BENEFITS AND SIDE EFFECTS OF MEDICATIONS

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Abstract*: Blood is a vital fluid composed of cellular(corpuscular) elements suspended in plasma. The corpuscular components include erythrocytes (red blood cells), leukocytes (white blood cells), and thrombocytes(platelets), each playing a crucial role in maintaining homeostasis. Erythrocytes are responsible for oxygen transport via hemoglobin, leukocytes contribute to immune defense, and thrombocytes facilitate hemostasis through clot formation. The balance and functionality of thse elements are essential for overall health, and any deviations can indicate pathological conditions. This article provides an overview of the structure,function, and clinical significance of blood corpuscles in physiological and pathological states.*

Key words: *Blood, erythrocytes, leukocytes, thrombocytes, oxygen, immune, elements, structure, plasma, body, cells.*

Medications play a crucial role in treating illnesses, alleviating symptoms, and preventing diseases. They help eliminate bacteria, reduce inflammation, relieve pain, and aid in recovery. Some medications, such as vaccines, protect against infections, while others assist in rehabilitation by speeding up healing after major surgeries. However, despite their benefits, medications can also have side effects that may negatively impact the body. Allergic reactions, such as skin rashes or difficulty breathing, are common. Long-term use of certain medications may damage internal organs like the heart, kidneys, or liver. Digestive disruptions, including nausea, diarrhea, or abdominal pain, can also occur. Some medications may cause physical changes, such as hair loss or dry skin, while prolonged use of antibiotics can lead to resistance, reducing their effectiveness.

Medications come in various forms, including tablets, which are the most common and easy to take, and injections, which act quickly when administered directly into the bloodstream. Capsules allow for slow absorption, while syrups and liquids are useful for children or those who struggle with swallowing pills. Topical treatments such as creams and ointments target skin conditions, while sprays provide relief for respiratory or nasal issues.

Different medications work in distinct ways to achieve their effects. Antibiotics and antiviral drugs fight harmful microorganisms, while anti-inflammatory medications like aspirin and ibuprofen reduce swelling and pain. Some medications manage symptoms, such as antihistamines that ease allergy reactions or cough syrups that suppress coughing. Painkillers like morphine or codeine act on the central nervous system to alleviate severe pain.

To ensure safety and effectiveness, it is important to follow medical guidelines when using medications. Taking the correct dosage as prescribed by a doctor is essential, as overdosing can lead to severe side effects. Completing the full course of treatment,

especially with antibiotics, ensures the medication works properly and prevents resistance. It is also crucial to be aware of potential drug interactions that could enhance side effects.

Certain medications carry specific risks. Hormonal treatments may cause long-term hormonal changes, and prolonged medication use can lead to liver and kidney damage. Some drugs, particularly antidepressants or psychotropic medications, may affect mood and mental health. Others, such as pain relievers or anti-inflammatory drugs, can impact heart function or blood pressure. Additionally, some powerful painkillers pose a risk of addiction if not managed properly.

Medication – a substance used to treat or prevent diseases. Before any medication is administered to people, it is tested on animals and monitored in clinical settings. Medications are produced in pharmaceutical factories using synthetic substances, plant, animal, or microbiological products, and some medications that are perishable are prepared in pharmacies. Medications come in various forms, such as liquids (infusions, tinctures, solutions, suspensions, and others), soft forms (ointments, liniments, creams, pastes, and others), solid forms (powders, tablets, dragees, granules, and others), as well as ampoules for injection purposes.

Depending on their effects, there are heart medications, diuretics, pain relievers, antipyretics, narcotics, sedatives, and others. Medications that directly affect the causative agent of a disease form a separate group, including medications for malaria, anthrax, tuberculosis, and others. These are known as chemical therapeutic agents. The therapeutic effect of medications depends on the patient's age, condition, and dosage. A large dose can poison the body, while a small dose might make the pathogen resistant to the medication. Therefore, medication should only be taken in the prescribed dose by a doctor.

Medications are applied to the skin, ingested, delivered through the respiratory tract, or injected. Their potency and effect depend on how and how quickly they enter the body. Some medications accumulate in the body after repeated administration and exert their effect (see Cumulative Effect). Taking medications blindly is harmful because many diseases have similar symptoms, and taking unnecessary medications can harm health. The medications that enter the body are partially broken down and altered, and then they are eliminated through the kidneys, digestive and respiratory systems, skin, and other pathways.

Medications should be stored in places where children cannot reach them. The expiration date of each medication is indicated on its label, and if kept past the designated period, its effectiveness may be lost. In recent years, the variety of imported medications has increased, so it is important to only take them after consulting with a doctor.

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