

SKIN:

A GUIDE TO **UNDERSTANDING DESIGNING FOR** SENSITIVE SKIN

# DO YOU EXPERIENCE PERSISTENT **SKIN ISSUES**

A heightened reactions to environmental factors, or to skincare products, or to specific ingredients? It could be signs of sensitivity. Sensitive skin tends to be more prone to redness, dryness, and irritation. Identifying sensitiv e skin involves recognizing signs such as itching, burning, redness, rashes, sudden breakouts or tightness after product application.

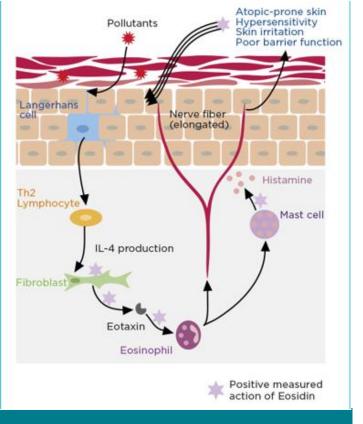
Sensitive skin can be a challenge to manage, but with the right knowledge and care, you can keep your skin healthy and radiant.

quide, we'll explore the characteristics of sensitive skin, identify common triggers, and some practical tips for designing products for sensitive skin

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# Sensitive skin prevalence

- Global reported prevalence rate ranges between 12.8% to 68.4%
- ~60–70% of women and 50–60% of men report having some degree of sensitive skin
- Youngsters reporting more sensitivity than older subjects
- The most sensitive area of the body's reported by a substantial majority (79. 8%) is the face

# WHAT IS SENSITIVE SKIN

Sensitive skin can be caused by various factors, and its exact scientific reason may vary from person to person. Here are a few potential scientific explanations for sensitive skin:

#### 1.Impaired skin barrier function:

The outermost layer of the skin, known as the stratum corneum, acts as a barrier to protect the underlying layers from environmental factors, irritants, and allergens. In individuals with sensitive skin, this barrier function may be compromised, leading to increased permeability and vulnerability to irritants. Genetic factors, environmental factors (such as excessive sun exposure or harsh weather conditions), or improper skincare routines can contribute to a weakened skin barrier.

#### 2. Hyper-reactive nerve endings:

People with sensitive skin may have nerve endings that are more sensitive or reactive to certain stimuli. These nerve endings can be triggered by various factors, such as temperature changes, chemicals, fragrances, or even light touch, resulting in sensations of discomfort, itching, or pain.

#### 3. Inflammatory responses:

Individuals with sensitive skin may have an exaggerated inflammatory response to certain triggers. When the skin is exposed to irritants or allergens, the immune system may release inflammatory mediators, such as histamine, cytokines, and prostaglandins. These substances can cause redness, itching, and inflammation, leading to discomfort and sensitivity.

#### 4. Altered skin pH:

The skin's natural pH plays a crucial role in maintaining a healthy skin barrier. Changes in pH levels can disrupt the protective function of the skin and increase sensitivity. Factors such as harsh cleansers, alkaline substances, or certain skincare products can disturb the skin's pH balance, making it more prone to irritation and sensitivity.

#### 5. Genetic predisposition:

Some individuals may have an inherent genetic predisposition to sensitive skin. Certain genetic variations can influence the structure and function of the skin, making it more reactive or susceptible to irritants.















DRY & SCALY SKIN

ACNE

ITCHINESS

ROUGH PATCHES

SKIN DISCOLOURATION

REACTIVE & RED AREAS

# REGULATORY CONSIDERATIONS

- Ingredient Regulations
- Allergen Labeling
- Safety Assessments
- Packaging and Labeling Requirements
- Claims and Advertising
- Country specific Regulations

Every individual's skin sensitivity may vary, so it's important to conduct patch tests and monitor feedback from the users to ensure if the designed product is well-tolerated and suitable for sensitive skin

### PRODUCT DESIGN PRINCIPLE FOR SENSITIVE SKIN

When formulating a personal care product for sensitive skin, it's important to include ingredients that are gentle, hydrating, and soothing. Here are some must-have ingredients suitable for sensitive skin,



**1.Mild Surfactants:** selection of gentle and mild surfactants that effectively cleanse the skin without stripping away its natural oils is a must. Some examples include cocoglucoside, decyl glucoside, and lauryl glucoside



**2.Moisturizing Ingredients**: Selecting ingredients that help hydrate and moisturize the skin, such as glycerin, aloe vera, shea butter, or hyaluronic acid. These ingredients help maintain the skin's moisture balance and prevent dryness



**3.Calming and Soothing Agents**: Ingredients with soothing properties help reduce skin irritation and redness. Chamomile extract, oat extract, allantoin, and panthenol (provitamin B5) are known for their calming effects on sensitive skin



**4.Natural Plant Extracts**: Incorporate natural plant extracts known for their skin-soothing properties, such as green tea extract, chamomile extract, calendula extract, or cucumber extract. These botanical ingredients can provide additional benefits for sensitive skin



**5.pH-Balanced Formulation**: Ensuring a pH level close to the natural pH of the skin (around 5.5). Maintaining a balanced pH helps protect the skin barrier and minimize irritation



**6.Free from Harsh Chemicals**: Avoid including harsh chemicals, sulfates, parabens, and artificial fragrances in your formulation. These can potentially irritate sensitive skin and cause adverse reactions

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