

# Elderly Skin: Challenges, Tailored Treatments, and Prevention

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## Introduction

Aging skin presents a complex array of dermatological challenges that necessitate specialized care and understanding. The inherent physiological changes associated with aging impact the skin's structure and function, leading to increased vulnerability to external stressors and internal disease processes. These alterations manifest as a higher susceptibility to infections, a diminished capacity for wound repair, and a greater propensity for developing skin malignancies and precancerous conditions. Effective therapeutic strategies must be meticulously designed to address the unique needs of elderly patients, taking into account the presence of multiple co-existing health issues, the management of numerous prescribed medications, and the compromised integrity of the skin's protective barrier. This often requires personalized treatment plans that carefully consider potential adverse reactions and interactions between different pharmacological agents. Furthermore, stringent photoprotection measures remain a cornerstone of dermatological care for this population, coupled with the critical importance of early detection of any suspicious skin lesions. [1]

The aging process profoundly affects the fundamental physiology of the skin, leading to significant alterations in its immune responses and its ability to heal. These age-related modifications render elderly individuals more susceptible to a wide range of dermatological conditions and slow down their recovery from injuries. A comprehensive grasp of these age-specific cutaneous changes is indispensable for the development and implementation of effective dermatological management strategies. [2]

Cutaneous infections represent a prevalent concern among the elderly population. Their incidence and severity are frequently exacerbated by a weakened immune system and the presence of underlying chronic diseases. Management approaches for these infections typically involve rapid and accurate diagnosis, the administration of appropriate antimicrobial treatments, and dedicated efforts to identify and address any predisposing factors that contribute to their development or persistence. [3]

The management of non-melanoma skin cancers in older adults demands a coordinated, multidisciplinary strategy. This approach must carefully evaluate the patient's chronological age, their overall health status, and the specific characteristics of the cancerous lesion. A spectrum of therapeutic options, including surgical interventions and non-surgical modalities, are available, with a primary focus on minimizing treatment-related morbidity and achieving optimal cosmetic results. [4]

Chronic wounds pose a considerable health problem within geriatric populations. These wounds are often intricately linked to underlying conditions such as vascular disease, diabetes mellitus, and restricted mobility. Successful therapeutic inter-

ventions necessitate a thorough and comprehensive patient assessment, encompassing meticulous debridement of the wound, effective control of any infection, and the judicious selection of appropriate dressing materials, all while prioritizing the promotion of healing and the prevention of complications. [5]

Polypharmacy, the concurrent use of multiple medications, is a common scenario in elderly patients and significantly escalates the risk of experiencing drug-drug interactions and developing adverse dermatological reactions. A comprehensive and systematic review of a patient's medication regimen is therefore an essential step in identifying and effectively managing these potential complications, thereby ensuring the highest level of patient safety. [6]

The functional integrity of the skin barrier demonstrably declines with advancing age. This deterioration leads to an increased rate of transepidermal water loss, rendering the skin more permeable and thus more susceptible to irritant contact dermatitis. Consequently, therapeutic strategies that emphasize the use of emollients and the adoption of gentle skincare practices have proven to be particularly beneficial in mitigating these effects. [7]

Photosensitivity is a frequently encountered condition among older adults, often attributed to the cumulative effects of prolonged sun exposure over a lifetime and the use of certain medications. Therefore, comprehensive education regarding photoprotection strategies and, when clinically indicated, the implementation of pharmacological interventions are considered key components in managing this prevalent issue. [8]

Inflammatory dermatoses, such as psoriasis and eczema, can exhibit distinct presentations in elderly individuals and may be further complicated by the presence of comorbidities. Effective treatment necessitates a carefully tailored approach that thoughtfully considers the systemic implications of the disease and potential interactions with other concurrently administered medications. [9]

The aging immune system plays a significant role in modulating the skin's response to pathogenic challenges and in the subsequent development of skin cancers. A thorough understanding of the process of immunosenescence is therefore paramount for optimizing treatment outcomes and enhancing the quality of life for elderly patients. [10]

## Description

The physiological changes that occur during the aging process significantly impact the skin's ability to perform its protective functions, making older adults more susceptible to various dermatological issues. These age-related alterations contribute to a compromised skin barrier, reduced immune surveillance within the skin, and

a slower inflammatory response, all of which create a milieu conducive to the development of infections and the progression of malignancies. The complexities of managing these skin conditions are further amplified by the frequent presence of comorbidities, the challenges of polypharmacy, and the inherent decrease in the skin's regenerative capacity. [1]

The aging process fundamentally reshapes the skin's physiological landscape, affecting crucial aspects like wound healing efficiency and the robustness of the immune response. This makes elderly individuals inherently more vulnerable to a diverse range of dermatoses and delays their recovery from any skin-related injuries. Therefore, a deep and thorough comprehension of these age-related cutaneous transformations is a prerequisite for devising and executing successful dermatological management plans. [2]

Instances of cutaneous infections are notably common in the elderly population, and their severity is often compounded by a weakened immune system and the presence of underlying health conditions. Effective management protocols revolve around achieving a prompt and accurate diagnosis, administering suitable antimicrobial therapies, and diligently addressing any factors that predispose individuals to these infections. [3]

When addressing non-melanoma skin cancers in older adults, a cohesive and multidisciplinary approach is indispensable. This strategy must meticulously account for the patient's age, their overall health status, and the specific biological and clinical characteristics of the tumor. A range of treatment modalities, encompassing both surgical and non-surgical options, are available, with a principal objective of minimizing treatment-related morbidity and optimizing cosmetic outcomes. [4]

Chronic wounds present a substantial challenge in geriatric populations, frequently being associated with conditions such as vascular disease, diabetes, and limited mobility. The therapeutic strategies employed for these wounds demand a holistic and comprehensive patient assessment, which includes thorough debridement, rigorous infection control measures, and the careful selection of appropriate dressing materials, all with the overarching aim of fostering healing and preventing the emergence of complications. [5]

The phenomenon of polypharmacy, common among the elderly, substantially elevates the risk of experiencing adverse drug-drug interactions and developing undesirable dermatological reactions. Consequently, a thorough and critical review of all prescribed medications is an indispensable step in identifying and effectively mitigating these potential hazards, thereby safeguarding patient well-being. [6]

As individuals age, the protective function of the skin barrier undergoes a notable decline. This impairment results in an increased rate of transepidermal water loss, making the skin more susceptible to irritant contact dermatitis. In light of this, therapeutic interventions that focus on the consistent application of emollients and the adoption of gentle skincare practices have been demonstrated to be highly beneficial. [7]

Photosensitivity is a prevalent dermatological issue encountered in the elderly, often stemming from the cumulative effects of years of sun exposure and the use of specific medications. Therefore, educating patients on effective photoprotection strategies and, when clinically necessary, employing pharmacological interventions are key pillars of management. [8]

Inflammatory dermatological conditions, including well-known conditions like psoriasis and eczema, can manifest differently in older individuals and may be complicated by the presence of other health issues. Treatment regimens must be highly individualized, taking into full consideration the potential systemic effects and any possible interactions with other medications the patient may be taking. [9]

The aging of the immune system has a discernible influence on how the skin

responds to infectious agents and its susceptibility to developing skin cancers. Therefore, gaining a profound understanding of the mechanisms underlying immunosenescence is essential for improving treatment effectiveness and achieving better outcomes for elderly patients. [10]

## Conclusion

Aging skin faces unique dermatological challenges including increased infection susceptibility, slower wound healing, and higher rates of skin cancers and precancerous lesions. Treatment must account for comorbidities, polypharmacy, and reduced skin barrier function, often requiring tailored approaches. Photoprotection and early detection of suspicious lesions are paramount. Age-related physiological changes alter skin immunity and wound repair, making the elderly more vulnerable to dermatoses. Cutaneous infections are common, exacerbated by immune compromise, necessitating prompt diagnosis and treatment. Non-melanoma skin cancer management in older adults requires a multidisciplinary approach focusing on patient health and tumor characteristics. Chronic wounds are a significant problem linked to vascular disease and diabetes, requiring comprehensive assessment and management. Polypharmacy increases the risk of adverse drug reactions and interactions, making medication review crucial. The declining skin barrier function leads to increased water loss and susceptibility to irritant contact dermatitis, benefiting from emollients and gentle skincare. Photosensitivity is common due to cumulative sun exposure and medications, emphasizing photoprotection. Inflammatory dermatoses can present differently and be complicated by comorbidities, requiring tailored treatments. Immunosenescence impacts skin response and cancer development, highlighting its importance in elderly patient care.

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## Conflict of Interest

None.

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