Serious Risk for Harm
Methylphenidate makes some people feel more awake and alert. If you have been drinking alcohol, taking methylphenidate might fool you into feeling alert enough to drive, or do other activities requiring alertness. This would be false. You may still be impaired, and it would be unsafe to drive.

Think First
Alcohol may increase the levels of methylphenidate in your blood to unsafe levels, potentially causing more unwanted effects such as jittery or irritable feelings, trembling hands, or trouble sleeping.

Think First
If you are depressed, blue, or moody, alcohol is a 'downer' and will make you feel worse.

Tobacco
(smokes, butts, cigs, cigars, darts, stogies, cancer sticks, chew, dip)

Interaction
a) 33 smokers with and without ADHD were given moderate doses of methylphenidate (10-40 mg). Methylphenidate did not seem to have an effect on smoking-reinforced responding.
b) In an open-label study of 154 participants, use of extended-release methylphenidate was associated with low rates of smoking in those with ADHD.

c) In a prospective observational study, individuals with ADHD who received methylphenidate increased their tobacco consumption compared to when they were not taking methylphenidate.

**Mechanism**

a,b) Evidence suggests that individuals with ADHD smoke more than their non-ADHD counterparts, possibly because the effects of nicotine on cognition are similar to the effects of stimulants such as methylphenidate. Therefore, individuals who take stimulants may be less likely to smoke cigarettes, as this may "replace" the desire for the effects of smoking.

**Significance**

a-c) Overall, the effects of methylphenidate on tobacco consumption are conflicting. More studies are needed to draw a conclusion regarding the effects of methylphenidate on smoking.

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**Caffeine**

(coffee, java, joe, soda, pop, tea, energy drinks (Red Bull®, Monster®, Rock Star®, Amp®, NOS®, Full Throttle®, 5-hour Energy Drink®, Beaver Buzz®), chocolate, cocoa)

**Interaction**

As a sympathomimetic, methylphenidate has the potential to enhance the adverse or toxic effects of other sympathomimetics, such as caffeine.

**Significance**

Patients should be monitored for increased sympathomimetic effects such as increased blood pressure or heart rate if these drugs are used concomitantly. Patients should also be counselled to avoid excessive caffeine intake.

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**Cannabis/ Hash**

(marijuana, mary jane, BC bud, blunt, chronic, j, jay, joint, hemp, pot, grass, herb, 420, dope, THC, weed, reefer, ganja, gangster, skunk, hydro, hash oil, weed oil, hash brownies, grease, boom, honey oil, K2, spice, poppers)

**Interaction**

Use of cannabis has the potential to increase the tachycardic effect of methylphenidate.

**Significance**

The clinical significance of this interaction is unclear.

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**Cocaine/ Crack**

(coke, snow, flake, nose candy, blow, lady white, stardust, rock, crystal, bazooka, moon rock, tar)

**Interaction**

a) In a placebo-controlled study of cocaine users given 60 or 90 mg of methylphenidate, no significant changes were observed in the pharmacokinetics or the physiological effects of cocaine (20 or 40 mg IV). However, a decrease in some of the positive subjective effects was observed.
Serious Risk for Harm

Cocaine and methylphenidate have some things in common, like the way they can affect your heart and blood pressure if you have too much. Taken together, we think the risk is greater. You could get a dangerously fast heart beat, or too high blood pressure. There is a risk of you getting heart damage, seizures, or even a stroke.

Think First

Using cocaine while you are taking methylphenidate may cause you to have a milder high.

Unknown Dangers

Unknown dangers. Sometimes doctors prescribe methylphenidate for patients taking opioids, but this is done carefully, with close monitoring.

Opioids

Interaction

a) In a study of 32 patients with advanced cancer and chronic pain, methylphenidate administration (10 mg with breakfast and 5 mg with lunch) augmented the analgesic effect of opioids (morphine, hydromorphone, levorphanol, oxycodone) and decreased opioid-induced drowsiness.

Significance

Concurrent administration of methylphenidate and opioids may allow for a lower opioid dose to be used in patients on long-term opioid treatment.

Amphetamines/ Stimulants

Interaction

a) As a sympathomimetic, methylphenidate has the potential to enhance the adverse or toxic effects of other sympathomimetics, such as amphetamines.
Serious Risk for Harm

Methylphenidate and amphetamines have some things in common, kind of like cousins in the 'chemical family'. Taking methylphenidate and street amphetamines together could put you at risk of severe side effects. It could cause dangerous heart problems, high blood pressure, or even seizures. It would be like taking too much amphetamine.

Unknown Dangers

b) 56 individuals with methamphetamine-dependence received methylphenidate. Patients who were given methylphenidate had less amphetamine-positive urine tests and less cravings for methamphetamine. There were no significant differences in adverse drug reactions between methamphetamine-dependent individuals who received methylphenidate or placebo.

c) 16 individuals were given methylphenidate in combination with MDMA. There were no significant changes in psychotropic effects when the two drugs were combined, but the adverse hemodynamic response (increased blood pressure and heart rate) and other adverse events were higher with the combination.

Mechanism

a) there is direct overlap of the mechanism of action between methylphenidate and amphetamines or other stimulants, since all increase CNS dopamine and norepinephrine activity.

b) The mechanism for this may be due to that methylphenidate antagonizes the effects of methamphetamine in vitro, or that methylphenidate acts as a “replacement” to methamphetamine.

c) The mechanism is likely pharmacodynamic in nature.

Significance

a,c) Patients should be monitored for increased sympathomimetic effects such as increased blood pressure or heart rate if these drugs are used concomitantly. Patients should also be counselled on avoidance of amphetamine use while taking methylphenidate.

b) Methylphenidate may be useful in managing methamphetamine-dependence.

Phencyclidine/ Ketamine

(PCR, angel dust, Peace Pill, rocket fuel, love boat, embalming fluid, elephant tranquilizer, hog, illy, wet, wet stick, dipper, toe tag, cadillac, snorts, or surfer, Special K, vitamin K, CVR, cat tranquilizer, cat valium, jet, kit kat, Ketalar®)

Interaction

KETAMINE: a) A 6-year-old boy taking methylphenidate 5 mg twice daily for ADHD was given midazolam 20 mg orally for a procedure requiring sedation. After 20 minutes, he was only mildly sedated and would not lie still. He was given an additional 10 mg oral dose of midazolam mixed with ketamine 60 mg orally but remained alert and uncooperative. Sedation was then successfully achieved with intravenous glycopyrrolate and midazolam over 5 minutes. His recovery was uneventful, but he experienced nausea, vomiting and lethargy after discharge.

b) In an attempt to speed recovery, methylphenidate (20 mg IV) was given to 30 patients after a short urologic procedure requiring sedation with ketamine. No improvement in recovery scores were seen and patients experienced a higher incidence of vomiting, excessive talking and limb movement.

Mechanism

KETAMINE: a) it was thought that the methylphenidate antagonized the sedative effects of midazolam and ketamine. It was also hypothesized that methylphenidate delayed both the absorption and elimination of the drugs.

Significance

KETAMINE: a) The significance of this interaction is unclear due to the limited data available.

LSD/ Hallucinogens

(acid, blotter, cartoon acid, hit, purple haze, trip, white lightning, raggedy ann, sunshine, window-pane, microdot, boomer, buttons, mesc, peyote, salvia, morning glory seeds, flying saucers, licorice drops, pearly gates, magic mushrooms, shrooms)

Interaction

No information currently available.
Unknown Dangers

Methylphenidate makes some people feel more awake and alert. If you have been using benzodiazepines, taking methylphenidate might fool you into feeling alert enough to drive, or do other activities requiring alertness. This would be false. You may still be impaired, and it would be unsafe to drive.

Think First

Benzodiazepines may reduce the stimulant effects of methylphenidate.

Think First

Doctors sometimes prescribe benzodiazepines to patients taking methylphenidate to help treat some illnesses, but this is done very carefully. Benzodiazepines are 'downers'. If you are depressed, blue, or moody, benzodiazepines can make this worse.

References


