

Increases in life expectancy in the UK have stalled and the slowdown is one of the biggest among 20 of the world's leading economies, the country's Office for National Statistics data shows.

Zika caused health problems for one in seven US babies

About one in seven babies exposed to Zika in the womb had health problems caused by the virus — including some medical complications that were not evident at birth and were identified only as the infants grew older, the US nation's top health agency reported.

The Centers for Disease Control and Prevention said the health issues possibly caused by Zika included birth defects — such as a small head size, brain and eye damage — and nervous system problems including seizures and vision and hearing loss, bradenton.com reported.

"The Zika story is not over," Peggy Honein, director of the CDC's Division of Congenital and Developmental Disorders, said during a conference call with reporters.

Zika emerged in Miami in the summer of 2016, the first place in the continental US to report local spread of the disease. By the summer of 2017, though, there were just two cases. No local Zika cases have been reported in 2018.

Honein said the CDC cannot say with certainty how many neuro-developmental problems, such as brain and eye damage, were caused by Zika infections in 2016 and 2017. But she added that the incidence of brain and eye damage was about 30 times higher in babies born to mothers who had Zika during pregnancy than it was in those babies who were not exposed to Zika in the womb.

"What makes this report unique," Honein said, "is we're looking at the health of these babies beyond what was observed at birth."

The CDC report released is the largest to date involving long-term health outcomes in babies born to mothers who had laboratory-confirmed evidence of Zika during pregnancy.

To conduct the study, the CDC examined 1,450

infants who were at least one year old by Feb. 1, 2018, and had some follow-up care. All of the children in the study were born in US territories with local spread of Zika in 2016 and 2017, including



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Puerto Rico, American Samoa, the US Virgin Islands, the Federated States of Micronesia and the Republic of Marshall Islands. No states were included in the study.

The new findings underscore the need for follow-up care of babies exposed to Zika before birth, said CDC Director Dr. Robert Redfield.

"We are still learning about the effects of Zika,

and it might be years before we fully understand the full spectrum of health outcomes," Redfield said.

"We do know that some babies may appear healthy at birth but may develop long-term health problems as they grow."

But follow-up care has been spotty for children born to mothers who had Zika during pregnancy, said Dr. Ivan Gonzalez, director of the Zika Response Team at the University of Miami Health System, a group of medical specialists who coordinate care for infants exposed to the virus before birth.

Gonzalez said the team monitors about 65 children born between 2016, when Florida began to monitor Zika infections, and 2018.

Ideally, Gonzalez said, the group should be tracking more children given the number of pregnant women with laboratory-confirmed Zika infections in Florida: a total of 479 since 2016, according to the Florida Department of Health. That number includes women who contracted the illness while traveling outside of Florida.

But persuading parents and pediatricians to follow CDC guidelines for follow-up care is proving difficult, said Gonzalez, who also serves as medical director of Florida's Zika Referral Center, a statewide program that connects infected patients to doctors.

"Because Zika has become last year's thing," he said, "nobody cares."

Gonzalez said parents and pediatricians who ignore follow-up care for children possibly exposed to Zika before birth risk missing early detection and interventions that could minimize the long-term effects of developmental problems, such as problems with vision, hearing and movement of their arms and legs.

New sensors to help doctors select effective cancer therapy

MIT scientists have developed new sensors that could help them analyze cancer cells and to check whether the cells are responding to a particular type of chemotherapy drug.

The sensors work by detect hydrogen peroxide inside human cells. The sensors could likewise be adjusted to screen individual patients' tumors to foresee whether such medications would be successful against them, techexplorist.com wrote.



Published by techexplorist.com

Hadley Sikes, an associate professor of chemical engineering at MIT said, "The same therapy isn't going to work against all tumors. Currently, there's a real dearth of quantitative, chemically specific tools to be able to measure the changes that occur in tumor cells versus normal cells in response to drug treatment."

Existing hydrogen peroxide sensors depend on proteins called transcription factors, taken from organisms and built to fluoresce when they respond with hydrogen peroxide. Scientists endeavored to utilize these in human cells however found that they were not delicate in the scope of hydrogen peroxide they were attempting to identify, which drove them to look for human proteins that could play out the assignment.

Scientists identified an enzyme called peroxidoxin that dominates most human cells' reactions with the molecule. One of this enzyme's many functions is sensing changes in hydrogen peroxide levels.

Scientists then changed the protein by adding two fluorescent particles to it — a green fluorescent protein toward one side and a red fluorescent protein at the opposite end. At the point when the sensor responds with hydrogen peroxide, its shape changes, bringing the two fluorescent proteins closer together.

The specialists can distinguish whether this move has happened by sparkling green light onto the cells: If no hydrogen peroxide has been identified, the gleam stays green; if hydrogen peroxide is available, the sensor shines red.

While experimenting with the sensor on two different types of cancer cells, scientists found that precisely disclosed that hydrogen peroxide levels were unchanged in the resistant cells but went up in the susceptible cells.

Sikes said, "There are two major uses for this sensor. One is to screen libraries of existing drugs, or compounds that could potentially be used as drugs, to determine if they have the desired effect of increasing hydrogen peroxide concentration in cancer cells. Another potential use is to screen patients before they receive such drugs, to see if the drugs will be successful against each patient's tumor."

She said, "You have to know which cancer drugs work in this way, and then which tumors are going to respond. Those are two separate but related problems that both need to be solved for this approach to have a practical impact in the clinic."

Sleeping more than eight hours a night may be deadly warning sign

It's well known that getting enough sleep is vital for staying healthy, but excessive snoozing looks to be linked to a higher risk of heart problems and even a higher mortality risk, according to new research.

That's not to say too much sleeping will directly kill you — but if you're spending a long time in bed it could be a sign or a symptom of an underlying health problem, or there's a chance it could be making existing issues worse, sciencealert.com wrote.

Now a team of researchers says we should pay more attention to oversleeping: Cutting it down to the recommended seven to eight hours a night might end up significantly reducing the risk of health problems later in life, they say.

"Our findings have important implications as clinicians should have greater consideration for exploring sleep duration and quality during consultations," said one of the team, Chun Shing Kwok.



Published by sciencealert.com

"If excessive sleep patterns are found, particularly prolonged durations of eight hours or more, then clinicians should consider screening for adverse cardiovascular risk factors and obstructive sleep apnea, which is a serious sleep disorder that occurs when a person's breathing is interrupted during sleep."

In other words, if doctors find their patients are spending a lot of time sleeping, that could be something worth looking into — particularly if the sleep isn't refreshing.

The researchers analyzed 74 previous studies that logged self-reported sleep duration and quality, as well as mortality and cardiovascular health. In total, the studies covered more than three million participants.

They found that an average sleep duration of 10 hours a night is linked with a 30-percent increase of premature death compared to getting seven hours a night.

An average of 10 hours of sleep also equated to a 56-percent increase in stroke mortality risk, and a 49-percent increase in cardiovascular disease mortality risk. Meanwhile, poor sleep quality was linked to a 44 percent increase in coronary heart disease rates.

Even across three million people, the study does have some limitations: Sleep habits were self-reported rather than measured in a lab, so may not be fully accurate. Plus, there might be underlying physical or mental conditions, not recorded in the studies, that had an effect on sleep patterns or risk patterns.

As a result, the researchers can't say more than eight hours of sleep causes an early death — just that it's something we should be watching out for as a potential warning sign.

Coaching parents may reduce child's obesity

Changing the way that parents interact with their infants could help combat child obesity, a US study suggested.

New mothers were offered ways of responding to babies' needs, including avoiding comforting with food, BBC wrote.

By the age of three, children exposed to so-called 'responsive parenting' had lower body mass index (BMI).

A UK child health expert said the study showed a small, early intervention could have long-term benefit.

'Tough nut'

Eating and sleeping behaviors are established early.

And if food is used to soothe or reward in infants, rather than just when they are hungry, that child may then use food to soothe their distress in later life and it could lead to them being obese.

In the study, published in the Journal of the American



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Medical Association (JAMA), nurses advised 279 first-time mothers — in their homes in the first six months after birth, and at a clinic at one and two years — on how to respond to their child's needs.

The team focused on mothers because they tend to have the leading role in caring for infants in their first months and years,

The advice included instructions on:

- Sleep routines
- Alternatives to feeding for calming a fussy infant

- Recognizing signals from the child of being hungry or full
- Focusing on physical activities

The children were then checked at the age of three. Those whose mothers had been coached in responsive parenting techniques were found to have lower BMIs. Girls were affected more than boys by the intervention.

Researchers will continue to monitor them up to the age of nine.

Ian Paul, from Penn State

University, who led the study, said it was about coaching the mother to "recognize their child's cues and needs", and respond with a 'developmentally appropriate response in a prompt fashion'.

"With such high rates [of obesity] already among toddlers, it made sense during such a developmentally important time of infancy to begin to establish healthy behaviors."

"Based on our growth charts, 20-25 percent of two- to five-year-olds are already overweight or obese. It's a major problem, a tough nut to crack."

"Children who are overweight or obese at an early age have a much increased risk of staying overweight or obese as they get older."

Reinforcement

But a 'lifelong approach' was needed to break the obesity cycle.

"Overweight children become

overweight parents who have overweight children... so where in the cycle do you intervene?"

"In our current environment, there needs to be a lifelong approach."

Figures in the UK show a similar problem.

Nearly a quarter of children in England are obese or overweight by the time they start primary school and a third by the time they leave aged 11.

Professor Neema Modi, president of the Royal College of Paediatrics and Child Health (RCPCH), said: "This shows that you can achieve small but sustained impact from an intervention that starts early in infancy, and that the effect carries through to three years."

"The real question for policy makers is what can you do to sustain this?"

"We know that the power of an early intervention is going to decline with time."

"How can we reinforce the good beginning?"

Drive for selfie perfection may be bad for health



TOOKAPIC/PIXABAY

Photo-editing tools that make people look more perfect online than in real life may be a health threat, medical experts warn.

The tidal wave of altered photos on social media is changing perceptions of beauty. And that can trigger a preoccupation with appearance that leads to risky efforts to hide perceived flaws, researchers suggest. Those efforts include behaviors like skin altering and even plastic surgery, UPI wrote.

This condition — called body dysmorphic disorder — affects about two percent of people, research showed.

Studies have found that teen girls who alter their social media photos tend to be

more concerned with their body appearance, and those with dysmorphic body image use social media for validation, according to the authors of a report published Aug. 2 in JAMA Facial Plastic Surgery.

Other studies have found that 55 percent of plastic surgeons have seen patients who want to look better in selfies.

"A new phenomenon called 'Snapchat dysmorphia' has popped up, where patients are seeking out surgery to help them appear like the filtered versions of themselves," said the new report's coauthor, Dr. Neelam Vashi. She's the director of the Ethnic Skin Center at Boston Medical Center and Boston University School of Medicine.

The authors of the report warn that surgery may worsen, not improve, body dysmorphic disorder in such patients. Mental health treatment is a better remedy, they advised.

"Filtered selfies can make people lose touch with reality, creating the expectation that we are supposed to look perfectly primped all the time," Vashi said in a medical center news release.

"This can be especially harmful for teens and those with body dysmorphic disorder, and it is important for providers to understand the implications of social media on body image to better treat and counsel our patients," she said.