What about Bupropion for adolescents?

Bupropion is approved by the FDA for major depressive disorder, seasonal affective disorder, and smoking cessation (Zyban) for ADULTS. There are no FDA indications for the pediatric population.

Before discussing when to consider in adolescents, let's first take a look at the medication itself…

- Unlike SSRIs and SNRIs (that affect serotonin and/ or norepinephrine), bupropion works by inhibiting the reuptake of **dopamine and norepinephrine**, thereby boosting levels/ increasing neurotransmission.
- It is metabolized by the P450 CYP system, specifically CYP2BG.
- It strongly inhibits CYP2D6. Be sure to cross check with other medications that are metabolized via CYP2D6 as dose adjustments may be needed (examples: codeine, tamoxifen, tramadol, haloperidol, risperidone, some TCAs).
- Available in immediate release (TID dosing), sustained release (BID dosing), and extended release (once daily dosing).
- Takes 2-4 weeks to see effects.
- Side effects can include activation/agitation, headaches, insomnia, GI distress, tachycardia, tremor, weight loss.
- Serious side effects include seizures. Should not be used in individuals who have a history of seizures or who have eating disorders (or other disorders that can potentially lower seizure threshold).

So when might we use or consider this in adolescents?

- When they have failed first-line therapies – i.e., two trials of SSRIs AND at least one trial of an SNRI.
- When they cannot tolerate SSRIs or SNRIs due to side effects.
- When medically complicated and on other serotonergic medications with concerns for serotonin syndrome with SSRIs and SNRIs.
- When an SSRI or SNRI has offered benefit at maximum dose, but residual depressive symptoms remain. May consider as a "booster," especially when fatigue and poor concentration remain.
- Treating sexual dysfunction associated with SSRI/SNRI use. This is an off-label use.
- When co-morbid conditions are present such as ADHD or tobacco use disorder, especially when other first-line therapies have not been effective. Could consider as an alternative or adjunct.
- For those "late teens" who have concerns about sexual side effects and weight gain or have experienced these symptoms (associated with SSRIs and SNRIs), this may be a nice option to consider.

What should I screen for before starting?

- Is this kiddo primarily presenting with depression or is there a large anxiety component? Anxiety may worsen with medication, so be sure to counsel family on this.
- Is there a history of seizures or other disorders increasing risk for seizures? If so, then not a good fit!
- Is there a history of "unexplained" weight loss, dieting behaviors/trends, disordered eating patterns, or a diagnosed eating disorder? If so, then not a good fit due to risk of lowering seizure threshold!
- Is there a history of substance abuse? Bupropion has been crushed and snorted in an attempt to get "high." This can also increase seizure risk if done. Discuss and counsel family/patient.

Resources: Stahl's Prescriber's Guide, Carlat Child Medication Fact Book