METHYLPHENIDATE TRANSDERMAL (Daytrana) Fact Sheet

BOTTOM LINE:
Daytrana is helpful for kids who, for whatever reason, cannot use any of the wide variety of oral stimulant preparations. Otherwise, we don't recommend it due to high cost, lag time for onset of effect, and the side effect of rash, which is pretty common and unpleasant.

PEDIATRIC FDA INDICATIONS:
ADHD (6–17 years).

ADULT FDA INDICATIONS:
ADHD.

DOSAGE FORMS:
Transdermal patch: 10 mg, 15 mg, 20 mg, 30 mg/9 hour.

PEDIATRIC DOSAGE GUIDANCE:
Start 10 mg/9 hour patch QAM (for initial therapy or for patients switching from other methylphenidate preparations, regardless of dose). Apply to hip two hours before an effect is needed and remove nine hours after application (drug effects may persist for five hours after removal). Increase dose at weekly intervals by using next-higher-dose system. May be removed in <9 hours if shorter duration is desired or if late-day side effects occur. Rotate application sites. Max 30 mg QD.

MONITORING: Weight, height, BP/P; ECG.

COST: $$$

SIDE EFFECTS:
- Most common: Headache, insomnia, irritability, decreased appetite, anorexia, nausea, tics, application site reaction (10%–40% incidence in children).
- Serious but rare: Allergic contact dermatitis/sensitization, characterized by intense local reactions (eg, edema, papules) that may spread beyond patch site; sensitization may subsequently manifest systemically with other routes of methylphenidate administration.

MECHANISM, PHARMACOKINETICS, AND DRUG INTERACTIONS:
- Stimulant that inhibits reuptake of dopamine and norepinephrine.
- Hepatic metabolism via carboxylesterase CES1A1, not CYP450 isoenzymes; t ½: 3–4 hours.
- Avoid use with MAOIs, antacids.

EVIDENCE AND CLINICAL PEARLS:
- FDA approved with several studies supporting its efficacy and safety, with a larger treatment effect size than non-stimulant medications, including in preschoolers (albeit no FDA indication for this age group).
- Apply patch to clean, dry area of the hip; don't apply to waistline or to areas under tight clothes, as it may rub off. Alternate sites daily (eg, opposite hip). Absorption not affected by perspiration. Remove after nine hours. If dislodged, replace with a new patch but remove within the nine-hour total wear time.
- Clinical effect usually seen in two hours and lasts approximately 12 hours.
- Exposure of application site to a heat source (eg, hair dryer, heating pad, electric blanket) may increase the amount of drug absorbed.
- For localized skin reactions (redness at site), use cortisone cream (1%–2%). For persistent, severe, or systemic reactions, discontinue patch.
- In June 2015, the FDA added a warning that Daytrana can cause chemical leukoderma, a permanent loss of skin color. These reactions are irreversible and not harmful but can be disfiguring to patients. Instruct patients to contact their physician if they notice skin color changes or lightening of skin areas; in such cases, an alternative medication should be considered.
- The manufacturer recommends to not cut the patch as it may release medication inconsistently or too quickly.

FUN FACT:
Since 2006, Shire Pharmaceuticals has issued at least 10 recalls of Daytrana patches because users have had difficulty removing the protective cover from the patch. Recall costs have reached into the millions.