

## A SCIENTIFIC ARTICLE ON THE USE OF DRUGS IN PHARMACOLOGY MAY INCLUDE THE FOLLOWING MAIN SECTIONS

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### **Introduction**

Pharmacology is the science that studies the effects of drugs on the human or animal body, their use, mechanisms of action, side effects, and pharmacokinetic properties. In recent years, the creation of new drugs and improving the effectiveness of existing ones have been one of the main directions in the pharmaceutical industry. This article discusses pharmacological approaches in the use of drugs, as well as their efficacy and safety issues.

**Key words:** Pharmacology, Pharmacokinetics

### **Main Principles of Drug Use**

#### **1. Pharmacodynamics and Pharmacokinetics**

Pharmacodynamics studies how a drug affects the body, i.e., which receptors or cells the drug interacts with and how it alters signaling pathways. Pharmacokinetics, on the other hand, studies how the body processes the drug after it is administered, including absorption, distribution, metabolism, and excretion.

#### **2. Determining Optimal Dosage**

The optimal dosage must be determined for each drug. This dosage provides the maximum therapeutic effect while minimizing side effects. Factors such as age, gender, liver and kidney function, and genetic characteristics must be considered when selecting the dose.

#### **3. Side Effects and Contraindications**

Unexpected side effects may occur during drug use. Clinical trials are needed to predict and minimize the side effects of each drug. Moreover, in some cases, drugs may be contraindicated in certain patients, meaning they cannot be used.

#### **Clinical Use of Drugs**

In clinical practice, drugs are categorized as follows:

- Antibiotics

Antibiotics are drugs used to combat bacterial infections. Misuse of antibiotics can lead to increased bacterial resistance. Therefore, it is important to determine the microorganism's sensitivity before prescribing antibiotics.

- Hormonal Drugs

Hormonal drugs affect the endocrine system and are primarily used to treat conditions such as diabetes, thyroid disorders, and reproductive system issues. Their doses and duration of use are determined individually.

- Antihistamines

Antihistamine drugs, which are used to treat allergic diseases, work by suppressing reactions involving hormones or other mediators, reducing symptoms. They are commonly used to treat conditions such as allergies, asthma, and hives.

### Pharmacogenetics and Personalized Medicine

Pharmacogenetics studies how genetic differences affect individual responses to drugs. This approach helps in selecting drugs and determining dosages on a personalized basis. For example, some patients may be more sensitive or resistant to certain drugs due to genetic mutations in specific enzymes.

### Conclusion

The issue of drug use in pharmacology remains highly relevant. It is crucial to carefully select drugs and determine the correct dosage to ensure effective and safe treatment for patients. New research, the development of new drug types, and advances in pharmacogenetics offer promising opportunities in drug use.

### References:

- 1.Navruzova U.O., Negmatullayeva M.A // Modern Aspects of Etiopatogenez of the Generalized Periodontal Disease.-The Pharmaceutical and Chemical Journal, 2022,7 (6): 13
- 2.Navruzova U.O., Sanoqulov L. A // Improving the Effectiveness of the Study, Treatment and Prevention of Caries in Children with Type 1 Diabetes.-European Multidisciplinary Journal of Modern Science, 2022,9(75): 78
- 3.Наврузова У.О., Хамидова Н.К., Юсупов Ш.А.- Evropean journal of pharmaceutical and medical research Journal. 2019 №3. С-108-113.
- 4.Наврузова У.О., Генерализаллашган пародонтит этиопатогенезининг хозирги замон аспектлари //Биология и Интегративная Медицина. 2019 №3. С. 64-70 .
5. Наврузова У.О., Особенности пародонтита при нарушении обмена веществ // Биология и Интегративная Медицина 2019 №3. С.28-40 .
- 6.Наврузова У.О., Современные аспекты этиопатогенеза генерализованного пародонтита (обзор литературы) //Биология и интегративная медицина.2019 №2. С-62-89
- 7.Наврузова Н.О. Ихтиярова Г. А., Каримова Г.К., Наврузова У.О., Шукуров И. Б., Аманова Х. И. - Современные диагностические методы для раннего выявления заболеваний шейки матки // Доктор ахборотномаси -2019. №4 С.77-82
- 8.Наврузова У.О., Каримова Г.К., Ихтиярова Г.А.- Современные диагностика патологии шейки матки // Тиббиёт ва спорт -2020 №1. С. 74-773.

9.Navruzova U.O., Negmatullayeva M.A. - 1-Тип Қандли Диабет Билан Касалланган Болаларда Кариес Касаллигини Ўрганиш, Даволаш Ва Профилактика Самарадорлигини Ошириш //Barqarorlik Va Yetakchi Tadqiqotlar Onlayn Ilmiy Jurnali-2022 №1.С. 395-399.

10 Ibrokhimovich, A. I., & Kizi, J. M. M. (2023). 1-Type Kandli Diabetes Bilan Kasallangan Bolalarda Caries Kasalligini Organish, Davolash Va Prevention Samaradorligini Oshirish. *AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI* , 2 (4), 165–171. Retrieved from <https://sciencebox.uz/index.php/amalibbiyot/article/view/6735>

11. Ibrokhimovich, A. I., & Kizi, J. M. M. (2023). Improving the Effectiveness of Research, Treatment and Prevention of Caries in Children with Type 1 Diabetes. *Scholastic: Journal of Natural and Medical Education*, 2(4), 182-187.

12 FR Kamalova, OO Yarieva, II Akhmedov (2021). Risk factors for oral diseases in children with diabetes mellitus *Scholastic: Journal of Natural remedies*, 1 (1), 57-63

13 Орзижоновна, Н. У., & Миродил Қизи, Ж. М. (2023). Профилактика Гастродуоденальных Кровотечений При Эрозивной Язве У Больных Ишемической Болезнью Сердца. *AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI*, 2(4), 16–23. Retrieved from <https://sciencebox.uz/index.php/amaltibbiyot/article/view/6517>

14Navruzova Ugilkhon Orzizjon Kizi, Saidov Jumamurod Zaynievich, & Narzullaeva Mekhriniso Zayniddinovna. (2023). Histological Findings in Endoscopically Detected Gastritis. *American Journal of Pediatric Medicine and Health Sciences (2993-2149)*, 1(9), 306–309. Retrieved from <https://grnjournal.us/index.php/AJPMHS/article/view/1596>

15 Orzizjon Kizi, N. U. ., Botyrovna, R. M. ., & Boltaevich, A. S. . (2023). Study and Prevention of Caries in Type 1 Diabetes. *AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI*, 2(2), 20–23. Retrieved from <https://www.sciencebox.uz/index.php/amaltibbiyot/article/view/5592>

16 Kizi, N. U. O., Fazliddinovna, E. G., & Najmiddinovna, A. N. (2022). Coronavirus Complications, Post Illness Medicines and Vitamin Therapy. *Central Asian Journal of Medical and Natural Science*, 3(6), 551-556. <https://doi.org/10.17605/OSF.IO/HQ4YZ>

17Наврўзова Ўғилхон Орзижоновна, Файзиева Зарина Алпомишовна, Толибова Муниса Уйғуновна, ЎТКИР ЮРАК -ТОЖ ТОМИР ЁТИШМОВЧИЛИГИ КЛИНИК БЕЛГИЛАРИНИ ЎРТА ЁШЛИ БОЛАЛАРДА КЕЧИШИИ , BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI: Vol. 2 No. 9 (2022): BARQARORLIK VA ETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI

18.Akhmedov Pkhom Ibrokhimovich, & Navruzova Ugilkhan Orzizjon Kizi. (2023). Or Pathogenesis of Periodontal Disease in I and II Levels of Obesity. *Central Asian Journal of Medical and Natural Science*, 4(6), 1007-1010. Retrieved from <https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/2178>