**Aggression, Irritability, and Violence: Drug-induced Behaviors**

Pharmacist Post-test

Pharmacist Learning Objectives:

* Define aggressive and irritable behavior that may be drug-induced
* Identify medications associated with aggression/irritability
* Classify medications causing aggressive behavior by mechanism of action
* Use consultation points to manage drug-induced aggressive behavior

**1. Which of the following sets of symptoms would be consistent with irritability?**

A. Reduced or moderate sensitivity to external stimuli

B. A State of physical and psychological tension that may suddenly escalate

C. Excessive control over temper and verbal behavior outbursts

**2. Under what circumstances might irritability, aggression, or violence be considered an adverse drug reaction?**

A. It is considered an unintended and undesired reaction to a medicine

B. It is an extension of the drug’s intended effect.

C. It is a natural consequence of the chemical reactions that take place between the drug and the body

**3. What is the difference between agitation and aggression?**

A. Agitated individuals intend to harm themselves, an object, or another individual

B. Aggression is directed at a specific person or object

C. Aggressive episodes contain intense emotional arousal and motor restlessness

**4. Which of the following medications has been most closely associated with irritability, aggression, or violence?**

A. Ribavirin

B. Interferon Alfa-2b

C. Montelukast

**5. Which of these drugs is part of the top 10 with highest risk of aggressive behavior?**

A. Sertraline

B. Duloxetine

C. Quetiapine

**6. Which of the following statements is TRUE about serotonin’s role in irritability, aggression, or violence?**

A. Aggression is linked to low serotonin turnover

B. Aggression comes from increased serotonin receptors

C. Violence leads to high synaptic serotonin concentration

**7. A mother comes to the pharmacy and mentions that her son has been sent to the principal’s office four times in the last three weeks. Before then, he had never had classroom behavior problems. She is there to pick-up the first refill for his montelukast prescription. Which of the following statements is most likely to be CORRECT?**

A. He is simply having fewer symptoms of asthma, feeling better, and has the energy to misbehave.

B. Mom’s heard that a new fad called the ‘Keto Diet’ can sure asthma and has put the whole family on this diet.

C. Montelukast’s effect on blood-brain permeability and neurotransmitter production may be causing the child’s behavior problems.

**8. A young man comes to the pharmacy with his girlfriend and asks for a recommendation for an OTC medication for acne. When you tell him you’ll be with him in a minute, he snaps, “I’m the customer. Move it!” He apologizes almost immediately, and his girlfriend says, “I don’t know where that came from. Lately, he snaps at the most ridiculous things.” When you start to ask questions, he says he is 23 and says that since he has “upped” his routine at the gym, and his acne is worse than it has ever been. He is quite muscular, and indicates he takes no prescription medications. Which of the following questions would be might be reasonable to ask?**

A. What kind of measurable exercise gains are you making?

B. Do you take any supplements or products for muscle building?

C. What’s your daily skincare routine and how long have you used it?

**9. A father comes to speak with the pharmacist at the local pharmacy. He has concerns about his child’s anxiety disorder medication, lorazepam. He states that for the past month his child has been acting agitated—outbursts of stomping around indoors and uncharacteristic yelling—and being particularly hostile towards his aunt, with whom he had always had a good relationship. Convinced the symptoms are from the lorazepam, he stopped his son’s treatment. However, it has been four days and his son is still agitated and unruly, but now complains of headaches, insomnia with nightmares, and dizziness. After confirming he received the correct medication, what should you tell the father FIRST?**

A. Monitoring for your son’s triggers is important. By avoiding activities that may cause aggressive outbursts, you will maintain a calmer household.

B. Antidepressant discontinuation syndrome happens when antidepressants are not properly tapered, and can cause symptoms like insomnia, imbalance, flu-like symptoms, and hyperarousal.

C. You should not abruptly stop your son’s lorazepam medication. In this case, the abrupt stop caused antidepressant discontinuation syndrome.

**10. A young woman approaches the pharmacy consultation window, asking for advice on how to lose weight. After listening to the pharmacist recommend caloric monitoring and daily exercise routines, the patient sets down a jar of Ma Huang she found in the weight loss aisle. “Facebook said this was an all-natural supplement for weight loss and enhancing athletic ability—I want to try this instead of all that work.” What would you encourage the patient to do while on this CAM product?**

A. Monitor any behavior changes in a diary or daily log

B. Track her weight loss progress in a daily vlog

C. Suggest trying White Mallow instead of Ma Huang