

What is it that keeps most little kids from getting COVID-19? ^[1]

Young children have consistently been slow to catch and spread Covid-19. Experts have a few hunches why.

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EXCERPTS

On the way home from a jog one afternoon in early July, Dr. Silvia Chiang noticed her husband and 2½-year-old daughter playing outdoors with a handful of neighborhood kids and their moms in face masks. As someone who specializes in pediatric infectious diseases and has helped care for dozens of children with Covid-19, Chiang said she felt uneasy at one point.

“I think at the height of the epidemic here, I would have asked them not to do that, to come inside,” said Dr. Chiang, M.D., an assistant professor at the Warren Alpert Medical School of Brown University. “But at that time, Rhode Island had pretty good control of the virus. Case counts continued to drop. So, I felt a lot more comfortable.”

Not that she thought the risk was zero, just that it was fairly low. Plus, Dr. Chiang knew the parents of two of the kids, both doctors, and they, too, were conscientious in their protection measures.

Dr. Chiang’s post-jog decision reflects how many parents are thinking about the coronavirus and their children. Just weeks away from what some hope will be a return to school in the fall, many Americans are looking to new research findings and guidance — some of which suggest kids are less likely to get, spread or suffer from Covid-19 — and recalibrating the precautions they take.

So, how strict should parents be? Are babies and children in their toddler through primary school years somehow more able to fight off coronavirus infections, compared with adults? Is it OK if they don’t wear masks or social distance?

Experts still say if families live in a hot spot or a family member is vulnerable to a severe case of Covid-19, children should remain as dedicated as ever to disinfection routines, distancing from people outside the home, wearing a mask and washing their hands even more than they did before the pandemic.

Outside of those situations, parents can relax at least one of the most stringent and challenging measures they took earlier this year — without raising risk significantly: they no longer need to completely isolate their young children, Dr. Chiang said. Similar guidance is implicit in the reopening guidelines for schools released in late June by the American Academy of Pediatrics, or A.A.P., which advocates for “having students physically present in school.”

There are many hints and even some data showing that children fare better against the virus on a few levels than adults do. First, only 17 children under the age of 5 nationwide have died of Covid-19, according to data reported to the U.S. Centers for Disease Control as of July 11. That’s a little under a third the number in that age range who have died of the flu this year. And while a multi-system inflammatory syndrome, called MIS-C, affects some children infected with the coronavirus, it is rare and most recover from it.

Experts who study and treat children with the coronavirus remain cautious but say they’ve seen positive signals amid limited data on how children catch and spread the novel coronavirus.

“The findings currently are pointing to a likelihood that young children have a lower risk of becoming infected and maybe even a lower risk of transmitting,” Dr. Chiang said. “I think it’s an evolving situation, but I wouldn’t be surprised if those are the conclusions that we end up drawing.”

The American Academy of Pediatrics’ guidelines for reopening schools stated that children “may be less likely to become infected” with the coronavirus and to spread that infection.

What we know so far

While this is welcome news for parents, governmental and news media reports have raised concerns about the accuracy of data on adult infections and deaths, and for children. Undercounts are likely because tests can be difficult to obtain, results reportedly lag, and states’ data collection and reporting practices differ. Without widespread testing and large, random targeted samples of children, researchers and doctors are not confident of the true number of children who catch the coronavirus, said Mark Schleiss, M.D., a pediatric infectious diseases expert at the University of Minnesota Medical School.

In Iceland, a team of researchers tested 6 percent of the country's population for the coronavirus. Out of more than 848 children who responded to an invitation to participate in one part of the study, the team found no coronavirus infections in kids under 10 years old, even with elementary schools and day cares open at the time. The children were either less vulnerable to the virus or never exposed to it, the authors wrote.

Another way researchers have gauged whether children were less likely to catch the coronavirus was to track infections within households where at least one person had tested positive. Two studies in China found that children were less likely than adults to catch the virus from an infected person living with them. A third study showed no difference.

Some researchers hypothesize that the virus cannot make its way into the cells of younger children as well as it can into those of adults because children make fewer receptors, called ACE2, which is where the virus docks.

As children grow into adolescence and adulthood, they make more ACE2 receptors. Their risk for infection and sickness from the coronavirus would, theoretically, likely increase. The evidence for this hypothesis is limited. To establish a link, experts would have to demonstrate it in lab mice and then in large studies of people over time.

It remains unclear whether young children spread the coronavirus to other children and to adults, according to a handful of studies. (A recent study from South Korea found that unlike the case for children under 10, older children transmit the virus as well as adults do.)

"It certainly doesn't seem like young kids play a huge role in transmission, but it's early days in this pandemic. It's not conclusive yet that they don't," Dr. Chiang said.

One theory suggests that because children's smaller lungs do not push out as many droplets as adults' do, they also push out fewer droplets potentially containing the coronavirus, said Jeffrey Starke, M.D., a professor of pediatrics at Baylor College of Medicine in Houston who sees patients at Texas Children's Hospital.

Whether it's small lungs, less-welcoming cells or other factors, the reason for why kids may be more resilient to catching and spreading the virus is elusive. Even under the best of circumstances, it can take decades for researchers to understand how an infectious disease behaves in adults, let alone its nuances in children.

"With many health issues, children can get the short end of the stick and don't get studied until we figure out what's going on in adults," Dr. Schleiss said.

Weighing the risks for your family

Yet, just like Chiang when she saw the kids together in the street, some public-health experts are shifting and even loosening their thinking about isolating children and adopting a risk-benefit perspective.

"Any additional contact increases risk but we are facing a trade-off of what's best for our children," said Helen Jenkins, Ph.D., an assistant professor of biostatistics at Boston University.

For starters, rather than prohibiting children from playing together and eliminating all social risk, Dr. Chiang and the A.A.P. schools-reopening guidelines focus on reducing risk and state that outdoor play is safer than indoor play. Jenkins said her family now socializes with another cautious family. Their summer plans include outdoor playground and beach visits, but not museums.

Some families who initially tried going without sitters and nannies have relented, and public-health experts acknowledge that the strain was significant. Parents and nannies should have honest discussions about their expectations for mask-wearing and distancing. "But there is no way for a nanny to socially distance from a young kid she's taking care of," Dr. Chiang said. And there is no evidence that risk of transmission is lower for a younger nanny, she added.

Ultimately, parents have to weigh their threshold for risk when it comes to children's interactions with others. And that same advice applies to day care, summer camp or school in the fall. Parents should consider the demands of their work, whether any household member is at high risk for severe Covid-19, the status of the outbreak in their community and administrators' plans for keeping children and staffers at least in fixed and distanced groups. Also, look for policies requiring children and staffers to be screened for symptoms.

In other words, Dr. Chiang said, if the spread of coronavirus in your community is low, if administrators seem to be taking risk reduction seriously and if parents have to work from home or are essential workers, sending young kids to day care or school may make sense.

"The logistics of keeping kids out of school, but still trying to educate them, go far beyond just infectious diseases," Dr. Starke. "They go into economics, they go into social structure, and they go into families."

Dr. Chiang has the same decisions to make. When her daughter's day care reopened, she spoke with the facility's director about distancing, disinfection and other coronavirus-related policies. Statistics, family composition, and the age of her daughter also must be considered.

"With her being 2 1/2, the risk that she's going to have severe disease from Covid-19 or develop MIS-C is tiny," Dr. Chiang said. "We don't have any older family members living with us or in town, so we don't have to consider her getting infected at day care and infecting grandma and grandpa. And the benefits she gets from day care are amazing."

Dr. Starke's take is a little different. If he had young children now, given the current runaway outbreak in Texas, he would not let them stray far from home. "The virus doesn't make allowances for our coronavirus fatigue nor for our need for fellowship," he said. "The virus is looking for a place to jump from one person to another. That's it. And that's why distancing, masking, and hygiene work. If we do those three things, the virus literally has no place to go."

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