



Submitted: 24.8.2020

Accepted: 21.9.2020

Conflict of interest

None.

DOI: 10.1111/ddg.14328

# Skin and Psychosomatics – Psychodermatology today

**Uwe Gieler<sup>1</sup>, Tanja Gieler<sup>2</sup>,  
Eva Milena Johanne Peters<sup>3</sup>,  
Dennis Linder<sup>4</sup>**

(1) Department of Dermatology,  
University Hospital Gießen

(2) Psychosomatic Medicine for Child-  
ren and Adolescents, Department of  
Pediatrics, University Hospital Gießen

(3) Laboratory for Psychoneuroimmu-  
nology, Department of Psychosomatic  
Medicine and Psychotherapy, University  
Hospital Gießen in cooperation with  
the Department of Psychosomatic  
Medicine and Psychotherapy, University  
Hospital – Charité, Berlin

(4) Department of Dermatology,  
University of Padua, Italy, Institute for  
Medical Psychology and Psychotherapy,  
Medical University Graz, Austria

## Summary

Modern psychodermatology relies on the bio-psycho-social disease model in psychosomatics, according to which biological, psychological and social factors (on various levels, from molecules to the biosphere) play a major role in the disease pathogenesis through complex, non-linear interactions over the entire disease course. It is nowadays experimentally proven that “emotions get into the skin”. Recent research shows close anatomical, physiological and functional connections between skin and nervous system, already known to be ontogenetically related. These connections are reflected in many skin diseases where psychological and somatic etiological factors are closely intertwined. A holistic approach by the physician should do justice to this interdependence; biological, psychological and social factors should be adequately taken into account when taking anamnesis, making a diagnosis and choosing a therapy. The “visibility” of the skin organ bestows dermatology a special position among the various other clinical subjects, and renders a holistic, psychosomatic approach to the patient that is particularly important. The life course belongs also to modern psychodermatological approaches. Based on the modern psychodermatology concept, other corresponding sub-areas such as psychogastroenterology, psychocardiology etc. have emerged. After the theoretical part of this article, some selected skin diseases are discussed in more detail from the psychosomatic point of view.

Section Editor

Prof. Dr. D. Nashan, Dortmund

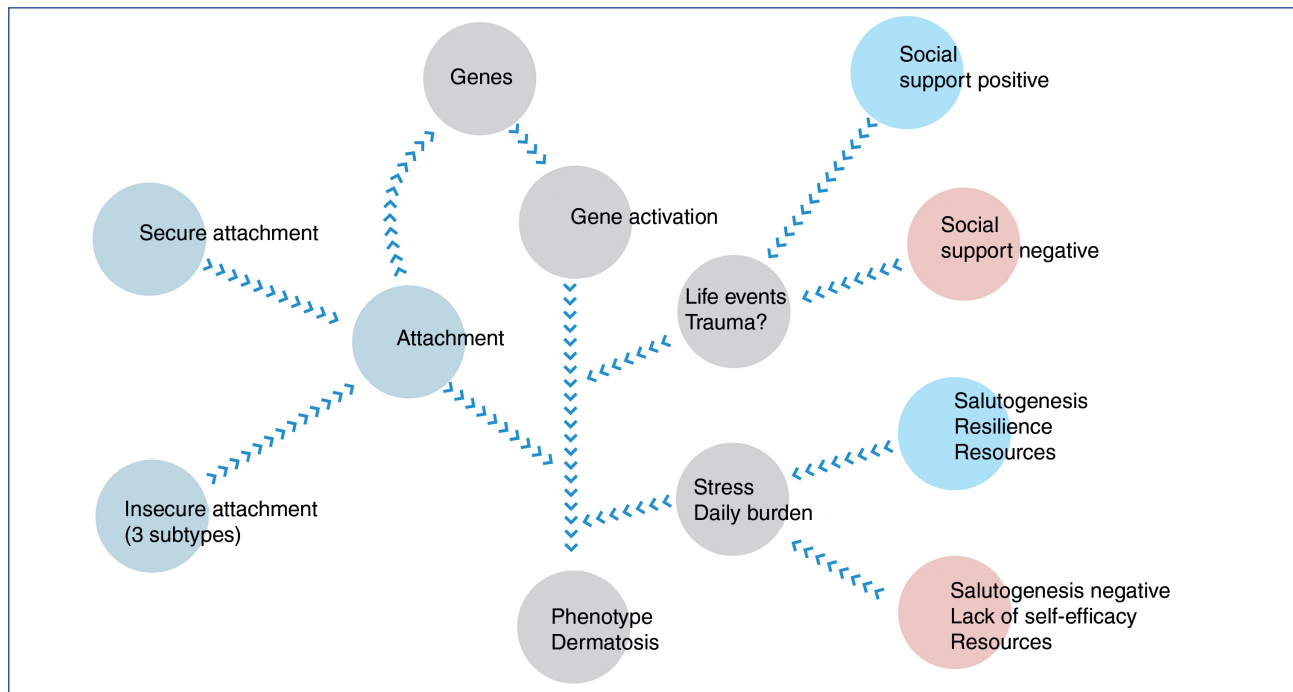
## General Section

### Psychosomatics and the bio-psycho-social model

Modern psychosomatic medicine uses the so-called bio-psycho-social model of disease. According to this model, biological, psychological and social factors contribute significantly to the pathogenesis of any disease.

Popular understanding of ‘psychosomatics’ assumes a simple, monocausal relationship between ‘psychological’ and ‘physical’ events.

Modern psychosomatic medicine uses the so-called bio-psycho-social model of disease [1–3]. According to this model, biological, psychological and social factors on various levels (from the molecules to the biosphere) contribute significantly to the pathogenesis of any disease, via complex interactions throughout its course. This concept aims to integrate the complexity of causal connections but remains in contrast with the popular understanding of the term ‘psychosomatic’ – which assumes a simple, monocausal relationship between ‘psychological’ and ‘physical’ events. Thus, in common parlance a ‘psychosomatic disease’ is at best a disease aggravated by psychosocial factors, but usually simply a disease caused purely by stress and completely reversible by removing the roots of this stress. In the field of dermatology, diseases such as psoriasis or atopic dermatitis with their complex psychoneuroimmunological pathogenesis have always been termed ‘psychosomatic’ by many patients and some physicians. Usually, however, ‘stress’ or ‘life events’ were – and sometimes still are – identified as the sole or at least most important cause of the



**Figure 1** Main issues that contribute, according to modern psychosomatics, to the pathogenesis of a skin disease.

Psychoneuroimmunological mechanisms are frequently involved in the pathogenesis of dermatoses.

Physicians should explore patients' perception of their disease and their disease models and integrate these into the conversation as far as possible. If a physician rejects these models out of hand, patient compliance will be drastically reduced.

disease. Figure 1 attempts to show the most important elements involved in the pathogenesis of skin disease according to the modern psychosomatic view.

There are indeed many ontogenetic, anatomical, and functional connections between the skin, the psyche, and also the immune system – e.g. joint origin from the same germinal layer, dense network of free nerve endings in the skin. These connections are the reason that psychoneuroimmunological mechanisms are frequently involved in the pathogenesis of dermatoses. This is why skin diseases are classified as 'paradigmatic' psychosomatic diseases.

In our daily clinical practice and especially when talking to patients, we need to find a compromise between over-simplification ("Is it caused by stress, doctor?") and a compilation of psychoneuroimmunological mechanisms which may explain the pathogenesis more accurately but may not be easily understood or very helpful in the clinical setting. On the one hand, we expect the physician to understand and apply modern science. On the other hand, when talking to a patient it is important to respect their individual model of the disease, even if this is over-simplified or scientifically wrong, and correct it in such a way that it can be integrated into scientific 'reality' and clinical practice. Physicians should explore patients' perception of their disease and their disease models and integrate these into the conversation as far as possible. If a physician rejects these models out of hand, patient compliance will be drastically reduced.

### Special features of the skin – consequences for skin disease psychosomatics

The skin is the only organ which is completely visible and can thus be observed closely by the patient at all times.

The skin is the only organ which is completely visible and can thus be observed closely by the patient at all times. Patients are able to give free rein to their ideas about pathogenetic mechanisms. This means that, as mentioned above, physicians especially in the field of dermatology need to explore (and respect) a patient's disease

Some patients actually anticipate and experience imagined stigmatization even in case of minimal skin lesions. This may occur e.g. in the framework of a dysmorphic disorder.

models. However, skin lesions are not only visible to the patients themselves but often also to other people. Patients with dermatoses are thus frequently exposed to stigmatization: Skin diseases may cause revulsion or fear of contagion. Feelings like embarrassment about their disease, or disgust expressed by other people, may therefore influence a patient's view of life. Some patients actually anticipate and experience imagined stigmatization even in case of minimal skin lesions. This may occur e.g. in the framework of a dysmorphic disorder.

The fact that the skin is so visible has also contributed to psychoanalytical theories and interpretations of skin diseases by psychoanalysts interested in psychosomatic medicine. Psychoanalyst Didier Anzieu was the first to describe the psychological dimension of the skin as a "psychological shell", coining the term "Skin Ego" [4, 5]. In this theory, Anzieu compares the physiological skin functions with the psychological representations of Ego. According to this theory, children must develop an idea of Self deriving from their own body surface.

Developmental psychology also recognizes a special role of the skin. It postulates a very early tactile phase that is important for the development of a person's identity. Skin diseases may therefore be associated with early attachment disorders in a number of cases. This may occur both in the development of early childhood cognition when dealing e.g. with a genetically determined skin disease, and in the development of Self via "psychoanalytical dialogue with the skin" from a psychoanalytical point of view [6]. Notably, skin diseases that are present before the formation of identity (e.g. port wine stains, hairy nevi) rarely result in psychosocial problems since apparently the patients can integrate the potential defect into their body image. This is in contrast to skin lesions occurring later – e.g. scars after accidents, or vitiligo lesions. These may lead to body image disorders that are very difficult to overcome and may result in suicidal tendencies.

Psychological closeness-distance conflicts may also play an important role in dermatoses. Especially for atopic dermatitis, "psychosomatic" problems have been discussed repeatedly [7, 8]. One of the theories states that initially, the mother (or more generally, the attachment figure) will pay excessive attention to the patient because of the uncontrollable pruritus. Later however, this excessive attention may change into exhaustion because over time, caring for this child can result in overexertion. Thus, the exhausted mother may find herself confronted with her child's chronic disease, without being able to predict the future course of this disease. All of this may result in a (more or less) subliminal aggression from the mother. In addition, increased maternal attention during attacks of itching/scratching may lead to cognitive reinforcement of the child's behavior.

Taboo subjects or other sensitive topics such as sexuality, touch, or smells are often not addressed during dermatological consultation. This may decrease therapeutic adherence but also patient and physician satisfaction.

The special features of the skin also result in unusual situations during doctor-patient consultations. Sensitive topics and taboos such as sexuality, touch, smells, purity, and body language may constitute an "elephant in the room" – an obvious topic that is not addressed by the participants in the consultation. These topics are frequently addressed only in passing or not at all: Many important issues remain unexpressed, which may decrease therapeutic adherence as well as patient and physician satisfaction. Fortunately, the necessity of specific training in communication techniques is being increasingly recognized for both physicians and physician. Implementation of this type of training may over time prove helpful in dealing with difficulties that occur during consultations.

## Quality of life and questionnaires

Skin diseases, in particular chronic inflammatory dermatoses, constitute a considerable burden for both patients and their families. A number of questionnaires

Questionnaires about quality of life are used frequently. In most cases however, the measured results do not influence therapeutic decisions since neither physician nor patient will learn the individual results.

have been developed to measure this burden or the impairment of a patient's quality of life caused by the disease. These questionnaires have gathered plenty of data in the past and continue to do so. The information thus gathered, however, offers only indirect benefits to the patient since neither the physician nor the patient will measure current quality of life during a consultation, or learn the individual results reported in the questionnaire. Yet in the last few years, some visual instruments (such as PSODisk, PRISM, HIDRADisk) have been developed for use *during* patient-physician consultations [9–12]. The idea is to cover all areas of the patient's quality of life (and the influence of the disease) during consultation, so they can be integrated into therapeutic decisions.

## Psychoneuroimmunology

The skin is actually our largest immune organ. The skin's barrier and immunological functions play a central role in explanatory approaches for the pathogenesis of skin diseases. Psychoneuroimmunology, in particular, offers plausible explanations on "how stress gets into the skin". It is easy to imagine that certain immunological mechanisms may play a crucial role in this process, mainly under the influence of endocrine stress mediators.

Most physicians know that patients inquire about an explanation for their disease even before they ask about treatment options and prognosis. The classic question, "Doctor, what caused this? Could it have been stress?" is frequently asked during a first consultation with a dermatologist.

To show that a dermatosis or its clinical course is modulated by stress – either consciously experienced or subliminally present – or in other words, to explain "how emotions get into the skin", the following conditions must be fulfilled:

- There must be an anatomical connection between the skin and the emotional centers in the brain [13].
- It must be proven that stress leads to immunological changes in the skin [13].
- There must be an influence of centrally regulated hormonal processes on skin inflammation.

Evidence includes:

- There are connections between C fibers in the skin and mast cells
- Stress modulates immunological reactions in the skin
- Stress leads to irreversible neuroendocrine changes in the skin (animal experiments)
- In patients with psoriasis or atopic dermatitis, expression of various neuropeptides and neurotransmitters shows changes that differ from those in healthy controls
- Neuromediators can directly modulate inflammatory reactions that occur in chronic-inflammatory skin disease such as atopic dermatitis. Thus, stress reactions in the skin of atopic dermatitis patients can be explained by psychoneuroimmunological mechanisms [14–30].

"Psychoneuroimmunoendocrinological" mechanisms can offer a model for the question of "how emotions get into the skin". There is thus a good explanatory model (confirmed by experiments) for psychosomatic reactions in skin disease. This should be utilized in clinical consultation.

## Frequency of psychological disorders in skin disease, and comorbidity

Psychological aspects are frequently associated with skin disease, and virtually always, skin disease also shows a psychosomatic component. The available studies report that about 25 % of all patients with skin diseases also show depression, anxiety, or somatoform reactions. In a multicentric study conducted in

Patients with inflammatory skin disease often show comorbidity with psychological disorders.

13 European countries, Dalgard et al. [31] found impressive evidence on the importance of stigmatization and the frequency of depression and anxiety: 12.7 % of the about 3,700 patients included in the study reported suicidal thoughts, and 4 % said these were triggered by their skin disease. Only 8.3 % of controls with healthy skin reported suicidal thoughts. Dalgard et al. [31] also demonstrated that using the HADS questionnaire 10.1 % of the patients but only 4.3 % of the controls with healthy skin were found to be depressed. Anxiety occurred in 17.2 % of patients vs. 11.1 % of controls. This study confirms the results of older, monocentric epidemiological studies that found similar results [32]. Thus, at least 10 % resp. 17 % of all patients with skin disease display a psychological disorder requiring treatment.

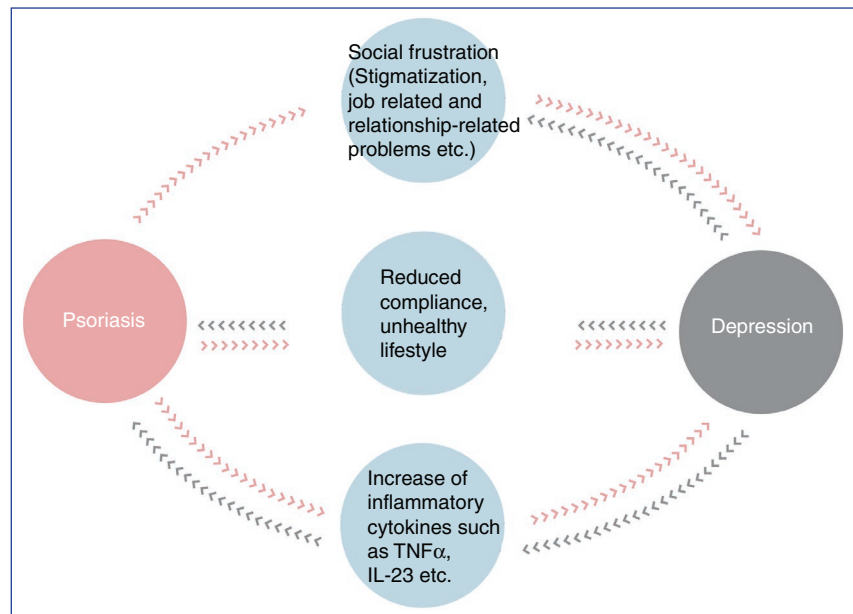
Due to the close anatomical and physiological connections between the skin and the psyche, as well as the psychosocial consequences of the visibility of skin and skin disease, the frequency of psychological disorders in patients with skin disease is quite plausible: Patients with inflammatory skin disease often show comorbidity with psychological disorders.

The term “comorbidity” was first introduced into English medical terminology by clinical epidemiologist and statistician Alvan Feinstein in 1970 [33]. It is used when a “second” disease is observed frequently in a group of patients with the same disease. In fact, the term “comorbidity” and its definition are problematic. A comprehensive discussion of this topic would go beyond the scope of this overview [34–36]. Nevertheless, this term is an excellent example of how monocausal, linear, reductive models are rarely sufficient for a detailed representation of clinical reality in modern medicine. One must also distinguish if the term is used in the classic, epidemiological sense (hypertension, for instance, is a comorbidity for psoriasis: hypertension is more common than expected in psoriasis patients), or if the term comorbidity is simply used to describe a second, non-related disease in an individual patient (for example, a certain patient develops an anxiety disorder while suffering a bout of shingles, but there is no evidence that anxiety is more common than expected in shingles patients). Physicians interested in psychosomatic medicine should always explore “individual comorbidity”.

There are two important mechanisms that may result in association between (inflammatory) skin disease and psychological disorders: (1) body image disorders and stigmatization due to the dermatosis, resulting in social withdrawal, and (2) systemic inflammation, since there is much evidence [37] that systemic inflammation may directly cause depressive moods.

To simplify matters, we may imagine the following constellations of psychological comorbidity shown in epidemiological studies, mostly with inflammatory dermatoses:

- Psychiatric disease/psychological disorders cause behavior that eventually results in skin lesions. (For example, borderline disorders lead to artefacts; depression and the resulting lack of self-care lead to excessive eating and thus to obesity, resulting in ulcerations on the lower limbs.)
- A “purely somatic” disease (as far as we know today) leads to psychological suffering (vitiligo, for example, leads to feelings of stigmatization, resulting in social withdrawal and depression).
- There is a common cause (usually inflammatory) for the simultaneous occurrence of the psychological disorder and the dermatosis, leading to positive feedback mechanisms and complex causative connections (see Figure 2).
- Purely psychiatric diseases, whereby the patient initially mainly consults a dermatologist (or an infectious disease specialist or plastic surgeon), not a



**Figure 2** Hypothetical connection between psoriasis and depression.

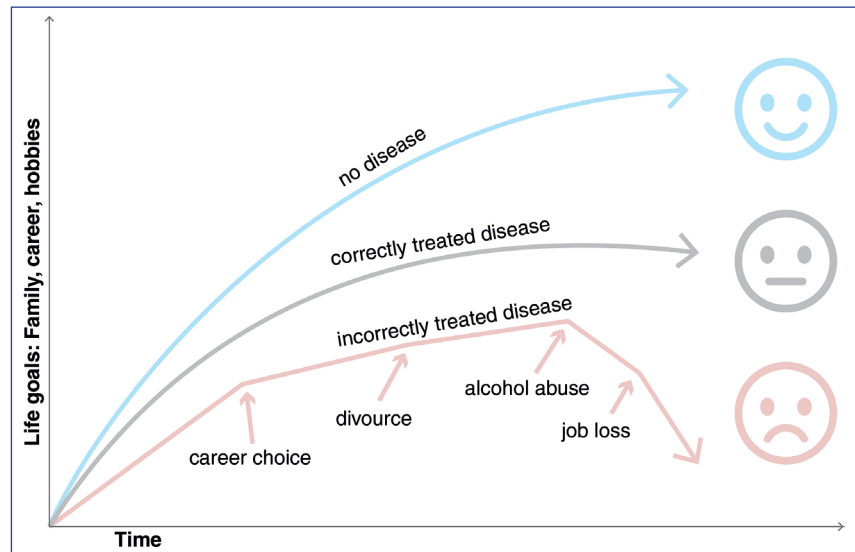
- psychiatrist. These include, for example, delusional infestation and body dysmorphic disorders. These disorders lead patients to perform self-manipulation or have it performed by third parties, including doctors (e.g. plastic surgeons).
- And finally, there is a heterogeneous group of functional disorders including chronic idiopathic mucocutaneous pain syndromes (vulvodynia, chronic oral pain syndrome) that are not purely psychiatric.

## Life course perspective

Within the last 30 years, life course research, formerly an area of sociology and demographics, has become increasingly important in medicine, particularly in the field of epidemiology. Studies from this research area have shown that growing up in financially strained circumstances will have negative results on health later in life (for instance, an increased risk of cardiovascular disease). Psychosocial factors also play an important role for life course perspectives. A theory states that chronic recurrent disease may cause permanent “damage” to a patient’s life course. Insufficiently treated psoriasis, for example, may impair a patient’s professional opportunities and/or their relationship. In other words, chronic disease carries a risk that these patients will not achieve the course of life which could have been theirs without the disease (Cumulative Life Course Impairment, CLCI) [38]. Back in 2009, a pioneering publication described the development of a “life course questionnaire”. Research had already shown that childhood atopic dermatitis continues to influence a patient’s life course over many years [39]. In the field of dermatology, the concept of CLCI has been discussed mainly in connection with psoriasis [40] (Figure 3).

Obviously, this approach has very relevant psychosocial aspects, especially since it is hoped that mathematical models [41] may help determine the optimum modality and time for treatment so as to minimize “life course damage” in chronic disease (Figure 3).

The term *cumulative life course impairment* postulates that chronic disease carries a risk that patients will not achieve the course of life which could have been theirs without the disease.



**Figure 3** Life course approach and cumulative life course impairment (CLCI) (modified after [40]).

## Psychodermatology, psychocardiology, psychogastroenterology, and psychooncology

The central role of the close connection between skin and psyche in collective consciousness is also expressed in language. There are countless sayings such as “gets under your skin”, being “thin-skinned”, “itching to do something”, “only skin-deep”, “the skin as a mirror of the soul”. Popular wisdom appears to have a clear idea of the interaction between skin and psyche.

Psychodermatology is not the only “psycho” part of a medical specialty.

Psychodermatology is not the only “psycho” part of a medical specialty. Not only the skin but also other organs and medical fields show close connections with the psyche [42, 43]. Similar studies are conducted in other medical fields, and there are similar psychopharmacological and psychotherapeutic approaches – albeit not as extensive. Our language also has expressions that underline the importance of the heart and digestive tract in our collective awareness, such as “having a heart-to-heart”, “wearing your heart on your sleeve”, “this is dear to my heart”, “biting off more than you can chew”, “I need to digest this stroke of fate”, “nauseating fear” and “gut instinct”. The emergence of such specialties derives from the fact that the reductionist approach of biological medicine – notwithstanding a multitude of successes and breakthroughs – reaches its limits when treating complex, chronic diseases with multifactorial causes that include psychosocial factors.

The following section offers (sometimes brief) descriptions of dermatological symptoms and diseases with psychosomatic relevance.

## Selection of psychosomatically relevant symptoms and skin diseases

### Pruritus

Pruritus is a classic leading symptom in dermatological practice and remains a challenge in many cases. Various and occasionally complex aspects of this symptom

Psychosomatic factors are especially important in case of somatoform pruritus and need to be taken into consideration as a differential diagnosis when investigating the underlying causes.

need to be taken into consideration [44, 45]. We will refrain from covering diagnostic procedures here, and concentrate on somatoform pruritus.

Psychosomatic factors are especially important in case of somatoform pruritus and need to be taken into consideration as a differential diagnosis when investigating the underlying causes. Pruritus can be psychologically transmitted; purely mental induction of pruritus is possible when people concentrate on mosquitoes, fleas, or bugs [46–50]. Meanwhile, there is a plethora of experimental studies on the psychosomatic aspects of this phenomenon, which are probably mediated via mirror neurons [48]. Correlation factors with affective disorders have been identified. Interestingly, people with skin diseases are not adapted to the impulse to scratch, as one might assume: On the contrary, they appear to react more strongly to the stimulus than healthy people [51–54].

Relaxation techniques have proven to be effective in the psychological treatment of pruritus. These are included in training programs for atopic dermatitis patients and have even been covered in Cochrane reviews [55, 56]. Behavioral therapy approaches such as ‘habit reversal’ techniques [57] and ‘itch diaries’ are useful therapeutic interventions [58]. Psychological techniques used for pruritus during wound healing are similar and have proven effective in several studies [59].

## Atopic eczema, allergies – psychoallergology

Allergies are immunological reactions that according to psychoneuroimmunology may be modulated by psychological influences.

Allergic diseases have increased markedly in the last few decades. It is assumed that one in five neonates is predisposed towards allergic reactions. Allergies are immunological reactions that according to psychoneuroimmunology may be modulated by psychological influences. Various neuromediators, for instance brain-derived neurotrophic factor (BDNF), are noticeably increased in allergy patients [60]. The Copenhagen City Heart Study found a strong association of stress with the incidence of asthma, the number of asthma-related hospitalizations, the prescription of asthma medications, and the incidence of allergic rhinitis and atopic dermatitis [61]. Meta-analyses on the influence of stress on asthma show that in most studies, stress will aggravate existing allergic reactions [62, 63]. Psychosocial stress factors are found more frequently in families with asthmatic children [64–66]. In a prospective study, negative life events (change of residence, parents’ divorce, school problems) resulted in an increase of asthma attacks [67, 68]. Altogether, psychosocial stress is a clear predictor of allergic disease [69–71]. During allergy season, students with hay fever achieve markedly lower grades than healthy students [72]. This has also been noted with food allergies [73, 74].

Psychosocial stress is a clear predictor of allergic disease.

In day-to-day practice, the following aspects of psychosomatic allergology should be observed:

*Anxiety and related disorders:* The excessive availability of medical testing for detection of allergies, combined with frequent warnings of possible anaphylactic reactions, are likely to promote anxiety. It is sometimes difficult to distinguish between an allergic reaction and a panic attack. Panic attacks are more frequently associated with feelings of alienation and unreality, as well as ‘fear of going mad’. Anaphylactoid reactions are characterized by a ‘furry feeling’ on the tongue, a scratchy feeling in the throat, urticarial exanthema, hypotension, and in extreme cases cardiac arrest. Other symptoms, however, can be observed in both situations, such as tachycardia, chest pain, fear of death, vertigo, tremor, hot flashes and dyspnea.

*Pseudoallergies, somatoform disorders:* Patients quite frequently attribute their somatic symptoms to allergic causes. This is called ‘pseudoallergy’, and it is usually a somatoform disorder. Patients should be treated according to the



guidelines for somatoform disorders ([www://awmf.de](http://www://awmf.de), in German), but at the same time a good knowledge of possible allergies is essential. Indications of a somatoform disorder include: Lack of a clearly identified, specific allergen; non-specific, confusing symptoms; a patient who is totally focused on ‘allergy’ as a diagnosis; a patient who keeps demanding additional tests whenever negative results are returned; the presence of conflicts; the presence of psychological symptoms such as anxiety and depression; rejection of psychotherapeutic treatment. One special somatoform disorder is pseudo-semen allergy (see [75] on the treatment and differential diagnosis of semen allergy). Pseudoallergic food intolerance (when ingestion of a certain food leads to symptoms that indicate a possible allergy, but without an underlying immunological causation) may also sometimes constitute a purely somatoform disorder [76].

### Psychotherapy in cases of “true allergy”

There are only a handful of studies on psychotherapy in patients with allergies.

There are only a handful of studies on psychotherapy in patients with allergies. Behavioral therapy approaches and psychodynamic/psychoanalytical therapies have been described [75]. Markowitsch and colleagues [76, 77] published interesting case reports on patients who lost their previous allergies when they experienced amnesia.

Langewitz et al. [78] conducted hypnotic imagination sessions with allergy patients who visualized an environment with few allergens. One-third of the patients treated in this manner experienced a reduction of allergic symptoms. The detection of altered erythematous reactions in studies where patients were exposed to various, imagined emotions [79–81] also indicates possible conditioning effects in allergies. In one case of peanut allergy, placebo-controlled exposure achieved induction of tolerance. This did not disappear even when the patient was told that she had indeed eaten peanuts [82].

Furthermore, experimental psychodynamic approaches in patients with urticaria, with a psychotherapeutic setting of ten hours (one hour per week), achieved an improvement of symptoms as compared with the control group [83].

Atopic dermatitis and psoriasis are the two best-studied skin diseases in terms of psychosomatic aspects.

The psychosomatic aspects of allergies and allergy-like symptoms have only been studied in the last few decades. Atopic dermatitis (atopic eczema), however, was considered a classic psychosomatic disease right from the beginnings of psychosomatic research, by the pioneers of the field (Alexander, Mitscherlich, M’Uzan, Stephanos and Groddeck). Indeed, atopic dermatitis and psoriasis are the two best-studied skin diseases in terms of psychosomatic aspects. Current estimates indicate that about 20–25 % of all atopic dermatitis patients exhibit a “psychosomatic component”. This is mostly observed in the way the patient copes, which may be accompanied by depression and social phobia. On the other hand, psychological factors (e.g. stressful or life-changing events such as divorce or job transitions) may trigger or exacerbate atopic dermatitis attacks [84].

The influence of stress is well studied and can be regarded as established. A relevant psychosocial component in the etiology of this disease should, however, not be automatically assumed. After all, this genetically determined disease, which has a momentum of its own, can be affected by a number of other provocation factors such as irritation, allergies, or climatic factors. The most important aspects of atopic dermatitis for psychosomatic practice can be summarized as follows (modified from [75]):

- The course of this disease may be influenced by subjective stress factors. Social stress and interaction problems appear to possess a special significance as

Atopic dermatitis may significantly reduce quality of life for patients and their relatives.

- triggers. Exacerbations may occur due to difficult or life-changing events, stress, or psychosocial problems (daily hassles).
- Anxiety and depression are the most frequent psychological disorders. However, increased emotional instability, excessive sensitivity, timidity, and excitability have also been reported.
  - Negative compliance and a feeling of helplessness will influence coping with this disease.
  - Psychotherapy is indicated in about 20 % of atopic dermatitis patients. Psychotherapeutic treatment is effective in mitigating exacerbations.
  - Pruritus and scratching will often influence awareness and concentration.
  - Coping with the disease and especially with pruritus is a central problem for patients, or in the case of children, for their parents (itch-scratch cycle).
  - Atopic dermatitis may significantly reduce quality of life for patients and their relatives.

Psychoneuroimmunological mechanisms of atopic dermatitis have been well studied. They have been confirmed in standardized stress reactions in murine experiments [22], in serum from people with atopic dermatitis compared with healthy people [14, 24], and also in the skin itself via biopsies before and after stressful situations [85].

Various psychotherapeutic approaches have been studied. Training interventions (see below) have proven especially effective. Other approaches utilized in atopic dermatitis include cognitive treatment (mainly for coping with the itch-scratch cycle and with disturbed sleep), psychodynamic methods, role playing, relaxation techniques, autogenic training, muscle relaxation according to Jacobson, and family therapy interventions. Although there is conflicting evidence on the efficacy of these methods, psychotherapeutic intervention should be considered for patients who show significant deterioration of their symptoms when exposed to stress.

### Training programs

Training programs are now established worldwide not only for treatment but in particular also for tertiary prevention and improved coping. Due to their proven efficacy, these training programs are recommended in the guidelines for asthma, atopic dermatitis, and anaphylaxis.

Training programs have been developed for allergy patients, and these always contain psychological modules. These programs are now established worldwide not only for treatment but in particular also for tertiary prevention and improved coping. Due to their proven efficacy, these training programs are recommended in the guidelines for asthma, atopic dermatitis, and anaphylaxis [55]. In 2014, the *Cochrane Review* by Ersser et al. [55] presented ten randomized long-term studies that confirm the evidence from these training programs.

In Germany, the following training programs are offered in specialized centers:

- AGAS (asthma training) [87],
- AGNES (atopic dermatitis training for children and adolescents aged 0–18) [86],
- AGATE (anaphylaxis training) [88],
- ARNE (atopic dermatitis training for adults) [89].

The training programs consist of different modules. There are units covering medical information or nutrition, and depending on the diagnosis also psychological units with relaxation techniques, role playing, or ‘habit reversal’ techniques. The trainings are conducted by physicians, psychologists, or nutritionists who have attended special ‘train the trainer’ classes. AGAS and AGNES trainings are reimbursed by health insurance companies as part of outpatient rehab, so patients do not have to cover attendance costs. Further information is available on the websites of the various training programs.

**Psoriasis**

Physicians interested in psychosomatic medicine will note that the concept for psoriasis is similar to atopic dermatitis – however from a psychodynamic point of view, the mother-child relationship is less important while social problems such as relationship problems and sexual disorders are paramount.

Psoriasis is a multifactorial, inflammatory, chronic relapsing dermatosis with a high prevalence in Western industrialized countries (2–4 %). Physicians interested in psychosomatic medicine will note that the concept is similar to atopic dermatitis – however from a psychodynamic point of view, the mother-child relationship is less important while social problems such as relationship problems and sexual disorders are paramount.

As with atopic dermatitis, psychotherapeutic approaches and training programs have also been developed for psoriasis, with varying degrees of success. A comprehensive overview of studies on this topic was published in 2019 [90].

**Artefacts and skin picking disorder**

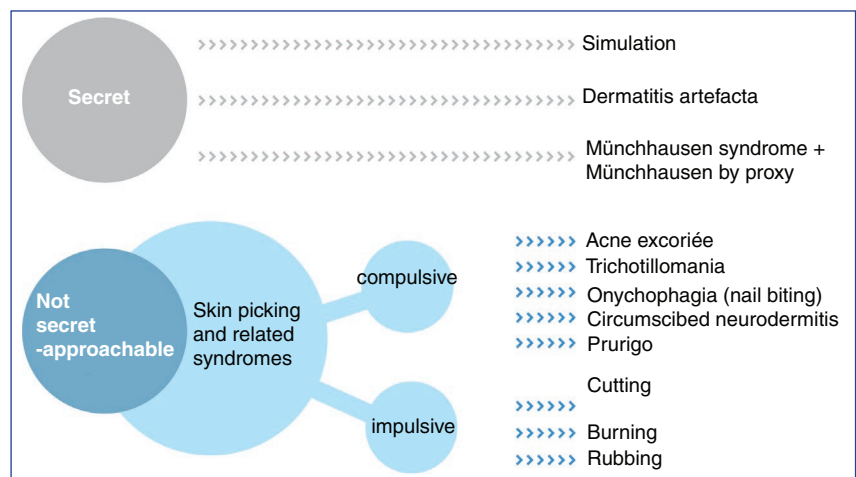
Artificial lesions or self-inflicted injuries of the skin are mostly seen in borderline personality disorders, and are in fact part of the diagnostic criteria for this disorder.

Artificial lesions or self-inflicted injuries of the skin are mostly seen in borderline personality disorders, and are in fact part of the diagnostic criteria for this disorder. Psychodermatology identifies several variations of self-inflicted injuries that require a clear diagnosis before developing a therapeutic strategy. For better characterization, the European Society for Dermatology and Psychiatry (ESDaP) published a new classification in 2013 (Figure 4) [91].

According to the ESDaP classification, skin picking is not purely a compulsive disorder but frequently an impulse control disorder.

Since the last edition of the DSM-V 2013 (American Psychiatric Association), the diagnosis “Skin picking syndrome” was added under the heading of compulsive disorders, in addition to dermatitis artefacta, another term for self-inflicted injuries. According to the ESDaP classification (Figure 4), skin picking is not purely a compulsive disorder but frequently an impulse control disorder. Skin picking is diagnosed if the following criteria are fulfilled:

- Repeated, compulsive skin manipulation which has caused the current lesion(s).
- The patient has repeatedly tried to discontinue or at least reduce his/her skin-damaging behavior.
- The skin manipulation has compromised at least one job-related, social, or other important aspect of the patient’s life.
- There is no psychiatric disease (such as delusional infestation) offering a better explanation for the patient’s behavior resp. skin symptoms.



**Figure 4** Self-inflicted skin lesions – diagnostic classification.

The frequency of skin picking in the literature is estimated at 1.4–5.4 % of the population [92–94], which is a surprisingly high rate.

- Neither substance abuse (such as cocaine) nor another disease (for instance scabies) has been detected as a possible cause of the skin manipulation.

The frequency of skin picking in the literature is estimated at 1.4–5.4 % of the population [92–94], which is a surprisingly high rate. Skin picking is comparatively rare before the age of 10; it usually starts in early adolescence [95, 96]. One typical manifestation is acne excoriée on the face (maximum amount of picking in cases of minimal acne). According to Grant JE et al. [97], skin picking is however not limited to early adulthood. It may also occur later between the ages of 30 and 45, often in connection with life-changing events (divorce, bereavement). Almost 20 % of those affected report that they have had skin picking syndrome all their life. Women appear to be affected more frequently than men [95]. Only a small proportion seek psychosomatic help [95]. Occurrence in connection with compulsive disorders has been reported.

There are a number of internet forums offering support for patients. In Germany, the webpage [www.skin-picking.de](http://www.skin-picking.de) has proven especially helpful. It is often useful to recommend self-help books [98] or a ‘habit reversal’ program developed by the University Hospital Hamburg which is offered for download ([www.skin-picking.de/downloads/habit-reversal](http://www.skin-picking.de/downloads/habit-reversal)).

The main psychosomatic treatment approach is behavioral therapy with ‘habit reversal’ techniques [99, 100]. Diaries are used to reduce the number of skin-picking episodes. Additional behavioral therapy interventions such as video techniques, self-observation with diaries, stimulus control, and role playing are also employed [101]. Such cognitive interventions are estimated to be up to 50 % effective [102].

Psychodynamic group therapies have also been described [103]. A detailed description of how this promising form of therapy is set up cannot be provided here. For the interested reader, the following should be noted: The first step is gaining a better understanding of the symptom. The transference relationship with the therapist is then employed to elucidate and process repressed intrapsychic conflicts. In accordance with attachment theory, focus is placed on primary attachment figures.

Psychopharmacological treatment attempts have been reported only rarely and are ineffective, thus a Cochrane Review [104] concludes that there is currently no evidence in favor of psychotropic drugs for self-inflicted injuries.

In principle, the psychotherapeutic approaches described above could also be used to treat all kinds of self-inflicted injury. However, the underlying personality disorder is a major issue, and it is upon this that treatment should initially focus.

## Conclusion

Psychodermatology deserves greater attention – because of its significance within the framework of physician-patient communication, its support of increased compliance/adherence, and last not least, because it improves job satisfaction for dermatologists. Psychodermatology is now well established, scientifically proven, and is of considerable benefit in day-to-day practice.

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The main psychosomatic treatment approach for skin picking is behavioral therapy.

A Cochrane Review [104] concludes that there is currently no evidence in favor of psychotropic drugs for self-inflicted injuries.

## Correspondence to

Dennis Linder MD, PhD  
University Hospital for Medical  
Psychology and Psychotherapy

Auenbruggerplatz 3  
8036 Graz, Austria

E-Mail: [michael.dennis.linder@gmail.com](mailto:michael.dennis.linder@gmail.com)

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## [CME-Questions/ Lernerfolgskontrolle]

1. Welche der folgenden Strategien helfen bei einer chronisch entzündlichen Hautkrankheit für eine positive Krankheitsbewältigung?

- a) Hohe Stress-Vulnerabilität
- b) Vermeidung von Kommunikation
- c) Zulassen von negativen Emotionen
- d) Aktivierung von Übergeneralisierung und Grübeln
- e) Hohe Selbstakzeptanz

2. Welches der folgenden Kürzel ist eine bekannte Schulung für Patienten mit atopischen Erkrankungen?

- a) ARNE
- b) ALFONS
- c) ANTON
- d) ANNA
- e) ALEX

3. Für welche psychosoziale Intervention gibt es die beste Evidenz bei der atopischen Dermatitis?

- a) Katathymes Bilderleben
- b) Kognitive Verhaltenstherapie
- c) Psychodynamisch orientierte individuelle Psychotherapie
- d) Autogenes Training und andere Entspannungsverfahren
- e) Schulungsprogramme

4. Welches der folgenden Forschungsfächer kann den Zusammenhang zwischen Stress und Hautsymptomen am besten erklären?

- a) Psychoendokrinologie
- b) Psychoimmunologie
- c) Psychophysiologie
- d) Stressforschung
- e) Hirnforschung

5. Welche Strategie sollten Ärzte zu „falschen Vorstellungen“ der Patienten eher bevorzugen?

- a) „Falsche Vorstellungen“ sofort schroff und autoritär korrigieren.
- b) Sich nach diesen Vorstellungen bei der Therapie richten, weil sonst die Compliance beeinträchtigt wird.
- c) Versuchen, diese Vorstellungen und das geltende „wissenschaftliche Modell“ zu integrieren.
- d) Die Vorstellungen ignorieren.
- e) Es gibt dazu grundsätzlich keine gute Strategie.

6. Bei der Anwendung von Lebensqualitätsfragebögen zeigt sich oft Folgendes?

- a) Sie werden selten in Anwesenheit des behandelnden Arztes ausgefüllt, so dass dieser die Auswertung bei der Therapiewahl berücksichtigen kann
- b) Lebensqualitätsbögen sind zu vereinfachend, als dass sie eine Aussage hinsichtlich der Compliance machen können.
- c) Sie vermeiden es, tabuisierte Aspekte der Krankheit wie Einfluss auf Sexualeben ins Gespräch zu bringen.
- d) Es gibt sehr viele, aber meistens schlecht validierte Fragebögen, so dass die Auswahl sehr schwer ist.
- e) Lebensqualität ist ein veraltetes Instrument und wird heute eher durch spezifische Fragebögen zur Krankheitsverarbeitung ersetzt.

7. Wieviel Prozent der bei der multizentrischen europaweiten Studie in 13 europäischen Ländern zur Bedeutung der Stigmatisierung und Erfassung der Häufigkeit von Depression und Angst erfassten Patienten hatten suizidale Ideen?

- a) ca. 4 %
- b) ca. 13 %
- c) ca. 25 %
- d) weniger als 0,5 %
- e) ca. 9 %

8. Für welche psychosoziale Intervention gibt es die beste Evidenz bei der atopischen Dermatitis?

- a) Katathymes Bilderleben
- b) Kognitive Verhaltenstherapie
- c) Psychodynamisch orientierte individuelle Psychotherapie
- d) Autogenes Training und andere Entspannungsverfahren
- e) Schulungsprogramme

9. Welche Erkrankungen konnten in der Copenhagen City Heart-Studie als deutliche Stress-assoziiert nachgewiesen werden?

- a) Migräne, Arthritis
- b) Epilepsie, ADHS
- c) Urtikaria, Psoriasis
- d) Allergische Rhinitis, Neurodermitis, Asthma
- e) Akne, Rosazea, Hidradenitis suppurativa

10. Was trifft bei der Diagnose Skin Picking zu?

- a) Es liegt immer eine schwere psychiatrische Krankheit vor, die die Symptomatik gut erklärt.
- b) Die Hautmanipulationen erfolgen meist zur selben Uhrzeit am Tag.
- c) Patienten haben sich bereits oft selbst bemüht, ihr hautschädigendes Verhalten einzustellen oder zumindest zu reduzieren.
- d) Das Manipulieren der Haut hat kaum Auswirkungen auf den beruflichen beziehungsweise

sozialen Aspekt des Lebens der Patienten.

- e) Bei den Patienten lässt sich als Auslöser häufig eine Hautinfestation (beispielsweise Skabies) feststellen, worauf die Hautmanipulation zurückgeführt werden könnte.

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Liebe Leserinnen und Leser,  
der Einsendeschluss an die DDA für diese Ausgabe ist der 29. Januar 2021.  
Die richtige Lösung zum Thema „Hautveränderungen bei internen Neoplasien“ in Heft 8 (August 2020) ist: (1e, 2c, 3c, 4b, 5d, 6e, 7a, 8e, 9e, 10d).

Bitte verwenden Sie für Ihre Einsendung das aktuelle Formblatt auf der folgenden Seite oder aber geben Sie Ihre Lösung online unter <http://jddg.akademie-dda.de> ein.

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