

**Mercy Managed Behavioral Health
ADHD Medication Guideline**

Medication Chart to Treat Attention Deficit Hyperactivity Disorder (ADHD)						
DRUG	FORM	DOSING	COMMON SIDE EFFECTS	DURATION OF EFFECTS	PROS	PRECAUTIONS
FIRST LINE						
METHYLPHENIDATE						
RITALIN METHYLIN METADATE Generic MPH	Short Acting <u>Tablet</u> 5 mg 10 mg 20 mg	Starting dose for children is 5 mg twice daily, 3-4 hours apart. Add third dose about 4 hours after second. Adjust timing based on duration of action. Increase by 5-10 mg increments. Daily dosage above 60 mg not recommended. Estimated dose range .3-.6 mg/kg/dose	Insomnia, decreased appetite, weight loss, headache, irritability, stomachache, and rebound agitation or exaggeration of pre-medication symptoms as it is wearing off.	About 3-4 hours. Most helpful when need rapid onset and short duration.	Works quickly (within 30-60 minutes). Effective in over 70% of patients.	Use cautiously in patients with marked anxiety, motor tics or with family history of Tourette syndrome, or history of substance abuse or history of cardiac disease. Don't use if glaucoma or on MAOI.
FOCALIN (with isolated dextroisomer) FOCALIN XR (.5 immed, .5 delayed)	Short Acting <u>Tablet</u> 2.5 mg 5mg 10mg 15mg, 20mg 30mg, 40mg	Start with half the dose recommended for normal short acting methylphenidate above. Dose may be adjusted in 2.5 to 5 mg increments to a maximum of 20 mg per day (10 mg twice daily).	As above. There is suggestion that Focalin (dextro-isomer) may be less prone to causing sleep or appetite disturbance.	About 3-4 hours. Most helpful when need rapid onset and short duration. Only formulation with isolated dextro-isomer.	Works quickly (within 30-60 minutes). Possibly better for use for evening needs when day's long acting dose is wearing off. May sprinkle etc	As above. Expensive compared to other short acting preparations.
RITALIN SR METHYLIN ER METADATE ER	Mid Acting <u>Tablet</u> 20mg Mid Acting Tablet 10mg 20mg	Start with 20 mg daily. May combine with short acting for quicker onset and/or coverage after this wears off.	Insomnia, decreased appetite, weight loss, headache, irritability, stomachache.	Onset delayed for 60-90 minutes. Duration supposed to be 6-8 hours, but can be quite individual and unreliable.	Wears off more gradually than short acting so less risk of rebound. Lower abuse risk.	As above. Note: If crushed or cut, full dose may be released at once, giving twice the intended dose in first 4 hours, none in the second 4 hours.
RITALIN LA <i>50% immediate release beads</i> <i>and 50% delayed release beads</i> METADATE CD <i>30% immediate release and 70% delayed release beads</i>	Mid Acting <u>Capsule</u> 20 mg 30mg 40mg Mid Acting Capsule 10 mg 20 mg 30mg	Starting dose is 10-20 mg once daily. May be adjusted weekly in 10 mg increments to maximum of 60 mg taken once daily. May add short acting dose in AM or 8 hours later in PM if needed.	Insomnia, decreased appetite, weight loss, headache, irritability, stomachache, and rebound potential.	Onset in 30-60 minutes. Duration about 8 hours.	May swallow whole or sprinkle ALL contents on a spoonful of applesauce. Starts quickly, avoids mid-day gap unless student metabolizes medicine very rapidly.	Same cautions as for immediate release. If beads are chewed, may release full dose at once, giving entire contents in first 4 hours.

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CONCERTA 22% immediate release and 78% gradual release	Long Acting Tablet 18 mg 27 mg 36 mg 54 mg	Starting dose is 18 mg or 36 mg once daily. Option to increase to 72 mg daily.	Insomnia, decreased appetite, weight loss, headache, irritability, stomachache.	Onset in 30-60 minutes. Duration about 10-14 hours.	Works quickly (within 30-60 minutes). Given only once a day. Longest duration of MPH forms. Doesn't risk mid-day gap or rebound since medication is released gradually throughout the day. Wears off more gradually than short acting, so less rebound. Lower abuse risk.	Same cautions as for immediate release. Do not cut or crush.
DAYTRANA (Patch)	Skin Patch	Patch comes in various dosing strengths (10, 15, 20, 30mg).	Insomnia, decreased appetite, weight loss, headache, irritability, stomachache.	Lasts 9 - 12 hours	Well tolerated. Easier administration.	Same as other stimulants.
DEXTROAMPHETAMINE	FORM	DOSING	COMMON SIDE EFFECTS	DURATION OF EFFECTS	PROS	PRECAUTIONS
DEXTRORSTAT	Short Acting Tablet	For ages 3 -5 years: starting dose is 2.5 mg of tablet. Increase by 2.5 mg at weekly intervals, increasing first dose or adding/increasing a noon dose, until effective.	Insomnia, decreased appetite, weight loss, headache, irritability, stomach ache. Rebound agitation or exaggeration of pre-medication symptoms as it is wearing off. May elicit psychotic symptoms.	Onset in 30-60 minutes. Duration about 4-5 hours.	Approved for children under 6. Good safety record. Somewhat longer acting than mphyphenidate.	Use cautiously in patients with marked anxiety, motor tics or with family history of Tourette syndrome, or history of substance abuse, or history of cardiac disease. Don't use if glaucoma or on MAOI. High abuse potential particularly in tablet form.
DEXEDRINE	5 mg 10mg Short Acting Tablet 5mg	For 6 years and over, start with 5 mg once or twice daily. May increase total daily dose by 5 mg per week until reach optimal level. Tablet is given on awakening. Over 6 years, one or two additional doses may be given at 4-6 hour intervals. Usually not need more than 40 mg/day.				
DEXEDRINE SPANSULE dextroamphetamine sulfate ER	Long Acting Spansule 5 mg 10 mg 15mg	In children 6 and older who can swallow whole capsule, morning dose of capsule equal to sum of morning and noon short acting. Increase total daily dose by 5 mg per week until reach optimal dose to maximum of 40 mg/day.	Same as above.	Onset in 30-60 minutes. Duration about 5-10 hours.	May avoid need for noon dose. rapid onset. Good safety record.	As above. Less likely to be abused intranasal or IV than short acting. Must use whole capsule.
VYVANSE	20mg 30mg 40mg 50mg 60mg 70mg	1 dose per day.	Decreased appetite, difficulty falling asleep, stomach ache, irritability, dry mouth (adults).	All day.	Less GI side effects. Longer acting. May dissolve in water if unable to swallow capsule.	Same as above.

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MIXED AMPHETAMINE	FORM	DOSING	COMMON SIDE EFFECTS	DURATION OF EFFECTS	PROS	PRECAUTIONS
ADDERALL	Short Acting Tablet 5 mg 7.5 mg 10 mg 12.5 mg 15 mg 20 mg 30 mg	Starting dose is 5 or 10 mg each morning (age 6 and older). May be adjusted in 5-10 mg increments up to 30 mg per day.	Same as above.	Onset in 30-60 minutes. Duration about 4-5 hours.	Wears off more gradually than dextroamphetamine alone, so rebound is less likely and more mild. AVAILABLE AS GENERIC	Same as for Dexedrine tablets.
ADDERALL XR <i>50% immediate release beads and 50% delayed release beads</i>	Long Acting Capsule 5 mg 10 mg 15mg 20mg 25mg 30mg	Starting dose is 5 or 10 mg each morning (age 6 and older). May be adjusted in 5-10 mg increments up to 30 mg per day.	Same as above.	Onset in 60-90 minutes (possibly sooner). Duration 10-12 hours.	May swallow whole or sprinkle ALL contents on a spoonful of applesauce. May last longer than most other sustained release stimulants. Less likely rebound than with long acting dextroamphetamine.. AVAILABLE AS GENERIC	Same as for Dexedrine Spansules except that it has documented efficacy when sprinkled on applesauce.
SECOND LINE						
ATOMOXETINE	FORM	DOSING	COMMON SIDE EFFECTS	DURATION OF EFFECTS	PROS	PRECAUTIONS
STRATTERA	Long Acting Capsule 10mg 18mg 25mg 40mg 60mg 80mg 100mg	Starting dose is 0.5 mg/kg. The targeted clinical dose is approximately 1.2 mg/kg. Increase at weekly intervals. Medication must be used each day. Usually started in the morning, but may be changed to evening. It may be divided into a morning and an evening dose, particularly if need higher doses.	In children: decreased appetite, GI upset (can be reduced if medication taken with food), sedation (can be reduced by dosing in evening), lightheadedness. In adults: insomnia, sexual side effects, increased blood pressure.	Starts working within a few days to one week, but full effect may not be evident for a month or more. Duration all day (24/7) so long as taken daily as directed.	Avoids problems of rebound and gaps in coverage. Doesn't cause a "high," thus it does not lead to abuse, and so a) it is not a controlled drug and b) may use with history of substance abuse.	Use cautiously in patients with hypertension, tachycardia, or cardiovascular or cerebrovascular disease because it can increase blood pressure and heart rate. Has some drug interactions. While extensively tested, short duration of population use.
THIRD LINE						
BUPROPRION	FORM	DOSING	COMMON SIDE EFFECTS	DURATION OF EFFECTS	PROS	PRECAUTIONS
WELLBUTRIN IR	Short Acting Tablet IR-75 mg 100 mg	Starting dose is 37.5 mg increasing gradually (wait at least 3 days) to maximum of 2-3 doses, no more than 150 mg/dose.	Irritability, decreased appetite, and insomnia.	About 4-6 hours.	Helpful for ADHD patients with comorbid depression or anxiety. May help after school until home.	Not indicated in patients with a seizure disorder or with a current or previous diagnosis of bulimia or anorexia. May worsen tics. May cause mood deterioration at the time it wears off.
WELLBUTRIN SR	Long Acting Tablet SR 100 mg 150mg 200mg	Starting dose is 100 mg/day increasing gradually to a maximum of 2 doses, no more than 200 mg/dose.	Same as Wellbutrin IR	About 10-14 hours.	Same for Wellbutrin IR. Lower seizure risk than immediate release form. Avoids noon dose.	Same as Wellbutrin IR. If a second dose is not given, may get mood deterioration at around 10-14 hours.
WELLBUTRIN XL	Long Acting Tablet 150mg 300mg	Starting dose is 150 mg /day increasing gradually to a maximum of 2 doses, no more than 300 mg/day.	Same as Wellbutrin IR	About 24 + hours.	Same for Wellbutrin IR. Single daily dose. Smooth 24 hour coverage. Lower seizure risk than immediate release form.	Same as Wellbutrin IR.

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OTHER						
ALPHA-2 AGONISTS	FORM	DOSING	COMMON SIDE EFFECTS	DURATION OF EFFECTS	PROS	PRECAUTIONS
CATAPRES (clonidine) ----- CLONIDINE	Tablet 0.1 mg 0.2 mg 0.3 mg ----- Tablet 0.1 mg 0.2 mg 0.3 mg	Starting dose is .025 -.05 mg/day in evening. Increase by similar dose every 7 days, adding to morning, mid-day, possibly afternoon, and again evening doses in sequence. Total dose of 0.1 - .3mg/day divided into 3-4 doses. Do not skip days	Sleepiness, hypotension, headache, dizziness, stomachache, nausea, dry mouth, depression, nightmares.	Onset in 30-60 minutes. Duration about 3 - 6 hours.	Helpful for ADHD patients with comorbid tic disorder or insomnia. Good for severe impulsivity, hyperactivity and/or aggression. Stimulates appetite. Especially helpful in children (under 6) with ADHD symptoms associated with prenatal insult or syndrome such as Fragile X.	Sudden discontinuation could result in rebound hypertension. Minimize daytime tiredness by starting with evening dose and increasing slowly. Avoid brand and generic formulations with red dye, which may cause hyperarousal in sensitive children.
CATAPRES Patch	TTS-1 TTS-2 TTS-3	Corresponds to doses of 0.1 mg, 0.2 mg and 0.3 mg per patch. (If using .1 mg tid tablets, try TTS 2 but likely need TTS 3).	Same as Catapres tablet but with skin patch there may be localized skin reactions.	Duration 4-5 days, so avoids the vacillations in drug effect seen in tablets.	Same as above.	Same as above. May get rebound hypertension and return of symptoms if it isn't recognized that a patch has come off or becomes loose. An immature student may get excessive dose from chewing on the patch.
TENEX (guanfacine) ----- guanfacine tablets	1 mg 2 mg 3 mg ----- 1 mg 2 mg 3 mg	Starting dose is 0.5 mg/day in evening and increase by similar dose every 7 days as indicated. Given in divided doses 2-4 times per day. Daily dose range 0.5 - 4mg/day. DO NOT skip days	Compared to clonidine, lower chances/severity of side effects, especially fatigue and depression. Also less headache, stomachache, nausea, dry mouth. Unlike clonidine, minimal problem of rebound hypertension if doses are missed.	Duration about 6 - 12 hours.	Can provide for 24/7 modulation of impulsivity, hyperactivity, aggression and sensory hypersensitivity. This covers most out of school problems, so stimulant use can be limited to school and homework hours. Improves appetite. Less sedating than clonidine.	Avoid formulations with red dye as above. Hypotension is the primary dose-limiting problem. As with clonidine, important to check blood pressures with dose increases and if symptoms suggest hypotension, such as light-headedness.
Intuniv (longacting guanfacine)	1mg,2mg,3mg ,4mg	Start at 1 mg/d and increase weekly in 1 mg increments up to max of 4 mg	Same as above.	Duration all day	Benefits of Tenex in once a day dosing	Similar to above

This chart was reviewed / updated July, 2 012.

Treatment includes medical management, behavior modification, counseling, and school or work accommodations. The medications charted above include: (1) stimulants, (2) non-stimulant Strattera (atomoxetine) with effects similar to stimulants, (3) antidepressant Wellbutrin (bupropion) and (4) two antihypertensives; Catapres (clonidine) and Tenex (guanfacine). Stimulants include all formulations of methylphenidate (Ritalin, Focalin, Metadate and Methylin) and all forms of amphetamines (Dexedrine, Dextrostat and Adderall). Individuals respond in their own unique way to medication depending upon their physical make-up, severity of symptoms, associated conditions, and other factors. Careful monitoring should be done by a physician in collaboration with the teacher, therapist, parents, spouse, and patient.

Important Note: Medications to treat ADHD and related conditions should only be prescribed by a physician. Information presented here is **not** intended to replace the advice of a physician.

General Information about ADHD Medications:

- Document prior treatment successes and failures including adverse reactions.
- Obtain baseline BP, HR, Height & Weight. Labs are not necessary for any Stimulant as a baseline.
- Longer acting agents, such as Metadate ER & CD, Methylin, Concerta, Adderall SR, Ritalin LA are increasingly used in middle school and high school ages so as to avoid the need to go to the nurse, avoiding embarrassment & enhancing compliance.
- Abuse potential is a real but overstated concern, rarely seen, especially with any long acting preparation.
- Use follow up supplemental scales such as the Conners for parents and teachers.
- If appetite suppression occurs, but otherwise the medication is useful, may use Periactin/Cyproheptidine 2-4 mg BID-TID (This is not a standard treatment, but can be used)
- Adderall XR, Ritalin and Metadate capsules can be opened and sprinkled on food for children that cannot swallow the capsule