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Sources Searched: Medline, Embase, PsycINFO.

Dextroamphetamine for ADHD in Pregnancy

See full search strategy

1. Perinatal Outcomes of Women Diagnosed with Attention-Deficit/Hyperactivity Disorder: An Australian Population-Based Cohort Study

Author(s): Poulton A.S.; Armstrong B.; Nanan R.K.

Source: CNS Drugs; Apr 2018; vol. 32 (no. 4); p. 377-386

Publication Date: Apr 2018

Publication Type(s): Article

PubMedID: 29557079

Available at CNS Drugs - from ProQuest (Health Research Premium) - NHS Version

Abstract: Background: Attention-deficit/hyperactivity disorder (ADHD) is common and may require treatment in adulthood. We aimed to investigate the treatment patterns and perinatal outcomes of women with any history of stimulant treatment for ADHD. Method(s): We used health records of the New South Wales (NSW, Australia) population to compare perinatal outcomes of women treated with stimulants (dexamphetamine or methylphenidate) for ADHD from 1982 to 2012 who gave birth between 1994 and 2012, with perinatal outcomes of women with no known ADHD or stimulant treatment (comparison cohort). Five comparison women, matched by maternal age and infant year of birth, were selected for each treated woman. Pregnancy outcome odds ratios in the two groups were adjusted for confounders including maternal age and smoking. Result(s): Of 5056 women treated for ADHD with stimulant medication, 3351 (66.3%) had stimulant treatment documented before the index pregnancy but not within 1 year before the expected date of delivery, 175 (3.5%) had stimulant treatment before and possibly during pregnancy (stimulant prescription within the 12 months directly before the expected date of the index birth and earlier), and 1530 (30.2%) had no stimulant treatment until after the index pregnancy. Treatment for ADHD at any time (before, before and during and only after the index pregnancy) was associated with reduced likelihood of spontaneous labour-odds ratios (ORs) 0.7 [0.7, 0.8], 0.7 [0.5, 0.9], and 0.7 [0.7, 0.8], respectively-and increased risk of caesarean delivery (1.2 [1.1, 1.3], 1.3 [0.9, 1.8], 1.3 [1.1, 1.4]); active neonatal resuscitation (1.2 [1.0, 1.3], 1.7 [1.1, 2.7], 1.3 [1.0, 1.7]); and neonatal admission > 4 h (1.2 [1.1, 1.3], 1.7 [1.2, 2.4], 1.2 [1.0, 1.4]). Treatment before or before and during pregnancy was, in addition, associated with increased risk of pre-eclampsia (1.2 [1.0, 1.4], 1.5 [0.8, 2.6]); preterm birth < 37 weeks (1.2 [1.0, 1.3], 1.4 [0.9, 2.3]); and 1-min Apgar < 7 (1.2 [1.1, 1.3], 2.0 [1.4, 2.9]). Stimulant prescribing was low during pregnancy (3.5% of women received such a prescription) and dropped during the 12 months before the due date from an average of 24.7 prescriptions per month in the first 6 months to 4.5 per month in the final 6 months. Conclusion(s): Compared with no treatment,

ADHD stimulant treatment at any time was associated with small increases in the risk of some adverse pregnancy outcomes; treatment before, or before and during pregnancy, was associated with additional adverse outcomes, even after a treatment-free period of several years. None of these associations can be confidently attributed to stimulant treatment; in all cases ADHD per se or correlates of it could be responsible for the association.

Database: EMBASE

2. Placental Complications Associated With Psychostimulant Use in Pregnancy.

Author(s): Cohen, Jacqueline M; Hernández-Díaz, Sonia; Bateman, Brian T; Park, Yoonyoung; Desai, Rishi J; Gray, Kathryn J; Patorno, Elisabetta; Mogun, Helen; Huybrechts, Krista F

Source: Obstetrics and gynecology; Dec 2017; vol. 130 (no. 6); p. 1192-1201

Publication Date: Dec 2017

Publication Type(s): Research Support, N.i.h., Extramural Journal Article

PubMedID: 29112657

Available at Obstetrics and gynecology - from Free Medical Journals . com

Available at Obstetrics and gynecology - from Ovid (LWW Total Access Collection 2015 - Q1 with Neurology)

Abstract:OBJECTIVETo evaluate whether psychostimulants used to treat attention-deficit/hyperactivity disorder (ADHD) are associated with risk of adverse placental-associated pregnancy outcomes including preeclampsia, placental abruption, growth restriction, and preterm birth.METHODSWe designed a population-based cohort study in which we examined a cohort of pregnant women and their liveborn neonates enrolled in Medicaid from 2000 to 2010. Women who received amphetamine-dextroamphetamine or methylphenidate monotherapy in the first half of pregnancy were compared with unexposed women. We considered atomoxetine, a nonstimulant ADHD medication, as a negative control exposure. To assess whether the risk period extended to the latter half of pregnancy, women who continued stimulant monotherapy after 20 weeks of gestation were compared with those who discontinued. Risk ratios and 95% CIs were estimated with propensity score stratification to control for confounders.RESULTSPregnancies exposed to amphetamine-dextroamphetamine (n=3,331), methylphenidate (n=1,515), and atomoxetine (n=453) monotherapy in early pregnancy were compared with 1,461,493 unexposed pregnancies. Among unexposed women, the risks of the outcomes were 3.7% for preeclampsia, 1.4% for placental abruption, 2.9% for small for gestational age, and 11.2% for preterm birth. The adjusted risk ratio for stimulant use was 1.29 for preeclampsia (95% CI 1.11-1.49), 1.13 for placental abruption (0.88-1.44), 0.91 for small for gestational age (0.77-1.07), and 1.06 for preterm birth (0.97-1.16). Compared with discontinuation (n=3,527), the adjusted risk ratio for continuation of stimulant use in the latter half of pregnancy (n=1,319) was 1.26 for preeclampsia (0.94-1.67), 1.08 for placental abruption (0.67-1.74), 1.37 for small for gestational age (0.97-1.93), and 1.30 for preterm birth (1.10-1.55). Atomoxetine was not associated with the outcomes studied.CONCLUSIONPsychostimulant use during pregnancy was associated with a small increased relative risk of preeclampsia and preterm birth. The absolute increases in risks are small and, thus, women with significant ADHD should not be counseled to suspend their ADHD treatment based on these findings.

Database: Medline

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3. Perinatal outcomes after treatment with ADHD medication during pregnancy

Author(s): Norby U.; Kallen K.; Winbladh B.

Source: Pediatrics; Dec 2017; vol. 140 (no. 6)

Publication Date: Dec 2017

Publication Type(s): Article

PubMedID: 29127207

Abstract:OBJECTIVES: To analyze perinatal outcomes after maternal use of attention-deficit/hyperactivity disorder (ADHD) medication during pregnancy. METHODS: The study included singletons born between 2006 and 2014 in Sweden. Data on prescription drug use, pregnancies, deliveries, and the newborn infants' health were obtained from the Swedish Medical Birth Register, the Prescribed Drug Register, and the Swedish Neonatal Quality Register. We compared infants exposed to ADHD medication during pregnancy with infants whose mothers never used these drugs and infants whose mothers used ADHD medication before or after pregnancy. Analyses were performed with logistic regression. RESULTS: Among 964 734 infants, 1591 (0.2%) were exposed to ADHD medication during pregnancy and 9475 (1.0%) had mothers treated before or after pregnancy. Exposure during pregnancy increased the risk for admission to a NICU compared with both no use and use before or after pregnancy (adjusted odds ratio [aOR], 1.5; 95% confidence interval [CI], 1.3-1.7; and aOR, 1.2; 95% CI, 1.1-1.4, respectively). Infants exposed during pregnancy had more often central nervous system-related disorders (aOR, 1.9; 95% CI, 1.1-3.1) and were more often moderately preterm (aOR, 1.3; 95% CI, 1.1-1.6) than nonexposed infants. There was no increased risk for congenital malformations or perinatal death. CONCLUSIONS: Treatment with ADHD medication during pregnancy was associated with a higher risk for neonatal morbidity, especially central nervous system-related disorders such as seizures. Because of large differences in background characteristics between treated women and controls, it is uncertain to what extent this can be explained by the ADHD medication per se.

Database: EMBASE

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4. ADHD medication use in pregnancy and risk of preeclampsia and small for gestational age birth

Author(s): Cohen J.M.; Hernandez-Diaz S.; Park Y.; Bateman B.T.; Desai R.; Mogun H.; Huybrechts K.F.

Source: Pharmacoepidemiology and Drug Safety; Aug 2017; vol. 26 ; p. 502-503

Publication Date: Aug 2017

Publication Type(s): Conference Abstract

Abstract: Background: Some drugs used to treat attention-deficit hyperactivity disorder (ADHD) cause vasoconstriction and/or hypertension, which could impair placental perfusion. Preeclampsia (PE) and growth restriction represent maternal and fetal manifestations of placental ischemia. Despite increasing use, limited safety data exist on ADHD medication use in pregnancy. Objectives: To determine if ADHD medication use is associated with risk of PE or growth restriction, based on small for gestational age birth (SGA). Methods: The cohort included pregnant women and linked infants enrolled in Medicaid from 2000 to 2010. Given uncertainty regarding the etiologically relevant exposure window, we assessed risk in association with both early and late pregnancy exposure. In the first analysis, women who filled a prescription for amphetamine/dextroamphetamine (AMP), methylphenidate (MPH), or atomoxetine (ATX) monotherapy in the first half of pregnancy were compared to women who did not fill a prescription for any ADHD drug during the 3 months prior or first half of pregnancy. In the second, to assess the risk associated with exposure later in pregnancy, we compared women who continued any monotherapy into the second half to those who discontinued, as most women discontinued and few initiated these medications during pregnancy. Exposures were combined due to small numbers. Similarly, we compared discontinuers (only exposed early) to unexposed to determine if risk of early exposure was explained by continuers. Risk ratios (RRs) and 95% confidence intervals (CIs) were estimated with propensity score stratification for confounding control. Results: 3331 exposed to AMP, 1515 to MPH, and 453 to ATX monotherapy were compared to 1,461,493 unexposed pregnancies. AMP and MPH but not ATX use in the first half of pregnancy were associated with increased risk of PE, adjusted RRs (95% CI) 1.3 (1.1-1.6), 1.2 (1.0-1.5), and 1.0 (0.7-1.6). None were associated with SGA. Continuation of any monotherapy in late pregnancy (n = 1345) was associated with a greater risk of PE than discontinuation (n = 3954); 1.3 (1.0-1.7). However, discontinuers were

still at increased risk of PE compared to unexposed; 1.2 (1.0-1.4). Late pregnancy ADHD medication use was associated with an increased risk of SGA; 1.4 (1.0-2.0) for continuation compared to discontinuation. Conclusions: Early pregnancy exposure to AMP and MPH are associated with modest increased risksof PE. Late pregnancy exposure to ADHD medication is associated with modest increased risks of PE and SGA.

Database: EMBASE

5. Prenatal psychostimulant and antidepressant exposure and risk of hypertensive disorders of pregnancy

Author(s): Newport D.J.; Hostetter A.L.; Juul S.H.; Porterfield S.M.; Knight B.T.; Stowe Z.N.

Source: Journal of Clinical Psychiatry; Nov 2016; vol. 77 (no. 11); p. 1538-1545

Publication Date: Nov 2016

Publication Type(s): Article

PubMedID: 28076672

Abstract: Objective: To investigate the association, if any, of prenatal mental illness and psychotropic exposure with the risk of hypertensive disorders of pregnancy (HDP). Methods: A case-cohort analysis was conducted of 686 pregnant women participating in prospective, longitudinal observational studies in a tertiary referral center between January 1998 and May 2012. Risk estimates were produced using multivariate logistic regression modeling. Medication- and diagnosisspecific data were utilized to conduct post hoc confirmatory analyses of the risk estimates. Results: After adjustment for confounders, HDP were significantly associated with psychostimulant (odds ratio [OR] = 6.11; 95% CI, 1.79-20.9) and serotoninnorepinephrine reuptake inhibitor (SNRI) (OR = 2.57; 95%, 1.34-4.93) exposure following the 20th week of gestation and lifetime histories of cocaine dependence (OR = 2.99; 95% CI, 1.12-7.98) and panic disorder (OR = 1.78; 95% CI, 1.06-2.98) using DSMIV diagnostic criteria. HDP risk was not associated with prenatal selective serotonin reuptake inhibitor exposure or other psychiatric disorders. Post hoc analyses demonstrated an increased risk for HDP with higher maternal daily doses of amphetamine psychostimulants and the SNRI venlafaxine. Conclusions: These data indicate that psychostimulant and SNRI exposure following the 20th week of gestation conveys considerable risk for the emergence of HDP. Overall, the findings suggest that heightened vascular reactivity to noradrenergic, rather than serotonergic, stimulation may be pivotal to HDP risk among women with psychiatric illness.

Database: EMBASE

6. Attention deficit hyperactivity medications during pregnancy and the risk of congenital cardiac malformations: A cohort study

Author(s): Bateman B.T.; Huybrechts K.F.; Patorno E.; Desai R.; Hernandez-Diaz S.

Source: Pharmacoepidemiology and Drug Safety; Sep 2015; vol. 24 ; p. 206-207

Publication Date: Sep 2015

Publication Type(s): Conference Abstract

Available at Pharmacoepidemiology and Drug Safety - from Wiley Online Library Science , Technology and Medicine Collection 2017

Available at Pharmacoepidemiology and Drug Safety - from Unpaywall

Abstract: Background: Attention deficit hyperactivity disorder (ADHD) is a common neuropsychiatric disorder in children, which is increasingly being recognized as having the potential to extend into adulthood. As such, it is important to understand the teratogenic risk of drugs commonly used to treat ADHD. Objectives: The aim of this study was to define the risk of cardiac malformation associated with first trimester exposure to two of the most commonly used ADHD medications: amphetamine-dextroamphetamine and methylphenidate. Methods: We used a cohort of 1356514 completed pregnancies linked to liveborn infants of women enrolled in Medicaid from 2000 to 2010. We examined the risk of major cardiac malformations associated with first trimester exposure to amphetamine-dextroamphetamine and methylphenidate, which was defined based on a filled prescription during this exposure window. The reference group consisted of women without exposure to these medications during the first trimester. Propensity score stratification (100 strata of fixed score interval) was used to control for potential confounders including maternal demographics, obstetric and medical conditions, and exposure to other medications. Results: There were 3068 (0.2%) women dispensed amphetamine-dextroamphetamine and 1437 (0.1%) dispensed methylphenidate during the first trimester. The risk of cardiac malformations in the amphetamine-dextroamphetamine exposed was 1.92% and 2.78% in the methylphenidate exposed compared with 1.53% in the non-exposed. After controlling for confounders, the relative risk for cardiac malformations was 0.81 (95%CI 0.44 to 1.50) for amphetaminedextroamphetamine and 2.08 (95%CI 1.26 to 3.44) for methylphenidate. Conclusions: The results of this preliminary analysis suggest that maternal use of methylphenidate in the first trimester may be associated with an approximately twofold increase in the risk of major cardiac malformations, independent of measured confounders. Amphetamine-dextroamphetamine was not associated with elevated risk.

Database: EMBASE

7. ADHD treatment and pregnancy

Author(s): Besag F.M.C.

Source: Drug Safety; Jun 2014; vol. 37 (no. 6); p. 397-408

Publication Date: Jun 2014

Publication Type(s): Review

PubMedID: 24794209

Available at Drug Safety - from ProQuest (Health Research Premium) - NHS Version

Abstract: There is increasing recognition that ADHD is a common condition, not only in children and teenagers but also in adults. This has led to a rapid rise in the number of women of childbearing age

who are being treated for this condition. Against the background of concerns about the use of medication of any kind during pregnancy and breastfeeding, it is remarkable that there is so little information available on the effects of ADHD medication on the fetus and newborn. The impulsivity associated with ADHD might lead to an increased rate of unplanned pregnancy. Although treating ADHD during pregnancy and lactation might have negative effects on the baby, suspension of treatment or inadequate treatment could also place both mother and baby at risk. Pharmacodynamic and pharmacokinetic changes during pregnancy could affect both the efficacy and the concentration of medication. Again, there is almost no guidance available. The US Food and Drug Administration has classified ADHD medications as being "pregnancy category C", implying that there is insufficient information to confirm either harm or lack of harm. From the limited information that has been published, it would appear that the risk of fetal malformation, at least with methylphenidate, is very low and that the amounts of medication excreted in breast milk and consumed by the infant are very small. Three questions that both clinicians and patients are likely to ask are the following. Should ADHD medication be stopped before, during or after pregnancy, or should it be continued throughout? Should ADHD medication doses be adjusted during the course of the pregnancy or after delivery? Should breastfeeding be encouraged or discouraged? Discontinuing ADHD treatment could put both mother and baby at risk. This has to be balanced against the possible risks to the baby of continuing treatment. Although the data remain inadequate, the risk of the latter appears to be quite small, at least for methylphenidate. However, there is recent evidence that the rates of fetal loss both through abortion and through miscarriage are increased with methylphenidate. Discussions about ADHD treatment with women of childbearing age should be balanced, open and honest, acknowledging the lack of information on the possible risks to the offspring of continuing treatment, while also drawing attention to the possible risks to both mother and child of discontinuing treatment.

Database: EMBASE

8. Evidence-based guidelines for the pharmacological management of attention deficit hyperactivity disorder: Update on recommendations from the British Association for Psychopharmacology

Author(s): Bolea-Alamanac B.; Nutt D.J.; Young S.J.; Adamou M.; Asherson P.; Bazire S.; Coghill D.; Heal D.; Muller U.; Nash J.; Santosh P.; Sayal K.; Sonuga-Barke E.

Source: Journal of Psychopharmacology; Mar 2014; vol. 28 (no. 3); p. 179-203

Publication Date: Mar 2014

Publication Type(s): Review

PubMedID: 24526134

URL: https://www.bap.org.uk/pdfs/BAP_Guidelines-AdultADHD.pdf

Abstract: Attention deficit hyperactivity disorder (ADHD) is a common condition with a high societal burden. The present guidelines summarise current literature, generating expert consensus recommendations for the treatment of ADHD in children and adults. These guidelines also provide a review of recent research in the fields of neuroimaging, neuropsychology and genetics of ADHD. Novel discoveries in these areas have informed physiological models for the disease. Since the publication of the previous British Association for Psychopharmacology guidelines in 2008, new drugs have been licensed and further compounds are being investigated. The publication of randomised controlled trials of psychological interventions has contributed to the range of treatment options for ADHD. As the disorder has been diagnosed more frequently there has been greater focus on comorbid conditions and how they impact treatment. Services have continued to

develop for the treatment of ADHD in adults and care agreements have been introduced to facilitate access to treatment. © 2014 The Author(s).

Database: EMBASE

9. Exposure to attention deficit hyperactivity disorder medications during pregnancy

Author(s): Humphreys C.; Garcia-Bournissen F.; Ito S.; Koren G.

Source: Canadian Family Physician; Jul 2007; vol. 53 (no. 7); p. 1153-1155

Publication Date: Jul 2007

Publication Type(s): Short Survey

PubMedID: 17872810

Available at Canadian Family Physician - from PubMed Central

Abstract:QUESTION: An 18-year-old patient of mine, currently under treatment for attention deficit hyperactivity disorder (ADHD) with methylphenidate, just found out that she is pregnant. What are the risks for the baby when the mother uses ADHD medications during pregnancy? ANSWER: Available evidence for amphetamines suggests no increased risk of malformations with use of therapeutic doses, and inadvertent exposure during pregnancy is unlikely to be harmful. Human data for methylphenidate and atomoxetine treatment in pregnancy are very limited. Documented cases do not suggest teratogenicity, but we cannot rule out this risk with the information available.

Database: EMBASE

10. Transfer of dexamphetamine into breast milk during treatment for attention deficit hyperactivity disorder.

Author(s): Ilett, Kenneth F; Hackett, L Peter; Kristensen, Judith H; Kohan, Rolland

Source: British journal of clinical pharmacology; Mar 2007; vol. 63 (no. 3); p. 371-375

Publication Date: Mar 2007

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 17380592

Available at British journal of clinical pharmacology - from Wiley Online Library Science , Technology and Medicine Collection 2017

Available at British journal of clinical pharmacology - from IngentaConnect - Open Access

Abstract:AIMSTo investigate dexamphetamine transfer into milk, infant doses and effects in the breast-fed infant.METHODSFour women taking dexamphetamine, and their infants were studied.RESULTSThe median maternal dexamphetamine dose was 18 mg day(-1) (range 15-45 mg day(-1)). Median (interquartile range) descriptors were 3.3 (2.2-4.8) for milk/plasma ratio, 21 microg kg(-1) day(-1) (11-39) for absolute infant dose and 5.7% (4-10.6%) for relative infant dose. No adverse effects were seen. In three infants tested, dexamphetamine in plasma was undetected in

one (limit of detection 1 microg l(-1)) and present at 18 microg l(-1) and 2 microg l(-1) in the other two.CONCLUSIONDexamphetamine readily transfers into milk. The relative infant dose was <10% and within a range that is generally accepted as being 'safe' in the short term.

Database: Medline

11. Dexamphetamine substitute-prescribing in pregnancy: A 10-year retrospective audit

Author(s): White R.; Thompson M.; Windsor D.; Walsh M.; Cox D.; Charnaud B.

Source: Journal of Substance Use; Jun 2006; vol. 11 (no. 3); p. 205-216

Publication Date: Jun 2006

Publication Type(s): Article

Abstract: Background: In the UK dexamphetamine has been used widely as a treatment for amphetamine users. We sought to study the effects of illicit amphetamine use on pregnancy, and to evaluate the safety and effectiveness of prescribing to pregnant users. Method: The ante-natal care and birth outcomes of 47 amphetamine-using women who were prescribed dexamphetamine and 41 who were not, were compared with each other, and with local population norms. Analyses by dose of dexamphetamine were performed. Data was also collected for two equivalent samples of heroin users. Results: The prescribed amphetamine and heroin users received adequate antenatal care. Despite this there was a high rate of low birth weight in both groups. It is doubtful that prescribed dexamphetamine contributed substantially to these adverse outcomes in the amphetamine users, as they were very similar in those not prescribed to. Also, there was no association demonstrated with duration of prescribing or maximum dose. 'On-top' use was the best predictor of adverse birth outcomes. Conclusions: Dexamphetamine substitution delivered alongside a specialist midwifery service is successful at ensuring clients receive adequate antenatal care, but should be initiated with caution and used as a last-line treatment. Clients should be informed of possible risks, including those relating to continued use of street-drugs. © 2006 Taylor & Francis.

Database: EMBASE

12. NTP-CERHR Expert Panel Report on the reproductive and developmental toxicity of amphetamine and methamphetamine.

Author(s): Golub, Mari; Costa, Lucio; Crofton, Kevin; Frank, Deborah; Fried, Peter; Gladen, Beth; Henderson, Rogene; Liebelt, Erica; Lusskin, Shari; Marty, Sue; Rowland, Andrew; Scialli, John; Vore, Mary

Source: Birth defects research. Part B, Developmental and reproductive toxicology; Dec 2005; vol. 74 (no. 6); p. 471-584

Publication Date: Dec 2005

Publication Type(s): Journal Article Review

PubMedID: 16167346

Available at Birth defects research. Part B, Developmental and reproductive toxicology - from Wiley Online Library Science , Technology and Medicine Collection 2017

Database: Medline

13. Medical prescription of dextroamphetamine during pregnancy.

Author(s): Joffe, G M; Kasnic, T

Source: Journal of perinatology : official journal of the California Perinatal Association; 1994; vol. 14 (no. 4); p. 301-303

Publication Date: 1994

Publication Type(s): Case Reports Journal Article

PubMedID: 7965226

Abstract: Amphetamine and methamphetamine abuse complicate a significant number of pregnancies. This case report details medical prescription of dextroamphetamine during a complicated pregnancy. A review of the literature is included regarding fetal risks of dextroamphetamine and methamphetamine exposure.

Database: Medline

14. d-Amphetamine as a behavioral teratogen: Effects depend on dose, sex, age and task

Author(s): Holson R.; Adams J.; Buelke-Sam J.

Source: Neurobehavioral Toxicology and Teratology; 1985; vol. 7 (no. 6); p. 753-758

Publication Date: 1985

Publication Type(s): Article

PubMedID: 3835477

Abstract: Reports on the behavioral effects of prenatal exposure to d-amphetamine in rodents are inconsistent. Activity levels have been variously reported to increase, decrease, or show no change (as in the Collaborative Study) following such exposure. As a follow-up to the Collaborative Behavioral Teratology Study, 3 experiments have been conducted at the NCTR to examine the behavioral teratogenicity of this compound following SC dosing on days 12-15 of gestation. A higher dosage (3 mg/kg) was included and evaluations involved tasks used in the Collaborative Behavioral Teratology Study (startle, figure-8 activity) and other tasks not previously undertaken at the NCTR (short-term reactivity to novel open fields, intake of sweetened solutions). Activity measures gave especially mixed results. There was no effect of prenatal exposure, even at 3 mg/kg, upon longer-term activity, before or after amphetamine challenge, in figure-8 mazes or rectangular photocell chambers, at postnatal days (PND) 47 or 120. In one experiment, changes in reactivity to brief exposure to an open field daily over 3 days were seen in higher dosage PND 135 males but not females, while higher dosage females but not males showed lowered emergence latencies at this age. In a second experiment, no exposure-related changes were seen in reactivity to an open field in offspring of either sex at PND 47 or 70. Auditory startle amplitude showed complex dose effects in these two experiments. Females exposed to 3 mg/kg had elevated startle amplitude at PNDs 47 and 120, but not at PND 19. Males in the 3 mg/kg group had elevated startle at PND 19, but not thereafter. Finally, both sexes showed an enhanced intake of sweetened solutions which was still present at PND 215. In conclusion, prenatal amphetamine exposure can produce long-term alterations in behavior at dosages which produce no decrements in weight of offspring. However,

such effects are subtle and complex, and depend upon such factors as age, sex, exposure level and type of test.

Database: EMBASE

15. Attention deficit disorder, amphetamine, and pregnancy.

Author(s): Shangraw, R E; Seminer, S J; Zarr, M L

Source: Biological psychiatry; Aug 1985; vol. 20 (no. 8); p. 926-927

Publication Date: Aug 1985

Publication Type(s): Letter Case Reports

PubMedID: 4027306

Database: Medline

16. Maternal use of dextroamphetamine and growth of the fetus.

Author(s): Naeye, R L

Source: Pharmacology; 1983; vol. 26 (no. 2); p. 117-120

Publication Date: 1983

Publication Type(s): Journal Article Research Support, U.s. Gov't, P.h.s.

PubMedID: 6844388

Abstract: Data from a large prospective study were analyzed to determine if taking dextroamphetamine during pregnancy affects fetal growth or fetal/neonatal mortality. 237/42,101 women took the drug to control weight gain. Birth weights were not significantly affected when the drug was discontinued before the 28th week of gestation, but after the 28th week birth weights were 4% lower (144 g) when the drug had been taken in high weight gain gestations (p less than 0.01). The body lengths and head circumferences of neonates were not affected. The perinatal mortality rate was 38/1,000 births for both offspring of drug users and nonusers.

Database: Medline

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Strategy 646684

#	Database	Search term	Results
1	Medline	exp DEXTROAMPHETAMINE/	6953
2	Medline	(dexamfetamine).ti,ab	31
3	Medline	(Dextroamphetamine).ti,ab	687
4	Medline	(1 OR 2 OR 3)	7168
5	Medline	(pregnan*).ti,ab	463674
6	Medline	exp PREGNANCY/	861739
7	Medline	(5 OR 6)	961310
8	Medline	(4 AND 7)	132
9	EMBASE	exp DEXTROAMPHETAMINE/	12205
10	EMBASE	(dexamfetamine).ti,ab	47
11	EMBASE	(Dextroamphetamine).ti,ab	758
12	EMBASE	(9 OR 10 OR 11)	12333
13	EMBASE	(pregnan*).ti,ab	587407
14	EMBASE	exp PREGNANCY/	627513
15	EMBASE	(13 OR 14)	840107
16	EMBASE	(12 AND 15)	188
17	PsycINFO	exp DEXTROAMPHETAMINE/	2008
18	PsycINFO	(dexamfetamine).ti,ab	9

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19	PsycINFO	(Dextroamphetamine).ti,ab	1583
20	PsycINFO	(17 OR 18 OR 19)	2494
21	PsycINFO	(pregnan*).ti,ab	43604
22	PsycINFO	exp PREGNANCY/	39675
23	PsycINFO	(21 OR 22)	59774
24	PsycINFO	(20 AND 23)	21
25	Medline	exp "PRENATAL EXPOSURE DELAYED EFFECTS"/	27063
26	Medline	(4 AND 25)	31