

# OTC Medications Are Integral Part of Healthcare System

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## Abstract

Over the counter (OTC) drugs have emerged as a fundamental component of contemporary healthcare, offering accessible, effective, and economical remedies for prevalent health issues. These drugs are obtainable over the counter, enabling patients to autonomously manage symptoms of conditions such as headaches, colds, gastrointestinal disturbances, and minor accidents. OTC medications would allow patients to manage their health, decrease healthcare expenses, and alleviate the strain on healthcare systems by minimizing superfluous medical consultations. The extensive accessibility of over-the-counter pharmaceuticals prompts apprehensions about misuse, drug interactions, and self-diagnosis. This study investigates the role of OTC pharmaceuticals in modern healthcare, analyzing their advantages, problems, and the regulatory structures that guarantee their safety and effectiveness. The growing dependence on OTC products underscores the necessity for patient education, appropriate regulation, and ongoing research to enhance their utilization and reduce potential hazards.

**Keywords:** OTC medication, self-medication, healthcare ease, drug interaction

## 1.INTRODUCTION

We are all familiar with the term OTC medication. These drugs are available over the counter without a prescription from a healthcare professional. They can be found on the shelves of various locations, including pharmacies, supermarkets, grocery stores, and gas stations. A variety of drugs and equipment is available for self-care to treat acute symptoms, manage chronic diseases, or function as preventive measures. Over-the-counter drugs are essential for maintaining the health of the American population. The FDA's section on the regulation of nonprescription items states that over-the-counter (OTC) medications play an increasingly vital role in America's health care system. There are more than 80 therapeutic categories of over-the-counter drugs, including products for acne and weight control. In a manner akin to the oversight of prescription pharmaceuticals, the Center for Drug Evaluation and Research (CDER) regulates over-the-counter products to ensure precise labeling and to verify that their benefits outweigh any potential hazards. Over-the-counter drugs generally exhibit the following characteristics: The benefits outweigh the possible disadvantages. The probability of misuse and abuse is negligible. Individuals may employ them for ailments they have self-diagnosed. They can be suitably classified. The product can be employed safely and successfully without the need for healthcare professionals. The history of over-the-counter (OTC) medications is extensive and complex, reflecting the evolution of medical practices, regulatory frameworks, and consumer health behaviors. From ancient

remedies to their current importance in self-care, OTC medications have undergone significant changes in availability, formulation, and safety.[3][4]

## **2.History of OTC medications**

The practice of administering medications without the guidance of a physician has its roots in ancient civilizations. In ancient Egypt, China, and Greece, it was common to use herbal remedies and natural substances, such as willow bark for pain relief (the precursor to aspirin) [1]. By emphasizing the therapeutic properties of natural compounds, these traditional remedies established the foundation for modern pharmaceuticals. The commercialization of "patent medicines" during the 19th century represented a significant change in the accessibility of medicinal products. These formulations, which were frequently sold without scientific validation, were extensively promoted for a variety of ailments. Nevertheless, the absence of regulation resulted in the proliferation of hazardous or ineffective products, which raised public health concerns [2]. The regulation of medications underwent substantial progress during the early 20th century. The Pure Food and Drug Act of 1906 established the U.S. Food and Drug Administration (FDA), which commenced the investigation of consumer product safety and efficacy [3]. The OTC market experienced rapid development during the post-war period. The advancements in pharmaceutical science resulted in the creation of novel drug formulations, many of which were converted from prescription to over-the-counter status after being determined to be safe for self-medication. OTC medications have become an essential component of the self-care movement in the 21st century. A diverse selection of over the counter (OTC) products is now available to consumers for the treatment of both acute and chronic conditions

## **3.Benefits and Pros of OTC Medications**

Over the counter (OTC) medications are a vital part of healthcare systems, enabling individuals to address some of the health issues without the need for a prescription. This provides significant advantages to the patient and overall health care system.

### **3.1. Accessibility and Convenience**

Over-the-counter drugs are easily obtainable at pharmacies, supermarkets, and internet platforms, ensuring excellent accessibility. Their convenience of acquisition obviates the necessity for medical consultation, conserving both time and energy. This accessibility is especially beneficial for addressing mild symptoms like colds, headaches, or allergies. Distributing them in supermarkets or local grocery stores is advantageous, as these establishments are typically situated inside neighborhoods and are more accessible than pharmacies. Medications are occasionally required in urgent conditions, such as for severe pain, nausea, or intense coughing. It may be late at night, but you may locate a 24-hour petrol station where those prescriptions are available. This degree of accessibility and convenience will alleviate the burden on an already strained healthcare system. Emergency contraceptives are pharmacological agents or devices employed post-coitus to mitigate the likelihood of pregnancy, offering women a final opportunity to avert unexpected conception following unprotected sexual activity, contraceptive failure, or non-consensual intercourse. This drug consists of time-sensitive treatments that should be administered promptly. Unrestricted access and convenience to those medications represent a milestone in the history of over-the-counter pharmaceuticals. [5]

### **3.2. Cost-Effectiveness**

Over-the-counter treatments are typically more economical than prescription pharmaceuticals. Most OTC medications are pharmaceuticals with a long history of available safety data. In addition to the branded version of the OTC drug, a generic variant is also available. Typically, this generic form provides equivalent therapeutic results at a reduced cost to consumers. The self-treatment of acute diseases can be conducted in a highly cost-effective manner due to over-the-counter drugs. Another financial benefit of over-the-counter medications is eliminating the need to consult a physician or visit a doctor's office. This will conserve time and resources. If patients must repeatedly see a physician or hospital to treat common cold-like diseases, it would impose a significant load on healthcare systems. Over-the-counter medications conserve considerable time, energy, and financial resources for patients and healthcare professionals by obviating the necessity for physician consultations [5].

### **3.3. Encouragement of Self-Care**

OTC drugs enable individuals to assume control of their health, fostering increased autonomy. All over-the-counter medications are accompanied by explicit labeling and usage instructions. They have also undergone safety testing. Most patients do not require specific training to administer them. This promotes health literacy and fosters responsible healthcare practices [6].

### **3.4. Prevention of Disease Progression**

Over-the-counter drugs serve a preventive function in healthcare. Antacids can alleviate mild acid reflux before its advancement into more severe gastroesophageal reflux disease (GERD), while low-dose aspirin mitigates cardiovascular hazards. Occasionally, this type of symptom alleviation assists the body in managing the ailment at an initial stage. This type of early intervention may prevent progression into a more severe condition. Applying triple antibiotic ointment to minor burns and cuts might prevent them from developing into serious skin infections that may necessitate more extensive medical treatment. Administering antihistamines for a minor skin rash will alleviate symptoms and avoid inflammation. [8].

### **3.5. Complementary Role in Chronic Disease Management**

OTC medications often complement prescription treatments, providing relief for symptoms associated with chronic conditions. For instance, NSAIDs like ibuprofen are commonly used for arthritis pain, and antihistamines alleviate allergy symptoms. Taking low dose aspirin is suggested for cardiovascular health. It helps keep the blood thin. In Lots of chronic pain conditions, doctors recommend using topical pain creams and patches to help reduce dependency on opiate drugs. Taking azo to help with urinary burning pain or any infection. Taking pre-biotics while taking antibiotics to reduce the stomach discomfort and replace the stomach flora [6].

## **4.Challenges with Over the Counter (OTC) Medications**

While OTC medications provide numerous benefits, their accessibility and self-administered nature present challenges.

### **4.1. Risk of Overdose**

A primary challenge associated with OTC drugs is the risk of overuse. Consumers may erroneously perceive OTC drugs as entirely safe, leading them to exceed prescribed dosages or utilize prescriptions for unapproved indications. The majority of medications undergo safety testing for standard consumption. Exceeding the authorized dosage can seriously injure the patient. Exceeding the approved dosage of analgesics might result in harmful effects; for instance, acetaminophen is a common analgesic utilized for pain relief and fever reduction. This drug is combined with several types of medications. This substance is present in multi-system cold and cough medications, in conjunction with opiates for prescription analgesics, and in combination with migraine headache treatments. Individuals may inadvertently consume many medications containing substantial amounts of acetaminophen. Exceeding a dose of 4 grams of acetaminophen may result in liver damage. [9].

#### **4.2 Risk of misuse**

Over-the-counter drugs have specified usage instructions stated on the label. However, at times, they exhibit additional effects that have been utilized off-label. Diphenhydramine is utilized as an antihistamine. However, the off-label use of diphenhydramine is as a sleep aid. The most controversial off-label use was for pseudoephedrine as a stimulant. Pseudoephedrine is the active ingredient of decongestant medicines. However, it produced effects akin to those of stimulants. Individuals began to exploit pharmaceuticals in the illicit manufacture of methamphetamine. The Combat Methamphetamine Epidemic Act (CMEA) of 2005 was established to mitigate misuse. Such rules may necessitate the restriction of OTC medications to their approved indications.

#### **4.3 Masking of Serious Conditions**

Over-the-counter drugs frequently mitigate symptoms without resolving underlying issues, potentially postponing the detection and treatment of serious ailments. Chronic heartburn treated with antacids may obscure signs of GERD or peptic ulcers. Whenever patients experience those symptoms, they attempt to alleviate them with over-the-counter medication, and upon achieving brief relief, they disregard the issue until it recurs [10].

#### **4.4. Drug Interactions**

Over-the-counter pharmaceuticals may interact with prescription prescriptions, vitamins, or other over-the-counter products, resulting in undesirable effects. Consumers frequently lack understanding of possible interactions, especially with medications such as aspirin, antihistamines, or decongestants. There are also interactions between food and drugs. Many over-the-counter supplements lack detailed clinical data regarding significant interactions. This occasionally results in significant adverse events for patients [11].

#### **4.5 Limited Consumer Knowledge**

Even though OTC drugs are clearly labeled, many customers are unaware of their active ingredients, recommended dosages, or possible adverse effects. Sometimes there is a language barrier too. Some of the older patients migrated from other counties might not be good with language which can create confusion, mis understanding. Unintentional overdose or inappropriate use may result from this ignorance [12].

#### **4.6. Dependence on OTC Medications**

Certain over-the-counter medications might cause dependency if used frequently. For example, prolonged use of laxatives may impede normal bowel function, while excessive use of nasal decongestant sprays may result in rebound congestion. Pain medication are also good example of it. Sometimes patients just take it as scheduled dosage on the to avoid feeling any pain [13]

#### **4.7. Financial Costs of Mismanagement**

When OTC drugs are used improperly, they might result in hospital stays or necessitate medical care, which reduces their cost-effectiveness. Unintentional overdoses and other mismanagement increase the cost of healthcare systems [15].

#### **Conclusion**

In summary, over the counter (OTC) drugs have become a crucial component of contemporary healthcare, providing patients with readily available and reasonably priced solutions for treating common illnesses. Without a prescription, these drugs enable people to take charge of their health by offering immediate treatment for common conditions, including headaches, colds, and allergies. OTC products, which provide remedies for ailments like heartburn, constipation, and even certain skin disorders, are also essential in preventative healthcare. OTC drugs' accessibility and ease of use have significantly increased healthcare systems' efficiency by lessening the workload for medical staff and cutting down on needless doctor visits. However, because several over-the-counter medications, like acetaminophen and pseudoephedrine, can have severe side effects if not used as prescribed, their widespread usage necessitates cautious management to prevent abuse or overuse. OTC drugs will probably play a more significant part in contemporary healthcare as research and development progresses, with new formulations and products providing improved accessibility, safety, and efficacy. To ensure that over-the-counter pharmaceuticals continue to be a safe and valuable tool for managing health, it is nevertheless imperative that consumers are knowledgeable about how to take these medications and seek medical advice when needed.

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