

ADHD treatment in pregnancy and breastfeeding:

There have been no systematic studies evaluating the course of ADHD across pregnancy and the postpartum period. Discussion about continuing medication during pregnancy and lactation needs to be based on understanding the risk to the pregnant person of not being on medication vs known risks of medication exposure.

First, assess for disease severity- how severe is the occupational and relational functional impairment (work, relationships, domestic responsibilities) without treatment? What are the possible and likely negative outcomes of not being treated? Can use ASRS to understand picture more fully (LINK TO ASRS). Key questions to ask include:

1. How have you functioned in the past at work (or school) without the use of medications?
2. How is your driving when not treated with medications for ADHD? Have you had a history of accidents? (this is one of, if not THE, biggest concern with untreated ADHD in pregnancy)

If severe ADHD: Recommend staying on medication with discussion of risks as outlined below-

Congenital Malformations

Based on the findings of large studies (Huybrechts 2017) and Kolding 2021 , it appears that prenatal exposure to methylphenidate or amphetamines is not associated with an increase in the overall risk of major malformations. However, both the older Huybrechts study and the newer Kolding study have observed an increase in risk of cardiovascular malformations — specifically ventricular septal defects in the Kolding study — in pregnancies exposed to methylphenidate. While the Kolding study had only a small number of amphetamine exposures, the Huybrechts study reported on over 5500 amphetamine exposures, documenting no increase in risk of cardiac malformations.

Assuming the relative risk calculated in the Kolding study is correct, the risk for cardiac malformation in the methylphenidate-exposed children would be around 1.63%. A very small increase in absolute risk.

Neurobehavioral Outcomes

Many of the neurodevelopmental studies showed no abnormalities. For example: 40

children exposed during pregnancy to methamphetamine (in some of them the mothers misused methamphetamine) showed no difference in cognitive function at 3–4 years of age compared to sex-matched controls, with the exception of slightly worse testing on the visual motor integration domain (Chang 2009).

ADHD Medication Guide*											Revised: November 2016
Amphetamine Derivatives – Long Acting/Extended Release**											(Medications in this section are shown at actual size)
Adzenys XR-ODT [®] (l- & d-amphetamine) (orange flavor)	6–12 Yrs: 3.1–18.8mg; SD: 6.3mg 12–17 Yrs: 3.1–12.5mg; SD: 6.3mg Adults: 12.5mg	3.1mg	6.3mg	9.4mg	12.5mg	15.7mg	18.8mg				
Adzenys ER [®] (l- & d-amphetamine) 1.25mg/mL (orange flavor)	6–12 Yrs: 6.3–18.8mg; SD: 6.3mg 12–17 Yrs: 6.3–12.5mg; SD: 6.3mg Adults: 12.5mg	3.1mg 2.5mL	6.3mg 5mL	9.4mg 7.5mL	12.5mg 10mL	15.7mg 12.5mL	18.8mg 15mL				
Adderall XR [®] (mixed amphetamine salts)	6–17 Yrs: 5–30mg; SD: 10mg Adults: 5–30mg; SD: 20mg	5mg	10mg	15mg	20mg	25mg	30mg				
Vyvanse [®] (capsules) (lisdexamfetamine)	6 Yrs–Adults: 10–70mg; SD: 30mg	10mg	20mg	30mg	40mg	50mg	60mg	70mg			
Vyvanse [®] (chewables) (lisdexamfetamine) (lemon/orange flavor)	6 Yrs–Adults: 10–60mg; SD: 30mg	10mg	20mg	30mg	40mg	50mg	60mg	70mg			
Dyanavel XR [®] (l- & d-amphetamine sulfate) 2.5mg/mL (bubblegum flavor)	6–17 Yrs: 2.5–20mg; SD: 2.5 or 5mg	2.5mg 1mL	5mg 2mL	7.5mg 3mL	10mg 4mL	12.5mg 5mL	15mg 6mL	17.5mg 7mL	20mg 8mL		
Mydayis [®] (mixed amphetamine salts)	13–17 Yrs: 12.5–25mg; SD: 12.5mg Adults: 12.5–50mg; SD: 12.5mg	12.5mg	25mg		37.5mg		50mg				
Dexedrine Spansule [®] (d-amphetamine sulfate)	6–17 Yrs: 10–60mg; SD: 5mg 1-2x/day	5mg	10mg	15mg							
Amphetamine Derivatives – Short Acting/Immediate Release**											(Medications in this section are shown at actual size)
Evekeo [®] (l- & d-amphetamine sulfate)	3–5 Yrs: 2.5mg 1x/day 6–17 Yrs: 5–40mg divided BID; SD: 5mg 1-2x/day	5mg		10mg							
Zenzedi [®] (l-amphetamine sulfate)	3–5 Yrs: 2.5mg 1x/day 6–17 Yrs: 5–40mg divided BID; SD: 5mg 1-2x/day	2.5mg	5mg	7.5mg	10mg	15mg	20mg	30mg			
Adderall [®] (mixed amphetamine salts)	3–5 Yrs: 2.5mg 1x/day 6–17 Yrs: 5–40mg divided BID; SD: 5mg 1-2x/day	5mg	7.5mg	10mg	12.5mg	15mg	20mg	30mg			
ProCentra [®] (d-amphetamine sulfate) (bubblegum flavor)	3–5 Yrs: 2.5mg 1x/day 6–17 Yrs: 5–40mg divided BID; SD: 5mg 1-2x/day	5mg/5mL									
Non-Stimulants**											(Medications in this section are shown at actual size)
Intuniv [®] (guanfacine, extended release)	6–12 Yrs: 1–4mg; SD: 1mg 13–17 Yrs: 1–7mg; SD: 1mg target dose is weight-based: 0.5–0.12mg/kg/day	1mg	2mg	3mg	4mg						
Kapvay [®] (atomoxetine, extended release)	6–17 Yrs: 0.1–0.2mg BID; SD: 0.1mg qHS	0.1mg	0.2mg								
Strattera [®] (atomoxetine)	<70kg: 0.5mg/kg x 3x, then 1.2mg/kg (max 1.4mg/kg, not to exceed 100mg) >70 kg: 40mg/kg x 3x, then 80mg (max 100mg)	10mg	18mg	25mg	40mg	60mg	80mg	100mg			

* Updated versions of the ADHD Medication Guide can be viewed at www.ADHDMedicationGuide.com
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 * Contact Dr. Andrew Adelman with any comments or suggestions: ADHDMedGuide@Northwell.edu

** Discontinued ADHD Medications: The following FDA-approved proprietary formulations are no longer available (though, in some cases, branded or generic equivalents are still available): Ritalin LA capsule (80mg), Metadate CD capsules (40mg, 60mg), Metadate ER tablet (10mg), Ritalin SR tablets (20mg), Methylphen Cheewable tablets (2.5mg, 5mg, 10mg), Dexedrine Spansules (5mg, 10mg), Dexedrine tablets (5mg, 10mg), Dextrostat tablets (5mg, 10mg), LipoADD solution (5mg/5mL), and Cylert (pemoline).

If mild to moderate:

- CBT Therapy for ADHD
- Bilbiotherapy: ADD Friendly Ways to Organize Your Life, Scattered, Thriving with Adult ADHD, the CBT Workbook for Adult ADHD, Driven to Distraction
- Apps: inflow, rescuetime, Focus@Will, SimpleMind
- Medication: Bupropion

Breastfeeding:

We have limited data on breastfeeding with stimulants, but the information we have thus far is reassuring There are reports of six infants breastfeeding while their mothers were treated with methylphenidate and blood levels were very low in breastmilk and undetectable in 4 infants. In the 2 reports of infants breastfeeding while their mothers were treated with amphetamine stimulants, amphetamines

were detectable in breast milk at low levels and blood levels of amphetamine were detectable but very low in infants. *No adverse events were reported in any of the infants studied.*

With severe ADHD, it may be reasonable to continue stimulants in breastfeeding. It may be useful to consider switching to an IR formulation if mom is on an extended release medication. The blood level of Immediate Release formulations peak in 1-2 hours and then decline. Moms can breastfeed or pump prior to taking medication and this can decrease exposure for the infant who has less capacity for hepatic metabolism. This risk decreases as infants age and particularly as solid foods are introduced.