

BENEFITS AND SIDE EFFECTS OF MEDICATIONS**Asatullayev Rustam Baxtiyarovich ¹**¹Scientific Supervisor**Omongeldiyeva Zuxra Oybek qizi ¹**¹Student**ARTICLE INFO****ABSTRACT:****ARTICLE HISTORY:**

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Antipsychotic medications, corticosteroids, and antidiabetic drugs are essential for managing various mental and physical health conditions. Antipsychotics help treat schizophrenia, bipolar disorder, and psychotic disorders by regulating neurotransmitters but may cause metabolic issues and neurological side effects. Corticosteroids provide potent anti-inflammatory and immunosuppressive benefits but carry risks such as osteoporosis, weight gain, and immune suppression. Antidiabetic medications, including insulin and oral agents, control blood sugar levels, reducing diabetes complications while posing risks such as hypoglycemia and gastrointestinal disturbances. Careful monitoring, lifestyle modifications, and patient education are crucial for balancing therapeutic benefits with potential adverse effects.

INTRODUCTION. Antipsychotic medications play a critical role in managing severe mental health disorders such as schizophrenia, bipolar disorder, and major depressive disorder with psychotic features. These medications work by altering the levels of neurotransmitters, particularly dopamine and serotonin, to help stabilize mood, reduce hallucinations, and control delusions. In cases of acute psychosis, antipsychotics can provide rapid symptom relief, preventing dangerous behaviors and improving an individual's ability to function in daily life. Beyond their use in chronic mental illnesses, they are sometimes prescribed in cases of severe agitation, aggression, or delirium, particularly in dementia patients or individuals experiencing substance-induced psychosis.

Despite their effectiveness, antipsychotic medications can lead to significant side effects. Many second-generation (atypical) antipsychotics, such as olanzapine and clozapine, are

associated with metabolic issues, including weight gain, insulin resistance, and an increased risk of diabetes. Extrapyramidal symptoms, such as involuntary muscle movements, tremors, and rigidity, are more common with first-generation (typical) antipsychotics like haloperidol, often requiring additional medications to manage these side effects. Other neurological effects, such as tardive dyskinesia—characterized by repetitive, involuntary movements—can develop with prolonged use. Additionally, sedation is a frequent side effect, potentially affecting cognitive function, attention, and daily activities.

Corticosteroids are widely used for their powerful anti-inflammatory and immunosuppressive properties. They help manage conditions such as asthma, rheumatoid arthritis, lupus, and inflammatory bowel disease by reducing inflammation and immune system overactivity. In cases of severe allergic reactions, corticosteroids provide rapid relief by decreasing swelling and irritation. They are also used to prevent organ transplant rejection by suppressing the immune response that might attack the new organ.

However, long-term corticosteroid use can lead to serious complications. Osteoporosis and bone thinning are common with prolonged treatment, increasing the risk of fractures. Since corticosteroids affect metabolism, they can cause significant weight gain and fluid retention, leading to a characteristic "moon face" appearance and increased fat deposits around the abdomen. Their immunosuppressive effects, while beneficial in autoimmune diseases, also increase susceptibility to infections. Additional concerns include high blood pressure, mood swings, and elevated blood sugar levels, which can exacerbate or trigger diabetes. Gradual dose reduction is often necessary to avoid adrenal insufficiency, as long-term use can suppress the body's natural cortisol production.

Antidiabetic medications are essential for controlling blood sugar levels and preventing complications associated with diabetes. Metformin, a first-line treatment for type 2 diabetes, improves insulin sensitivity and reduces glucose production in the liver, helping maintain stable blood sugar levels. Insulin therapy is critical for individuals with type 1 diabetes and some with type 2 diabetes when oral medications are insufficient. Other medications, such as GLP-1 receptor agonists and SGLT2 inhibitors, offer additional benefits, such as promoting weight loss and reducing cardiovascular risks.

Managing diabetes with medication requires careful monitoring to avoid adverse effects. Hypoglycemia, or dangerously low blood sugar, can occur if insulin or sulfonylureas are taken in excess or if meals are skipped, leading to dizziness, confusion, and, in severe cases, loss of consciousness. Some diabetes medications, including insulin, may contribute to weight gain due to increased glucose uptake in fat cells. Gastrointestinal disturbances, such

as nausea, diarrhea, and abdominal discomfort, are common with metformin but usually improve over time.

Medications are indispensable in treating a wide range of health conditions, offering relief and improving quality of life for millions of people. However, their benefits must be weighed against potential risks. Healthcare professionals play a vital role in ensuring that medications are used safely and effectively, monitoring for adverse effects and adjusting treatment plans when necessary. Regular follow-ups, lifestyle modifications, and patient education are essential for optimizing therapeutic outcomes while minimizing unwanted side effects.

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