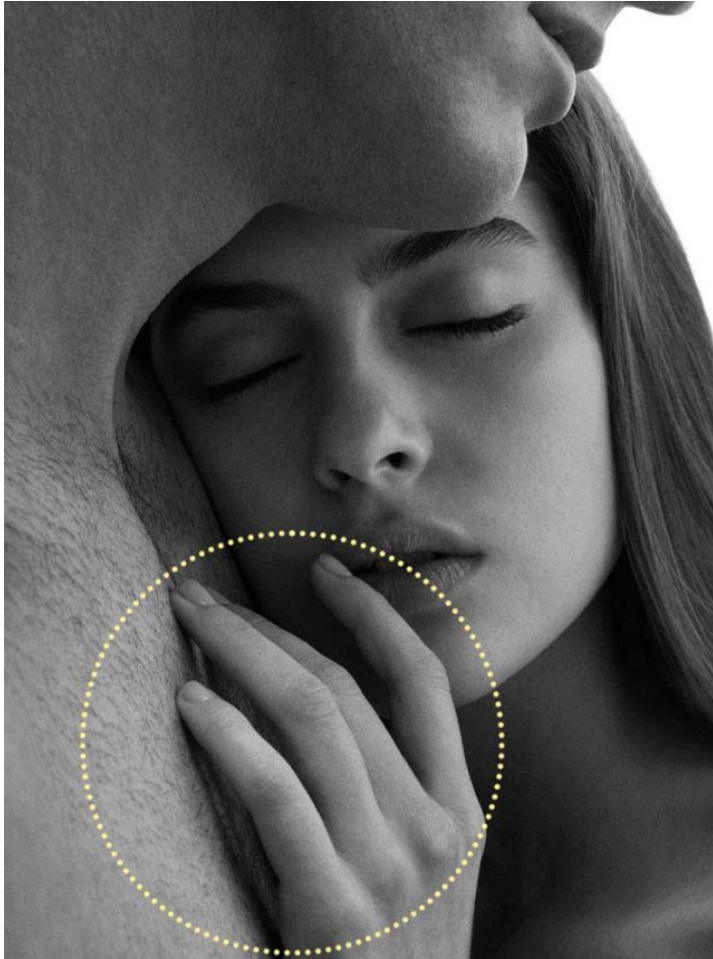
A toddler in his stroller looks warily at his fellow passengers, brows stitched with concern. He turns to Mom for reassurance, reaching out a small hand. She quietly takes it, squeezes, and releases. He relaxes, smiles, turns away—then back to Mom. She takes his hand again: squeeze and release.

A twenty-something in a skirt and blazer sits stiffly, a leather-bound portfolio on her lap. She repeatedly pushes a few blonde wisps off her face, then touches her neck, her subconscious movements both revealing and relieving her anxiety about her 9 a.m. interview.

A couple propped against a pole shares messages of affection; she rubs his arms with her hands, he nuzzles his face in her hair.

A middle-aged woman, squished into a corner, assuredly bumps the young man beside her with some elbow and hip. The message is clear; he instantly adjusts to make room.

Probing our ability to communicate nonverbally is hardly a new psychological tack; researchers have long documented the complex emotions and desires that our posture, motions, and expressions reveal. Yet until recently, the idea that people can impart and interpret emotional content via another nonverbal modality—touch—seemed iffy, even to researchers, such as DePauw University psychologist Matthew Hertenstein, who study it. In 2009, he demonstrated that we have an innate ability to decode emotions via touch alone. In a series of studies, Hertenstein had volunteers attempt to communicate a list of emotions to a blindfolded stranger solely through touch. Many participants were apprehensive about the experiment. "This is a touch-phobic society," he says. "We're not used to touching strangers, or even our friends, necessarily."



But touch they did—it was, after all, for science. The results suggest that for all our caution about touching, we come equipped with an ability to send and receive emotional signals solely by doing so. Participants communicated eight distinct emotions—anger, fear, disgust, love, gratitude, sympathy, happiness, and sadness—with accuracy rates as high as 78 percent. "I was surprised," Hertenstein admits. "I thought the accuracy would be at chance level," about 25 percent.

Previous studies by Hertenstein and others have produced similar findings abroad, including in Spain (where people were better at communicating via touch than in America) and the U.K. Research has also been conducted in Pakistan and Turkey. "Everywhere we've studied this, people seem able to do it," he says.

Indeed, we appear to be wired to interpret the touch of our fellow humans. A study providing evidence of this ability was published in 2012 by a team who used fMRI scans to measure brain activation in people being touched. The subjects, all heterosexual males, were shown a video of a man or a woman who was purportedly touching them on the leg. Unsurprisingly, subjects rated the experience of male touch as less pleasant. Brain scans revealed that a part of the brain called the primary somatosensory cortex responded more sharply to a woman's touch than to a man's. But here's the twist: The videos were fake. It was always a woman touching the subjects.

The results were startling, because the primary somatosensory cortex had been thought to encode only basic qualities of touch, such as smoothness or pressure. That its activity varied depending on whom subjects believed was touching them suggests that the emotional and social components of touch are all but inseparable from physical sensations. "When you're being touched by another person, your brain isn't set up to give you the objective qualities of that touch," says study coauthor Michael Spezio, a psychologist at Scripps College. "The entire experience is affected by your social evaluation of the person touching you."

If touch is a language, it seems we instinctively know how to use it. But apparently it's a skill we take for granted. When asked about it, the subjects in Hertenstein's studies consistently underestimated their ability to communicate via touch—even while their actions suggested that touch may in fact be more versatile than voice, facial expression, and other modalities for expressing emotion.

"With the face and voice, in general we can identify just one or two positive signals that are not confused with each other," says Hertenstein. For example, joy is the only positive emotion that has been reliably decoded in studies of the face. Meanwhile, his research shows that touch can communicate *multiple* positive emotions: joy, love, gratitude, and sympathy. Scientists used to believe touching was simply a means of enhancing messages signaled through speech or body language, "but it seems instead that touch is a much more nuanced, sophisticated, and precise way to communicate emotions," Hertenstein says.

It may also increase the speed of communication: "If you're close enough to touch, it's often the easiest way to signal something," says Laura Guerrero, coauthor of *Close Encounters: Communication in Relationships*, who researches nonverbal and emotional communication at Arizona State University. This immediacy is particularly noteworthy when it comes to bonding. "We feel more connected to someone if they touch us," Guerrero notes.

There's no phrase book to translate the language of touch; if anything, experts have barely begun documenting its grammar and vocabulary. "We found that there are many different ways to indicate a given emotion through touch," Hertenstein notes. What's more, how a touch gets interpreted is very context dependent. "Whether we're at the doctor's office or in a nightclub plays a huge role in how the brain responds to the same type of contact," Spezio explains. Still, examining some of the notable ways that we communicate and bond through touch (and how we develop the capacity to do so) reveals the versatility of this tool and suggests ways to make better use of it. There's much to be gained from embracing our tactile sense—in particular, more positive interactions and a deeper sense of connection with others.

Learning the Language of Touch

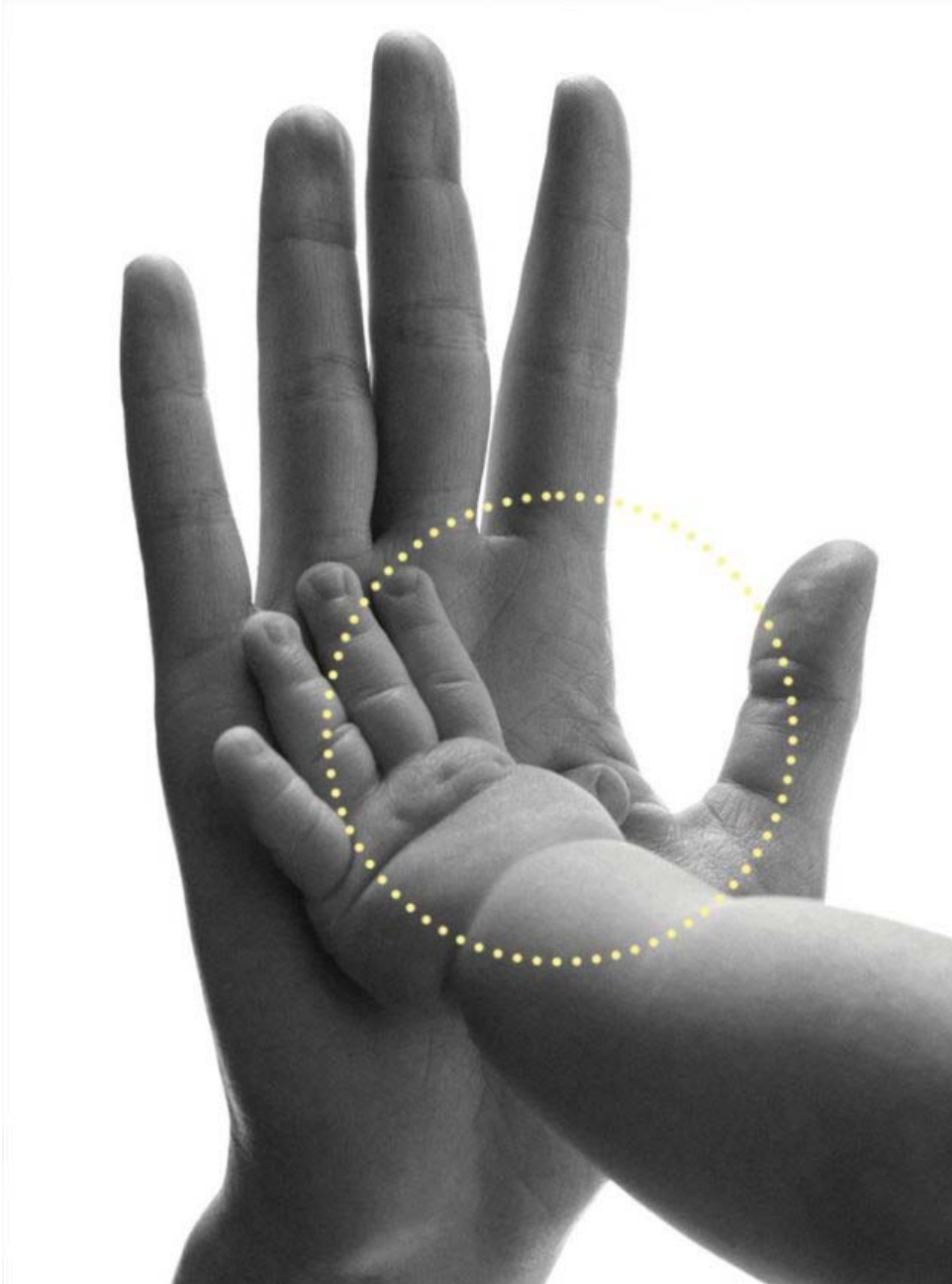
We begin receiving tactile signals even before birth, as the vibration of our mother's heartbeat is amplified by amniotic fluid. No wonder then that touch plays a critical role in parent-child relationships from the start: "It's an essential channel of communication with caregivers for a child," says San Diego State University School of Communication emeritus professor Peter Andersen, author of *Nonverbal Communication: Forms and Functions*.

A mother's touch enhances attachment between mother and child; it can signify security ("You're safe; I'm here") and, depending on the type of touch, [it can generate positive or negative emotions](#). (Playing pat-a-cake makes infants happy, while a sudden squeeze from Mom often signals a warning not to interact with a new object). Mom's touch even seems to mitigate pain when infants are given a blood test. University of Miami School of Medicine's Tiffany Field, director of the Touch Research Institute, has linked touch, in the form of massage, to a slew of benefits, including better sleep, reduced irritability, and increased sociability among infants—as well as improved growth of preemies.

[{Read More: The skin is a rich source of information about what we're thinking and feeling.}](#)

We're never touched as much as when we're children, which is when our comfort level with physical contact, and with physical closeness in general (what scientists call proxemics), develops. "The fact that there's a lot of cultural variation in comfort with touch suggests it's predominantly learned," Andersen says.

Warm climates tend to produce cultures that are more liberal about touching than colder regions (think Greeks versus Germans, or Southern hospitality versus New England stoicism). There are a number of hypotheses as to why, including the fact that a higher ambient temperature increases the availability of skin ("It pays to touch somebody if there's skin showing or they're wearing light clothing through which they can feel the touch," Andersen says); the effect of sunlight on mood ("It increases affiliativeness and libidinousness—lack of sunlight can make us depressed, with fewer interactions"); and migratory patterns ("Our ancestors tended to migrate to the same climate zone they came from. The upper Midwest is heavily German and Scandinavian, while Spaniards and Italians went to Mexico and Brazil. That influences the brand of touch").



What goes on in your home also plays a role. Andersen notes that atheists and agnostics touch more than religious types, "probably because religions often teach that some kinds of touch are inappropriate or sinful." Tolerance for touch isn't set in stone, however. Spend time in a different culture, or even with touchy-feely friends, and your attitude toward touch can change.

By the time we're adults, most of us have learned that touching tends to raise the stakes, particularly when it comes to a sense of connectivity. Even fleeting contact with a stranger can have a measurable effect, both fostering and enhancing cooperation. In research done back in 1976, clerks at a university library returned library cards to students either with or without briefly touching the student's hand. Student interviews revealed that those who'd been touched evaluated the clerk and the library more favorably. The effect held even when students hadn't noticed the touch.

More recent studies have found that seemingly insignificant touches yield bigger tips for waitresses, that people shop and buy more if they're touched by a store greeter, and that strangers are more likely to help someone if a touch accompanies the request. Call it the human touch, a brief reminder that we are, at our core, social animals. "Lots of times in these studies people don't even remember being touched. They just feel there's a connection, they feel that they like that person more," Guerrero says.

Just how strong is touch's bonding benefit? To find out, a team led by University of Illinois at Urbana-Champaign psychologist Michael Kraus tracked physical contact between teammates during NBA games (consider all those chest bumps, high fives, and backslaps). The study revealed that the more on-court touching there was early in the season, the more successful teams and individuals were by season's end. The effect of touch was independent of salary or performance, eliminating the possibility that players touch more if they're more skilled or better compensated.

"We were very surprised. Touch predicted performance across all the NBA teams," says Kraus. "Basketball players sometimes don't have time to say an encouraging word to a teammate; instead, they developed this incredible repertoire of touch to communicate quickly and accurately," he explains, adding that touch can likely improve performance across any cooperative context. As with our primate relatives, who strengthen social bonds by grooming each other, in humans, "touch strengthens relationships and is a marker of closeness," he says. "It increases cooperation but is also an indicator of how strong bonds are between people."

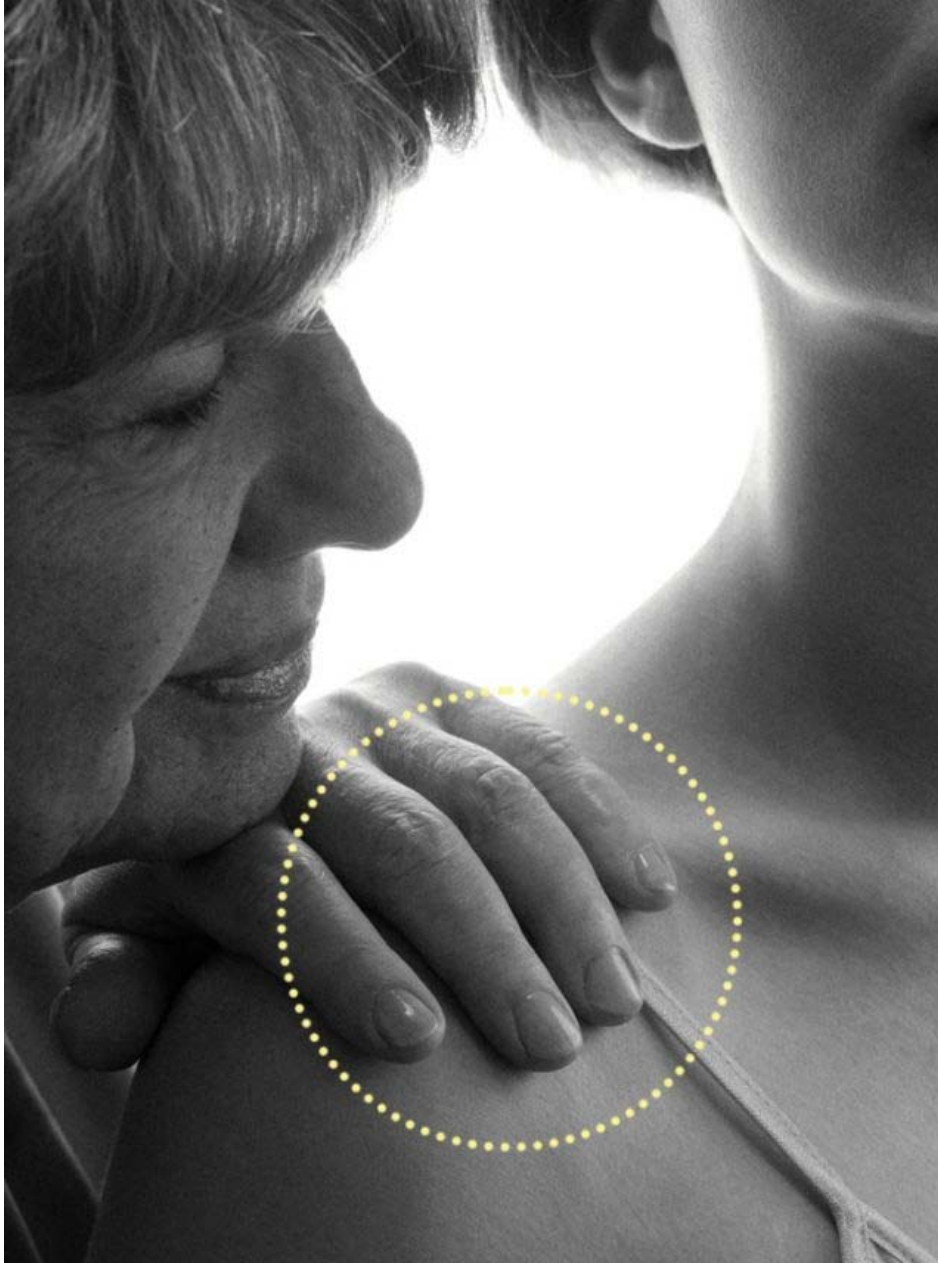
If a post-rebound slap on the back or the brush of a hand while delivering a bill can help us all get along a bit better, it may be because "when you stimulate the pressure receptors in the skin, you lower stress hormones," says the Touch Research Institute's Field. At the same time, warm touch stimulates release of the "cuddle hormone," oxytocin, which enhances a sense of trust and attachment.

The release also helps explain our propensity for self-caressing, which we do hundreds of times each day as a calming mechanism. "We do a lot of self-touching: flipping our hair, hugging ourselves," Field notes. Other common behaviors include massaging our foreheads, rubbing our hands, or stroking our necks. Evidence supports the idea that it's effective: Self-massage has been shown to slow the heart rate and lower the level of the stress hormone cortisol.

A Touch of Love

Every evening at bedtime, DePauw's Hertenstein gives his young son a back rub. "It's a bonding opportunity for the two of us. Oxytocin levels go up, heart rates go down, all these wonderful things that you can't see." Moments like these also reveal the reciprocal nature of touch, he says: "You can't touch without being touched. A lot of those same beneficial physiological consequences happen to me, the person doing the touching."

In fact, when we're the ones initiating contact, we may reap all the same benefits as those we're touching. For example, Field's research has revealed that a person giving a massage experiences as great a reduction in stress hormones as the person on the receiving end. "Studies have shown that a person giving a hug gets just as much benefit as a person being hugged," she adds.



Moreover, touching another person isn't just a one-way street when it comes to signaling; aside from sending them a message, it reveals a great deal of information about their state of mind, Hertenstein notes. Are they open to touch or do they pull away? Are they relaxed or tense? Are they warm—or perhaps cold and clammy? "Sometimes I'll touch my wife and can tell instantly—even if my eyes are closed—that she's stressed," he says. "You can sense that through muscle tightness and contraction, and this kind of information can guide our behavior with that person—it influences what we think, how we perceive what they say."

{Read More: How the physical sensations of objects we touch influence our more abstract feelings.}

Perhaps because touch affects both the person being touched and the one doing the touching, it is one of the most fundamental ways of fostering and communicating intimacy in a romantic relationship. One paper proposed a sequence of 12 behaviors of increasing intimacy that couples generally follow:

After the first three (eye-to-body contact, eye-to-eye contact, and speaking), the remaining nine involve touching (starting with holding hands, then kissing, and eventually sexual intimacy). "Touch functions a bit differently depending on the stage of the relationship," says Guerrero. "In the beginning, it's kind of exploratory. Will the other person reciprocate if I touch?" As the relationship progresses, touching begins to spike. "You see lots of public touch," she notes, "people holding hands the whole time they're together or with their arms around each other's shoulders. It signals they're intensifying the relationship."

But it would be a mistake to think that the amount of touching couples do continues to follow an escalating trajectory. Research involving observation of couples in public and analysis of their self-reports shows that the amount of touching rises at the beginning of a relationship, peaks somewhere early in a marriage, and then tapers off. Over time romantic partners adjust the amount of touching they do, up- or downshifting their behavior to move closer to their significant other's habits. Inability to converge on a common comfort zone tends to derail a relationship early on, while among couples in long-term marriages, touching reaches an almost one-to-one ratio.

While couples who are satisfied with each other do tend to touch more, the true indicator of a healthy long-term bond is not how often your partner touches you but how often he or she touches you in *response* to your touch. "The stronger the reciprocity, the more likely someone is to report emotional intimacy and satisfaction with the relationship," Guerrero says. As with many things in relationships, satisfaction is as much about what we do for our partner as about what we're getting.

The Laws of Social Contact

The most important things we reveal through touch: "probably our degree of dominance and our degree of intimacy," Andersen says. Take, for example, the handshake, one of the few situations in which it's OK to make prolonged contact with a stranger. As such, it's an important opportunity for sending a message about yourself. "A limp handshake signifies uncertainty, low enthusiasm, introversion," Andersen says, while a viselike grip can be taken as a sign that you're trying to dominate. "You want to have a firm but not bone-crushing handshake," he advises, since it's better to be perceived as overly warm than as a cold fish. "We like people to have a kind of medium-high level of warmth," Andersen says. "A person who touches a lot says, 'I'm a friendly, intimate person.' More touch-oriented doctors, teachers, and managers get higher ratings."

Still, outside of close relationships, the consequences of sending the wrong message also increase. "Touchy people are taking some risk that they might be perceived as being over-the-top or harassing," says Andersen. "Physical contact can be creepy; it can be threatening." Context matters, which is why we have rules about whom we can touch, where, and when. "Generally, from the shoulder down to the hand are the only acceptable areas for touch," at least between casual acquaintances, according to Andersen. "The back is very low in nerve endings, so that's OK too."



Of course, there are other contextual considerations as well. Different cultures and individuals have different tolerance levels for touch. Same-sex and opposite-sex touches have different implications. Then there's the quality of the touch, the duration, the intensity, the circumstances. "It's a complex matrix," Andersen says. A quick touch and release—like a tap on a cubicle mate's shoulder to get her attention—no problem. But a stroke on the shoulder could be easily misinterpreted. ("Most cases of sexual harassment involve stroking touches," notes Andersen.)

A touch will naturally seem more intimate if it is accompanied by other signals, such as a prolonged gaze, or if it is held an instant too long. Meanwhile, a squeeze on the arm could be a sign of sympathy or support, but if it doesn't end quickly and is accompanied by intense eye contact, it can come across as a squeeze of aggression. Environment changes things too: On the playing field, a man might feel comfortable giving his teammate a pat on the butt for a job well done, but that congratulatory gesture wouldn't do too well in the office.

Really, the only rule that ensures communicating by touch won't get you into trouble is this: Don't do it. Which is likely what it says in the employee handbook for your workplace. Still, leaving your humanity behind every time you leave home isn't very appealing. Andersen's slightly less stringent guidelines for touch: Outside of your closest relationships, stick to the safe zones of shoulders and arms (handshakes, high fives, backslaps), and in the office, it's always better for a subordinate, rather than a superior or manager, to initiate.

If there's a *most* appropriate time to communicate via touch, it's probably when someone needs consoling. "Research shows that touch is the best way to comfort," says Guerrero. "If you ask people how they'd comfort someone in a given situation, they tend to list pats, hugs, and different kinds of touch behaviors more than anything else. Even opposite-sex friends, for example, who usually don't touch a lot so they won't send the wrong signals, won't worry about being misinterpreted," she says.

Maybe that's because there are times—during intense grief or fear, but also in ecstatic moments of joy or love—when only the language of touch can fully express what we feel.

Further Reading:

Surface Impact: How the physical sensations of objects we touch influence our more abstract feelings.

What Your Skin Reveals: The skin is a rich source of information about what we're thinking and feeling—no touch required.

Photos by Henry Leutwyler

<https://www.psychologytoday.com/articles/201303/the-power-touch>