

# ETHIMOLOGICAL RESOURCES OF MEDICAL TERMS IN ENGLISH AND UZBEK LANGUAGES

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## Abstract

Medical terminology represents an essential component of professional language in both English and Uzbek. This article explores the etymological resources of medical terms in the English and Uzbek languages from a comparative perspective. The study aims to identify the principal sources of term formation, including Latin and Greek borrowings, native lexical units, and intermediary influences, as well as to examine their historical development and adaptation. The research is based on a comparative and etymological analysis of medical terms selected from authoritative dictionaries and professional medical texts. The findings indicate that English medical terminology is largely formed through direct borrowings from classical languages, whereas Uzbek medical terminology reflects a mixed system combining international terms, Russian-mediated borrowings, and native word-formation elements. The study reveals both universal and language-specific features in the etymological structure of medical terms and underlines the significance of etymology in understanding terminological meaning, ensuring translation accuracy, and supporting terminology standardization. The results may be useful for further research in medical linguistics, comparative terminology, and English for Specific Purposes.

**Keywords.** Medical terms, etymology, borrowings, English and Uzbek, medical terminology.

## Introduction

### Annotatsiya

Tibbiy terminologiya ingliz va o'zbek tillarida professional tilning muhim tarkibiy qismidir. Ushbu maqola ingliz va o'zbek tillaridagi tibbiy atamalarni etimologik manbalar nuqtai nazaridan taqqoslashga bag'ishlangan. Tadqiqotning maqsadi terminlar shakllanishining asosiy manbalarini aniqlash — lotin va yunon tillaridan olingan qarz so'zlar, ona tilga xos leksik birliklar va oraliq ta'sirlarni o'rganish, shuningdek, ularning tarixiy rivojlanishi va adaptatsiyasini tahlil qilishdir. Tadqiqot ishonchli lug'atlar va professional tibbiy matnlardan tanlangan tibbiy atamalarni taqqoslash va etimologik tahlil qilish asosida olib borilgan. Tadqiqot natijalari shuni ko'rsatadiki, ingliz tibbiy terminologiyasi asosan klassik tillardan to'g'ridan-to'g'ri qarz so'zlar orqali shakllangan, o'zbek tibbiy terminologiyasi esa xalqaro atamalar, rus tilidan o'tkazilgan qarz so'zlar va ona tilga xos so'z yasash elementlarini birlashtirgan aralash tizimni aks ettiradi. Tadqiqot tibbiy atamalarning etimologik tuzilishidagi umumiy va tilga xos xususiyatlarni ochib beradi va etimologiyaning termin ma'nosini tushunish, tarjima aniqligini ta'minlash hamda terminologiyani standartlashtirishdagi

ahamiyatini ta'kidlaydi. Natijalar tibbiy lingvistika, taqqosiy terminologiya va ma'lum bir soha uchun ingliz tilini o'rganish bo'yicha keyingi tadqiqotlar uchun foydali bo'lishi mumkin.

**Kalit so'zlar.** tibbiy atamalar, etimologiya, kirib kelgan so'zlar, ingliz va o'zbek, tibbiy terminologiya

### Аннотация

Медицинская терминология является важнейшей составляющей профессионального языка как в английском, так и в узбекском языках. В данной статье рассматриваются этимологические ресурсы медицинских терминов английского и узбекского языков с точки зрения сравнительного анализа. Цель исследования — выявить основные источники формирования терминов, включая заимствования из латинского и греческого языков, родные лексические единицы и промежуточные влияния, а также изучить их историческое развитие и адаптацию. Исследование основано на сравнительном и этимологическом анализе медицинских терминов, выбранных из авторитетных словарей и профессиональных медицинских текстов. Результаты показывают, что английская медицинская терминология в основном формируется за счёт прямых заимствований из классических языков, тогда как узбекская медицинская терминология представляет собой смешанную систему, объединяющую международные термины, заимствования через русский язык и элементы словообразования родного языка. Исследование выявляет как универсальные, так и языково-специфические особенности этимологической структуры медицинских терминов и подчёркивает важность этимологии для понимания терминологического значения, обеспечения точности перевода и поддержки стандартизации терминологии. Полученные результаты могут быть полезны для дальнейших исследований в области медицинской лингвистики, сравнительной терминологии и английского языка для профессиональных целей.

**Ключевые слова.** медицинские термины, этимология, заимствования, английский, узбекский.

### INTRODUCTION

Medical terminology represents a crucial component of professional communication in the healthcare field. Accurate understanding and use of medical terms are essential for effective diagnosis, treatment, scientific communication, and international collaboration. In both English and Uzbek, medical terminology has developed under the influence of multiple linguistic and historical factors, including classical languages (Latin and Greek), intermediary languages such as Russian, and native lexical resources. While English medical terminology is widely recognized for its reliance on classical borrowings, Uzbek medical terminology reflects a more complex system shaped by historical contact, linguistic adaptation, and national standardization efforts.

The study of etymological resources in medical terms allows scholars to trace the origins, formation mechanisms, and semantic development of specialized vocabulary. Such analysis is

particularly relevant in a comparative perspective, as it highlights both universal and language-specific patterns in term formation. In the context of globalized medicine, understanding the etymological background of terms is essential not only for accurate translation and interpretation but also for the development of standardized terminology in national languages. This article aims to examine the etymological sources of medical terms in English and Uzbek, identifying the main patterns of term formation, the influence of classical and international borrowings, and the role of native linguistic resources. By providing a comparative analysis, the study seeks to contribute to the fields of medical linguistics, terminology studies, and English for Specific Purposes (ESP), offering insights for educators, translators, and researchers working with medical texts in both languages.

## LITERATURE REVIEW / THEORETICAL BACKGROUND

Medical terminology has been the focus of numerous linguistic and terminological studies worldwide. In English, the etymology of medical terms has been extensively analyzed, highlighting the predominance of **Latin and Greek roots**, prefixes, and suffixes in forming specialized vocabulary (Bowker & Pearson, 2002; Quirk et al., 1985). Such studies emphasize the systematic nature of term formation and the semantic transparency provided by classical components, which facilitates learning, translation, and international communication.

In the context of Uzbek, research on medical terminology remains limited but growing. Historical studies indicate that Uzbek medical terms have been influenced by a combination of **native word-formation processes, Russian-mediated borrowings, and direct adoption of international (mostly Latin-based) terms** (Karimov, 2010; Nurmatova, 2017). Scholars note that while English terminology maintains a high level of standardization through international usage, Uzbek terminology exhibits variability due to historical, social, and linguistic factors, including Soviet-era language policies and recent efforts at national standardization.

Comparative studies of medical terminology across languages reveal important insights into **universal patterns and language-specific adaptations**. For example, while English terms often preserve classical morphology, Uzbek tends to modify borrowed terms to align with **phonological and morphological rules of the language**, creating hybrid or adapted forms. Etymological analysis provides the foundation for understanding these processes, offering guidance for translators, educators, and terminologists working in multilingual medical environments.

Despite these contributions, few studies have focused specifically on a **comparative etymological analysis of English and Uzbek medical terminology**, examining both the sources and mechanisms of term formation. This gap highlights the need for research that systematically identifies **classical roots, intermediary borrowings, and native derivations**, and analyzes their semantic and structural features in both languages.

This study builds upon previous research by combining **descriptive, comparative, and etymological approaches**, providing a systematic analysis of the main resources of medical term formation in English and Uzbek. The aim is to reveal both universal patterns and unique language-specific features, contributing to a better understanding of medical terminology development and informing teaching, translation, and standardization practices.



## METHODOLOGY

The present study employs a descriptive, comparative, and etymological approach to analyze the formation and origin of medical terms in English and Uzbek. The research focuses on identifying the main etymological resources, including classical (Latin and Greek) roots, intermediary borrowings, and native word-formation processes, and examining how these resources shape the structure and meaning of medical terminology in the two languages.

The data for this study were collected from a range of authoritative sources, including English medical dictionaries and specialized texts (e.g., *Stedman's Medical Dictionary*, *Dorland's Illustrated Medical Dictionary*), Uzbek medical dictionaries and terminology guides (e.g., *Tibbiyot Terminlari Lug'ati*, 2015; Ministry of Health standardized glossaries), and selected professional articles and textbooks used in medical education in Uzbekistan. A total of 500 medical terms were selected for analysis in each language. The terms were chosen to represent various branches of medicine, including anatomy, physiology, pathology, pharmacology, and clinical practice, ensuring both breadth and relevance.

The research procedures included classification of terms according to their etymological origin (classical roots, Russian-mediated borrowings, and native lexical formations), morphological analysis of term formation (affixation, compounding, and derivation), comparative analysis to identify similarities and differences in term structure, adaptation, and semantic transparency between English and Uzbek, and statistical analysis to determine the proportion of terms from each etymological category in both languages.

This methodology allows the study to systematically identify the main sources of medical term formation, examine the structural and semantic patterns of terms in both languages, and highlight language-specific adaptations and universal tendencies in medical terminology. The combination of comparative and etymological analysis ensures a rigorous examination of both the historical and contemporary aspects of medical terminology, providing a solid foundation for applications in translation, teaching, and standardization.

## RESULTS AND DISCUSSION

The analysis of 500 medical terms in English and 500 corresponding terms in Uzbek revealed distinct patterns in both **etymological sources** and **term formation mechanisms**. In English, the majority of medical terminology (approximately 70–75%) derives directly from **Latin and Greek roots**, with classical prefixes and suffixes forming the backbone of specialized vocabulary. Examples include *cardiology* (Greek *kardia* + *-logy*), *hepatitis* (Greek *hepar* + *-itis*), and *appendectomy* (Latin *appendix* + Greek *-ectomy*). In contrast, Uzbek medical terminology demonstrates a more diverse etymological mix: approximately 40% of terms are international borrowings (directly from Latin/Greek or via English), 35% are Russian-mediated borrowings reflecting historical Soviet influence (e.g., *rentgen* for X-ray, *anesteziya* for anesthesia), and 25% are native formations using Uzbek morphemes for suffixation or compounding (e.g., *qon bosimi* – blood pressure).

Morphologically, English medical terms predominantly use **affixation** (prefix + root + suffix) and **compounding** for term formation. For instance, *gastroenterology* combines *gastro-* (stomach) + *entero-* (intestine) + *-logy* (study of). Uzbek terminology combines borrowings

with **native derivational processes**; for example, *qon aylanish tizimi* (circulatory system) is a descriptive compound, while *gastroenterologiya* is a direct adaptation of the English/Latin term.

Regarding **semantic transparency**, English terms generally preserve high transparency due to consistent classical morphology. In Uzbek, especially in Russian-mediated terms, semantic transparency is sometimes reduced, which may require additional explanation in teaching or translation.

Comparative observations indicate that both languages exhibit **universal patterns**, such as the use of classical roots for scientific precision. However, language-specific adaptations are evident in Uzbek, where terms are often **phonologically and morphologically adjusted** to fit Uzbek grammar and pronunciation rules. This adaptation process is crucial for **terminology standardization, accurate translation, and ESP education**, ensuring that medical terms are understandable and usable in professional practice.

The findings imply that understanding the **etymology of medical terms** is essential for accurate translation, terminology standardization, and medical education, particularly in multilingual contexts. Moreover, the comparative analysis highlights the need for awareness of historical and linguistic influences when teaching or translating medical terminology in Uzbekistan.

## CONCLUSION

The comparative analysis of medical terms in English and Uzbek demonstrates that **etymological resources** play a crucial role in shaping the structure, meaning, and adaptation of specialized vocabulary. English medical terminology is largely based on **Latin and Greek roots**, resulting in high semantic transparency and international consistency. Uzbek medical terminology, in contrast, reflects a **more complex system**, combining international borrowings, Russian-mediated terms, and native lexical formations.

