The number of privately insured U.S. women ages 15 to 44 years who filled a prescription for a medicine to treat attention deficit/hyperactivity disorder (ADHD) increased 344% between 2003 and 2015, according to a report in the Centers for Disease Control and Prevention’s *Morbidity and Mortality Weekly Report*. For each year from 2003 through 2015, researchers examined private insurance claims for 2.3 million to 6.8 million women ages 15 to 44 years to see how many of those filled ADHD medicine prescriptions from outpatient pharmacies. Here are the main findings:

- From 2003 to 2015, there was a 344% increase in women ages 15 to 44 years who filled a prescription for an ADHD medicine.
- ADHD medicine prescriptions increased for all included age groups (subgroups analyzed by age in 5-year increments) and in all U.S. geographic regions.
- The biggest increase was among women ages 25 to 29 years, where the number of women who filled a prescription for an ADHD medicine increased by 700% between
2003 and 2015. The second-largest increase (560%) was among women ages 30 to 34 years.

- In 2015, the most commonly filled ADHD medicines among this group of women were mixed amphetamine salts (Adderall; Teva, Petah Tikva, Israel), lisdexamfetamine (Vyvanse; Shire, Dublin, Ireland), and methylphenidate (Ritalin; Novartis, Basel, Switzerland).

Find the full report here: www.cdc.gov/mmwr/volumes/67/wr/mm6702a3.htm.

**Iodine Deficiency and Conception**

Women with moderate to severe iodine deficiency may take longer to achieve pregnancy compared with women with normal iodine levels, according to research published in *Human Reproduction*. Researchers analyzed data collected from 501 U.S. couples who were planning pregnancy from 2005 to 2009. Of the 467 women analyzed for the current study, iodine status was sufficient in 260 (55.7%), mildly deficient in 102 (21.8%), moderately deficient in 97 (20.8%), and severely deficient in 8 (1.7%). Researchers found that women who had moderate to severe iodine deficiency had a 46% lesser chance of becoming pregnant during each menstrual cycle compared with women who had sufficient iodine concentrations. Women in the mildly deficient range had a smaller, statistically insignificant increase in the time it took to conceive.

Find the study here: doi.org/10.1093/humrep/dex379.

**Trends and Inequalities in Cesarean Birth Rates**
Cesarean birth rates have increased in most countries during the past decade, according to a study published in *The BMJ*. This was particularly true among the richest fifth of countries, which indicates an increase in wealth-related inequality over time. Researchers suggest that this inequality might be due to a combination of inadequate access to emergency obstetric care among the poorest groups and high levels of cesarean use without medical indication in the richest groups. An international team of researchers led by the World Health Organization analyzed data from demographic and health surveys and multiple indicator cluster surveys conducted between 2010 and 2014 in 72 low- and middle-income countries. To look at the change in inequality over time, they included data from surveys done 10 years earlier, between 2000 and 2004, which were available for 28 of the 72 countries. Participants included women ages 15 to 49 years with a live birth during the 2 or 3 years preceding the survey. Data were presented separately for five subgroups, ranging from the poorest fifth to the richest fifth of household wealth. The researchers found large inequalities between countries, with national cesarean birth rates ranging from 0.6% in South Sudan to 58.9% in the Dominican Republic. Researchers also found that rates tended to be lower (<10%) in the poorer two fifths, likely representing underuse, and greater (>15%) in the richer two fifths, often representing overuse. Almost all (26 of 28) countries reported increases in cesarean birth rates over time. Find the study here: doi.org/10.1136/bmj.k55.

**ADHD Medications and Congenital Malformations**

Infants born to women who take a specific class of stimulant ADHD medications during pregnancy may have a slightly greater risk of congenital malformations, according to a study in
In this cohort study, researchers found a potential small increased risk of cardiac malformations associated with intrauterine exposure to methylphenidate; however, an increased risk was not found for amphetamines. Find the study here: doi.org/10.1001/jamapsychiatry.2017.3644.

**HPV Vaccine and Safe Sex**
Adolescent women who receive the human papillomavirus (HPV) vaccine are not more likely to engage in risky sexual behaviors, according to a study in the *Journal of Adolescent Health*. Researchers surveyed sexually inexperienced young women ages 13 to 21 years who were receiving the HPV vaccine and had attended at least three of five study visits. Participants were given surveys that assessed HPV vaccine–related risk perceptions and sexual initiation at each visit. After 30 months, 78% of the women had initiated sex. Researchers found that HPV vaccine–related risk perceptions were not associated with sexual initiation or age of sexual initiation. Find the study here: doi.org/10.1016/j.jadohealth.2017.09.008.

**Study of HIV Treatment in Pregnant Women**
The National Institutes of Health has launched a large international study to compare the safety and efficacy of three antiretroviral treatment regimens for pregnant women living with HIV and the safety of these regimens for their infants. Researchers will evaluate the current preferred first-line regimen for pregnant women recommended by the World Health Organization and two regimens containing newer antiretroviral drugs that are becoming more widely used. The study
will provide data on the use of these newer drugs during pregnancy, helping ensure that women living with HIV and their infants receive the best available treatments. The first participants in the new clinical trial have begun receiving treatment at research sites in Zimbabwe. Find more information about the study here: clinicaltrials.gov/ct2/show/NCT03048422.

Preventing Cognitive Decline

Enhanced lifestyle counseling prevents cognitive decline—even in people who are carriers of the \textit{APOE4} gene, a common risk factor of Alzheimer’s disease—according to a study published in \textit{JAMA Neurology}. The 2-year FINGER trial involved adults ages 60 to 77 years with risk factors for memory disorders who lived in Finland. Study participants were divided into two groups: one was given regular lifestyle counseling, and the other was given enhanced lifestyle counseling. Enhanced counseling involved nutrition counseling, physical and cognitive exercises, and support in managing the risk of cardiovascular diseases. Earlier findings from the FINGER trial have shown that the regular lifestyle counseling group had a significantly increased risk of cognitive and functional impairment compared with the intervention group (i.e., the group receiving enhanced counseling). Now researchers have analyzed whether the presence of the \textit{APOE4} gene affected the intervention results. The analysis included 1,109 persons, and 362 were carriers of the \textit{APOE4} gene. Researchers found that enhanced lifestyle counseling prevented cognitive decline despite the presence of the risk gene. Analyses carried out within the groups also indicate that the intervention results might even be better in carriers of the \textit{APOE4} gene. Find the study here: doi.org/10.1001/jamaneurol.2017.4365.
Carbohydrate Intake and Neural Tube Defects

Diets that reduce or eliminate carbohydrates could increase the risk of having infants with neural tube birth defects, according to a study published in *Birth Defects Research*. Researchers found that women with low carbohydrate intake are 30% more likely to have pregnancies affected by neural tube defects compared with women who do not restrict their carbohydrate intake. The study authors reported that dietary intake of folic acid among women with restricted carbohydrate intake was less than half that of other women. The connection is thought to be from reduced intake of enriched grain products that are fortified with folic acid, which is essential to minimize the risk of neural tube defects. The Centers for Disease Control and Prevention recommends that all women who may become pregnant take a daily multivitamin with at least 400 µg of folic acid every day before and during pregnancy. However, because almost half of all pregnancies in the United States are unplanned, many women do not initiate folic acid supplementation until later in pregnancy, after a neural tube defect may have occurred. This makes fortified foods an important source of folic acid for women who may become pregnant.

Find the study here: doi.org/10.1002/bdr2.1198.

Predicting Fractures in Postmenopausal Women

Peak bone mass and density may play a more important role in fragility fractures than bone loss, say researchers in the *Journal of Bone and Mineral Research*. When investigators compared initial bone parameters with changes in those parameters over time in postmenopausal women, they found that initial measurements were significantly associated with women’s risk of fracture.
Rates of changes in bone density, microarchitecture, and strength were similar between the fracture and nonfracture groups. The study’s senior author suggests that bone strength can be better assessed and monitored through use of high-resolution imaging in addition to computer methods. Find the study here: doi.org/10.1002/jbmr.3347.

**Irritable Bowel Syndrome Relief**

Vitamin D supplements could help ease painful irritable bowel syndrome (IBS) symptoms, according to researchers in the *European Journal of Clinical Nutrition*. Researchers reviewed and integrated all available research on vitamin D; they also assessed the possible benefits of vitamin D supplements on IBS symptoms. The study showed a high prevalence of vitamin D deficiency in people with IBS, regardless of their ethnicity. Researchers suggest that supplements may help ease symptoms such as abdominal pain, bloating, diarrhea, and constipation, but they caution that more research is needed. Find the study here: doi.org/10.1038/s41430-017-0064-z.

**Vitamin Supplements and Autism Risk**

Women’s use of folic acid and multivitamin supplements before and during pregnancy appear to be associated with a reduced risk for autism spectrum disorder in children compared with the children of women who did not use supplements, according to a study published in *JAMA Psychiatry*. Researchers say, though, that this finding needs to be interpreted with caution because other factors could explain it. Folic acid is routinely recommended during pregnancy to avoid neural tube defects, but study findings about an association between maternal use of folic
acid and multivitamin supplements and risk of autism spectrum disorder in children have been inconsistent. Find the study here: doi.org/10.1001/jamapsychiatry.2017.4050.

Depression Prevention During Menopause
Hormone therapy may prevent the onset of depression symptoms in some women around menopause, say researchers writing in JAMA Psychiatry. They found that a year of hormone therapy was more effective than placebo at preventing the onset of depression symptoms among women without depression in the menopause transition and early postmenopause, a time in which risk of depression increases. This therapy is safest when it is given at the lowest dose for the shortest amount of time. In a randomized clinical trial, the study authors analyzed 172 women without depression between the ages of 45 and 60 years who were in perimenopause (the transition to menopause) or early postmenopause from 2010 to 2016. These women were given skin patches with estradiol or placebo for 12 months; oral progesterone was given every 3 months to women with the estrogen hormone patch, or identical placebo pills were given to women using the placebo patch. As a result, fewer women using the estrogen patch plus taking progesterone developed depression symptoms than those receiving placebos. Those women in the early menopause transition and those women with recent stressful life events showed the greatest mood benefit. Find the study here: doi.org/10.1001/jamapsychiatry.2017.3998.

Decrease in Infant Cardiac Deaths
Statewide implementation of mandatory policies to screen newborns for the most serious congenital heart defects is associated with decreased infant cardiac deaths, according to research published in *JAMA*. In this observational study, researchers conducted a before–after comparison of early infant deaths (between 24 hours and 6 months of age) from critical congenital heart disease or other congenital cardiac causes in states with mandatory versus nonmandatory screening policies. As of June 2013, eight states had implemented mandatory screening policies, five states had voluntary screening policies, and nine states had adopted but not yet implemented mandates. Researchers found a decrease in estimated infant cardiac death rates for states that implemented mandatory screening policies compared with states that did not; their findings support the use of statewide policies requiring newborn critical congenital heart disease screening as one means to reduce U.S. infant mortality. Find the study here: doi.org/10.1001/jama.2017.17627.

**Hormone Therapy and Chronic Conditions**

Hormone therapy is not recommended for prevention of chronic conditions such as heart disease, dementia, and stroke in postmenopausal women, says the U.S. Preventive Services Task Force (USPSTF). It recommends against the use of combined estrogen and progestin in postmenopausal women, or estrogen alone in postmenopausal women who have had a hysterectomy, to prevent chronic conditions. The USPSTF routinely makes recommendations about the effectiveness of preventive care services. This latest recommendation statement on the use of hormone therapy in postmenopausal women is an update from 2012, and it follows a review of evidence from clinical trials on the benefits and harms of hormone therapy taken orally.
Cervical Pessaries and Preterm Birth Prevention

Women with a short cervix may be able to prevent preterm birth by using a cervical pessary, say researchers writing in *JAMA*. This small silicone ring helps keep the cervix closed. In this randomized clinical trial, 300 women with a short cervix (25 mm or less) who had no history of spontaneous preterm birth (less than 34 weeks gestation) were split into two groups; half of the women (*n* = 150) had a cervical pessary inserted, and half did not. As a result, 11 women (7.3%) in the pessary group and 23 women (15.3%) in the control group experienced spontaneous preterm birth at less than 34 weeks gestation. Researchers caution that because the trial was conducted at one facility, there may be questions about the generalizability of the findings; future multicenter clinical trials would be necessary to confirm them. Find the study here: doi.org/10.1001/jama.2017.18956.

Oral Contraception and Cancer Risk

The beneficial effects of oral contraceptive use on ovarian and endometrial cancer risk are apparent across most lifestyle factors, according to a study in *JAMA Oncology*. Although oral contraceptive use is common, the influence on carcinogenesis is not fully understood. In this population-based cohort study of more than 100,000 predominantly postmenopausal women, risk reductions for ovarian cancer associated with increasing duration of oral contraceptive use were generally consistent across health behaviors. For endometrial cancer, the reductions were
strongest among current smokers, obese women, and those who exercised rarely; lack of associations with breast and colorectal cancer were consistent across health behaviors. Researchers observed the greatest risk reductions for endometrial cancer among women at risk for chronic diseases (e.g., smokers, those with obese body mass indexes). Find the study here: doi.org/10.1001/jamaoncol.2017.4942.

Eliminating Disparities in Preconception Health

Disparities in preconception health risk factors and health-promoting indicators highlight subpopulations that might benefit most from interventions that improve preconception health, according to Morbidity and Mortality Weekly Report. Researchers used data from the Behavioral Risk Factor Surveillance System (BRFSS) and the Pregnancy Risk Assessment Monitoring System (PRAMS) to collect and summarize data on 9 of 10 prioritized preconception health indicators: depression, diabetes, hypertension, current cigarette smoking, normal weight, and recommended physical activity (BRFSS data) and recent unwanted pregnancy, prepregnancy multivitamin use, and postpartum use of a most or moderately effective contraceptive method (PRAMS data). Heavy alcohol use was also an indicator, but those data were not available during the reporting period. Prevalence estimates of indicators representing risk factors were generally greatest among older women (35–44 years), non-Hispanic black women, uninsured women, and those residing in Southern U.S. states; prevalence estimates of health-promoting indicators were also generally lowest in these populations. Find the report here: www.cdc.gov/mmwr/volumes/67/ss/ss6701a1.htm.
New Data on Infant Mortality

In 2013 to 2015, 21 states (and the District of Columbia) had infant mortality rates that were significantly greater than the U.S. rate (5.89 per 1,000 live births), according to a National Center for Health Statistics data brief. There were 17 states with rates significantly lower than the national rate. Mississippi had the highest infant mortality rate (9.08 per 1,000 live births), and Massachusetts had the lowest rate (4.28). Some other key findings include the following:

- The lowest state mortality rates for infants of non-Hispanic White women occurred mostly in the West and Northeast.
- Midwestern states had 5 of the 9 highest mortality rates for infants of non-Hispanic Black women.
- For infants of Hispanic women, the mortality rate ranged from 3.94 (Iowa) to 7.28 (Michigan) per 1,000 live births.
- Alabama, Indiana, and Ohio had infant mortality rates that were greater than the national rate for each of the three racial and ethnic groups (Hispanic, non-Hispanic Black, and non-Hispanic White), as well as overall.
- California, New Jersey, and New York had rates that were lower than the national rate for each group and the overall U.S. rate.

Find the data brief here: www.cdc.gov/nchs/products/databriefs/db295.htm.

Maternal Glucose Levels and Congenital Heart Defects

Higher blood glucose levels early in pregnancy may increase the risk of congenital heart defects, even among women who do not have diabetes, according to a study published in *The Journal of*
Previous studies have addressed a link between nondiabetic mothers’ blood sugar levels and newborns’ heart defect risks; however, this study is the first to examine the earliest part of pregnancy, when the fetal heart is forming. The research team studied medical records from 19,107 mother–infant dyads between 2009 and 2015. The records included details of the women’s prenatal care, including blood test results and any fetal cardiac diagnoses made before or after birth. Infants with certain genetic diseases, those born from multiple pregnancies, and those whose mothers had extremely low or high body mass index measures were not included in the study. After excluding women who had diabetes before pregnancy or who developed it during pregnancy, the results showed that the risk of giving birth to a child with a congenital heart defect was elevated by 8% for every increase of 10 mg/dl in blood glucose levels in the early stages of pregnancy. Find the study here: doi.org/10.1016/j.jpeds.2017.10.046.

Influenza and Natural Immunity

People with higher levels of antibodies against the stem portion of the influenza virus hemagglutinin (HA) protein have less viral shedding when they get the flu, but they do not have fewer or less severe signs of illness, according to a new study published in mBio. HA sits on the surface of the influenza virus to help bind it to cells and features a head and stem region. Scientists only recently discovered that humans naturally generate anti-HA stem antibodies in response to flu infection, and this is the first study of its kind to evaluate preexisting levels of these specific antibodies as a predictor of protection against influenza. The findings could have implications for flu vaccine development, say researchers. Find the study here: doi.org/10.1128/mBio.02284-17.
Alcohol-Related Emergency Department Visits

The rate of alcohol-related visits to U.S. emergency departments (EDs) increased by nearly 50% between 2006 and 2014, especially among females and drinkers who are middle age or older, according to a study published in *Alcoholism: Clinical and Experimental Research*. Researchers analyzed data from the Nationwide Emergency Department Sample, the largest ED database in the United States and part of the Agency for Healthcare Research and Quality’s Healthcare Cost and Utilization Project. The research team assessed trends in ED visits between 2006 and 2014 involving acute and chronic alcohol consumption among individuals ages 12 years and older. The rate of all alcohol-related ED visits increased 47% between 2006 and 2014, which translates to an average annual increase of 210,000 alcohol-related ED visits. Other drug involvement increased the likelihood of admission for inpatient treatment. Find the study here:

doi.org/10.1111/acer.13559.
### New Resources

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<td>Academy of Breastfeeding Medicine’s 2017 Position Statement on Informal Breast Milk Sharing for the Term Healthy Infant</td>
<td>doi.org/10.1089/bfm.2017.29064.nks</td>
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<td>Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization</td>
<td>doi.org/10.15585/mmwr.rr6701a1</td>
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<td>American Academy of Nursing Position Statement: Full Practice Authority for Advanced Practice Registered Nurses Is Necessary to Transform Primary Care</td>
<td>doi.org/10.1016/j.outlook.2017.10.002</td>
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<td>American Academy of Nursing Position Statement: Reducing Fatigue Associated With Sleep Deficiency and Work Hours in Nurses</td>
<td>doi.org/10.1016/j.outlook.2017.10.011</td>
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<td>AWHONN Position Statement: Continuous Labor Support for Every Woman</td>
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<td>doi.org/10.1016/S1751-4851(17)30329-X</td>
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<td>doi.org/10.1016/S1751-4851(17)30269-6</td>
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