Health & Medicine

How Your Birth Month Influences Your Health

Fall 2015

In a study that is the largest of its kind ever conducted, a team of Columbia data scientists has shown that the month you were born helps determine your risk for asthma, ADHD, heart disease, and many other common medical problems. The study, which compared the birth dates and medical histories of 1.7 million people treated at New York–Presbyterian Hospital and Columbia University Medical Center between 1985 and 2013, gives medical researchers important new clues to understanding how prenatal and infant health can influence a person's lifetime risk of illness. It confirms the relationship between birth month and thirty-nine medical conditions already identified in smaller studies while identifying an additional sixteen conditions in which such a relationship exists.

"We've produced the most exhaustive catalog of these correlations yet, in order to help the scientific community come up with new ideas for investigating the roots of disease," says Nicholas Tatonetti, an assistant professor of biomedical informatics, who led the study.

Overall, the data indicates that people born in May have the lowest risk of disease, while people born in October and November have the highest. Tatonetti's analysis, consistent with previous research, shows that people born in late summer are prone to asthma, a connection that scientists have hypothesized stems from their having come into contact with humidity-loving dust mites as infants; and that people born in autumn are more likely to develop neurological conditions, an effect that some scientists suspect is related to their having gotten less sunlight, and hence too little vitamin D, in their infancy. Among Tatonetti's new discoveries is that the list of cardiovascular conditions linked to patients' birth dates is much longer than previously appreciated; he finds that people born between January 1 and April 30

are at greater risk of hypertension, atrial fibrillation, cardiomyopathy, congestive heart failure, and several other types of heart problems.

“What does that mean?” he asks. “Could it be related to the fact that expectant mothers are more likely to be fighting infections during the winter months? Could that be harming the development of their babies’ hearts in the womb? It’s unclear. This is one tiny piece of a complicated puzzle. But perhaps it will prompt medical researchers to investigate how seasonal factors may be obstructing the heart’s development. Once you identify those factors, you may be able to prevent future disease.”

Not all diseases will reveal their secrets in this way. In fact, Tatonetti and his research team, in the course of identifying correlations between birth month and fifty-five medical conditions, ruled out such correlations for more than 1,600 others.

Even when diseases do correlate with birth dates, this correlation represents a very small part of a person’s overall disease risk, says Tatonetti. Other factors, such as genetics, environmental exposures over a lifetime, and diet and exercise, are collectively much more important.

“While too strong to be the result of pure chance, the correlations that we found aren’t so large that anybody should worry about when they were born,” says Tatonetti. “In an era of big-data analysis, relatively subtle statistical blips can be useful for researchers. But October and November babies shouldn’t be losing sleep over this.”



Guide to school abbreviations

All categories >