

The World Health Organization (WHO) estimates that over 90% of the world's population lives in areas where pollution levels exceed WHO guidelines. In particular, respiratory problems, such as asthma and lung infections, have all been attributed to pollution. Now attention is also turning to the impact of pollution on people's skin.

Airborne particles, such as harmful carbon-based molecules, from vehicle exhausts and factory emissions land on the skin causing irritation and chemical damage. These pollutants tend to work together (gases and particles, including heavy metals) and their effects are increased by UV radiation and weather phenomena.

Prolonged exposure can lead to **accelerated aging**.

There are several studies confirming an aging effect due to air pollution. Exposure to pollution can also create allergen pathways, leading to certain skin conditions such as rashes, itching and eczema.

In cities where pollution is consistently high and people are subjected to pollution day in day out, there is a need, not just to warn people about the levels of pollution, but also to **actively protect** them.

Sources of pollution & consequences in skin

Polycyclic Aromatic Hydrocarbons (PAHs)

(automobile exhaust fumes & cigarette smoke)

- Skin pigmentation
- Acneiform eruptions

Volatile Organic Compounds (VOCs)

(paints, industrial emissions)

- Inflammatory/allergic reactions: atopic dermatitis & eczema

Ozone

- Reduction of the skin's antioxidant defences
- Increase in lipid peroxidation
- Barrier impairment & inflammation

Particulate Matter (PM)

- Pigmentation disorders
- Aging (nasolabial folds & wrinkles)

Cigarette smoke

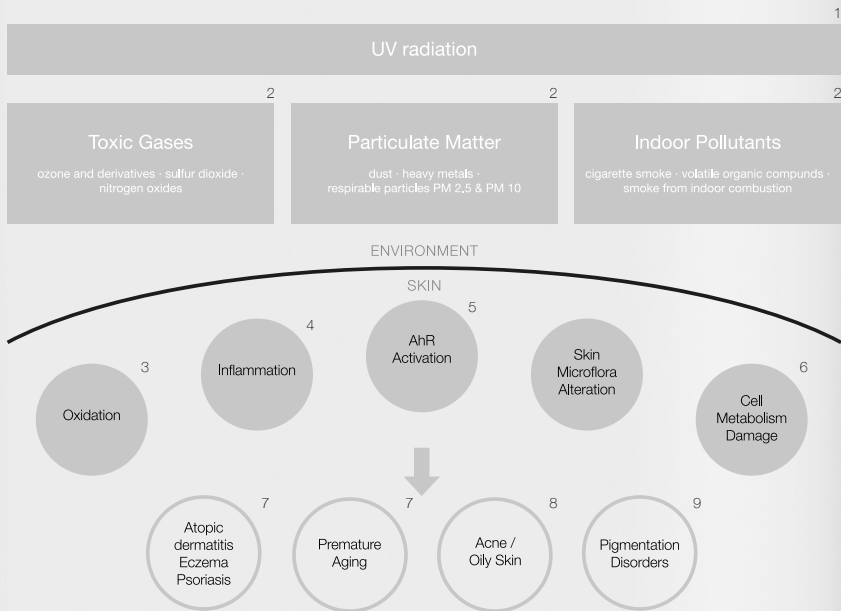
- Premature facial aging
- Connection with psoriasis & acne

Oxides (traffic)

- Oxidation of proteins and lipids
- Connection with atopic dermatitis & eczema

UV radiation

- Photo-aging



1 Complementary UV protection

2 Anti-pollution protection

3 Anti-oxidant action & Reduction on Lipoperoxidation

- Prevent the generation of free radicals
- Protection and Stabilization of the cellular membranes

4 Soothing Effect

- Regulation of Inflammatory mediators

5 Reduced Activation of AhR
(Aryl Hydrocarbon Receptor)

6 Protective Effect against Cell Damage

- Increased levels of cell ATP
- Increased cell viability

7 Enhanced Wellness Sensation & Wrinkle Reduction

8 Normalisation of Sebum Secretion

9 Reduction in Skin Yellowing & Spot Surface