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In Brief

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Getting even



Revenge is indeed sweet, at least according to research published in the [Journal of Personality and Social Psychology](#). Researchers asked 156 participants to write a personal essay and then swap the essays with a fictitious virtual partner to get "feedback" from peers. One group received made-up, unkind feedback like, "this is one of the worst essays that I have EVER read." Afterward, the participants were allowed to stick pins in a virtual voodoo doll that represented the unkind reader. Researchers measured participants' moods before and after they used the voodoo doll, and found that using the voodoo doll significantly improved participants' moods. In fact, after getting this "revenge," participants who received the nasty feedback were in no worse mood than those who received kind feedback.

Emotions linger

Emotional experiences can induce brain states that linger even after the experience has passed, affecting memory during that time period, finds research in [Nature Neuroscience](#). Researchers used fMRI to measure brain activity as participants viewed a series of emotionally affecting pictures and then, about 10 to 30 minutes later, a series of nonemotional images. A different group of participants viewed the nonemotional images first, then the emotional ones. When, six hours later, the participants took a memory test, those who saw the emotional images first remembered the neutral images better. The fMRI data also suggested that brain areas linked to emotion remained active as much as 30 minutes after patients saw the emotional pictures.

Pot-smoking trends



Marijuana use went up among teens in Washington after the state legalized the drug, finds a study in [JAMA Pediatrics](#), even as teen marijuana use declined nationwide during that time. Researchers looked at data collected between 2010 and 2015 from 253,902 teens in Washington and Colorado, as part of the national Monitoring the Future study. Among eighth- and 10th-graders in Washington, marijuana use increased 2 percent from 2010 to 2012 and 4.1 percent from 2013 to

2015. In Colorado, however, teen use did not increase significantly after legalization. The researchers posit that might be because Colorado had a larger medical marijuana dispensary system and more advertising even before recreational use was legalized.

Resting brain

Small areas of the brain cycle in and out of a sleep-like, low-activity state all the time, even when we are awake, suggests research in [Science](#). Scientists used electrodes to measure activity in small, targeted areas of neurons in a monkey's visual cortex as the monkey watched for changes in portions of its visual field. When the monkey was paying attention to one particular spot, neurons in the area associated with that portion of the visual field began spending more time in the "awake" state, and when the monkey's attention shifted elsewhere, the neurons spent more time in the "sleep" state. Such cycling could allow neurons in areas we are not using to conserve energy, the researchers hypothesize.

Skipping grades

Gifted students can benefit from skipping grades ("acceleration") and from being grouped with peers with similar skills ("ability grouping"), finds a meta-analysis in the [Review of Educational Research](#). Researchers reviewed 125 studies on acceleration and 172 on ability grouping, spanning 100 years of research. They found that gifted students who skipped a grade outperformed their nonaccelerated peers. Gifted students also benefited from most types of ability grouping: Within-class grouping helped them (breaking one classroom into smaller work groups based on ability), as did cross-grade subject grouping (grouping students from different grade levels together to learn a particular subject). However, between-class grouping (assigning students into high-, average- or low-ability classrooms) did not provide a benefit.

Fit parents, fit kids



Parents in underserved communities who are more physically active have preschool children who move more too, suggests research in the [American Journal of Preventive Medicine](#). Researchers fitted 1,000 low-income, mostly Latino and African-American parent/child pairs with accelerometers to measure their levels of physical activity for 12 hours a day for one week. The researchers found that there was a positive association between the amounts of time that parents and their children spent doing moderate to vigorous physical activity each day, and the time their children spent. However, this association held only up to 40 minutes per day of activity by the parents; if parents' activity was greater than that, their children's activity actually appeared to decline.

Personality change

Psychotherapeutic interventions and medications can change a patient's personality, finds a meta-analysis in [Psychological Bulletin](#). Researchers analyzed 207 studies with more than 20,000 patients that tracked changes in personality traits during these interventions. They found that over an average time span of 24 weeks, patients became significantly less neurotic and, to a lesser degree, more extraverted than they were before the interventions.

Autism and stress

Many children with autism also suffer from gastrointestinal symptoms, such as constipation and stomach pain. Now, research in [Brain, Behavior, and Immunity](#) suggests that a heightened stress response may be partly to blame. Researchers studied 120 children with autism—51 who had gastrointestinal symptoms and 69 who did not. They measured the children's cortisol levels before and after a 30-second stress test, such as holding one's hand in icy water, and found that children with gastrointestinal symptoms had a greater cortisol response to the stressor than those without gastrointestinal symptoms.

A dog's life



Dogs pay attention to what their owners can see and adjust their behavior accordingly—but some breeds are more skilled at this than others, finds a study in the [Journal of Comparative Psychology](#). Researchers tested 187 dogs from 56 different breeds. First, owners trained the dogs to not eat a dog biscuit left on top of a plastic box. Then, the dogs and owners stood at opposite ends of an enclosure, arranged so that the dogs could see two dog biscuits, and could also see that their owner could only see one of the biscuits (the other was blocked by a barrier screen on the owner's side). The researchers found that ancient and hunting breeds were more likely to try to eat the biscuit that the owner couldn't see, suggesting that they were paying attention to their owner's perception. Shepherds and mastiffs, meanwhile, chose randomly.

'Fess up

Children's attitudes toward lying change as they age, and older children are more likely than younger children to view confessing to a misdeed as the right thing to do, finds a study in the [Journal of Experimental Child Psychology](#). Researchers asked 48 children, ages 4 to 9, to read vignettes in which children did something wrong, then either lied or confessed about the transgression. Then, the researchers asked the children how they would feel in that situation. The 4- and 5-year-olds were more likely to feel positively about lying and negatively about confession—they focused on the gains associated with lying, like avoiding punishment. The 7- to 9-year-olds focused more on negative emotions associated with lying, such as guilt, and felt better about confession.

Talking fast and slow

Speedy talkers might rattle off more words per minute than slow ones, but they don't convey any more information in that time, finds a study in *Cognition*. Researchers analyzed recordings of 2,400 phone conversations and 40 longer interviews. Fast talkers tended to use simpler syntax and more common words, while slow talkers used more complex syntax and rarer words that conveyed more information per word.

Baby's brain

The visual cortex of young infants is organized similarly to that of adults, according to research in *Nature Communications*. In the past it has been difficult to use fMRI to study babies because the machines are loud and require participants to stay still for long periods of time. The researchers adapted the fMRI device to make it more comfortable for infants by making the machine quieter and allowing the baby to recline in a car-seat-like contraption. They then scanned nine 4- to 6-month-old babies' brains as the babies watched videos of faces, natural scenes, scrambled scenes, human bodies and objects. They found that regions of the visual cortex responded preferentially to faces and scenes, with a spatial organization similar to adult brains.