

# Skin-disease patients show brain immunity to faces of disgust

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(PhysOrg.com) -- People with psoriasis - an often distressing dermatological condition that causes lesions and red scaly patches on the skin - are less likely to react to looks of disgust by others than people without the condition, new research has found.

University of Manchester scientists used [magnetic resonance imaging](#) (MRI) scans to compare the brains of 26 men, half of whom had chronic [psoriasis](#). The researchers looked at the insular cortex - a part of the brain triggered by both feelings and observations of disgust - to see how participants responded to images of disgusted faces.

The study, published in the [Journal of Investigative Dermatology](#), found that the volunteers with psoriasis had a much weaker response in their insular cortex than the healthy volunteers, suggesting they have developed a coping mechanism to protect themselves from adverse emotional responses to their condition by others.

"Psoriasis has a significant negative impact on the physical and psychological well-being of those affected but little is known about the neurocognitive mechanisms of how patients cope with the adverse social stigma associated with visible [skin lesions](#)," said Dr Elise Kleyn, the dermatologist who carried out the research.

"We had previously shown that psoriasis patients commonly believe that they will be evaluated solely on the basis of their skin and so often avoid social situations they think will be stressful or humiliating as a coping

mechanism.

"For this study we wanted to investigate whether the social impact of psoriasis is associated with altered cognitive processing in response to [facial expressions](#) of disgust by measuring brain activity in the insular cortex.

"We found a significantly reduced response in the insular cortex in the patients compared with the control volunteers when observing disgusted faces, but also that patients were half as likely to recognise that a face was expressing disgust. This was not the case for other facial expressions, such as fear."

The research team, which was headed by world-renowned dermatologist Professor Chris Griffiths, believe that one explanation for their findings is that psoriasis patients develop a coping mechanism to protect them from stressful emotional responses by blocking the processing of disgusted facial expressions encountered in others.

Dr Kleyn added: "We believe that other stigmatising conditions, such as severe acne or scarring, may elicit similar findings, although further research is clearly needed. We think the insights provided by this study, however, could generate new strategies for managing stigmatising skin diseases."

Source: University of Manchester

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