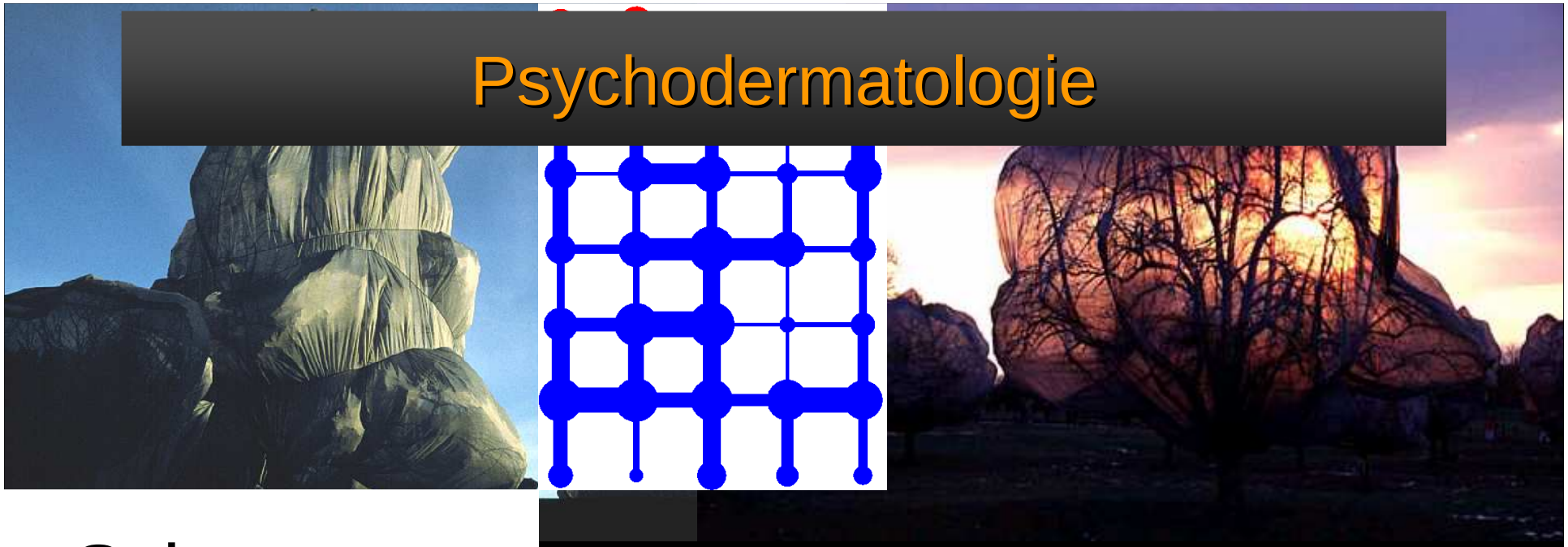
Psychodermatologie



Schutzorgan

Die Haut steht in Verbindung mit dem inneren Organnetzwerk

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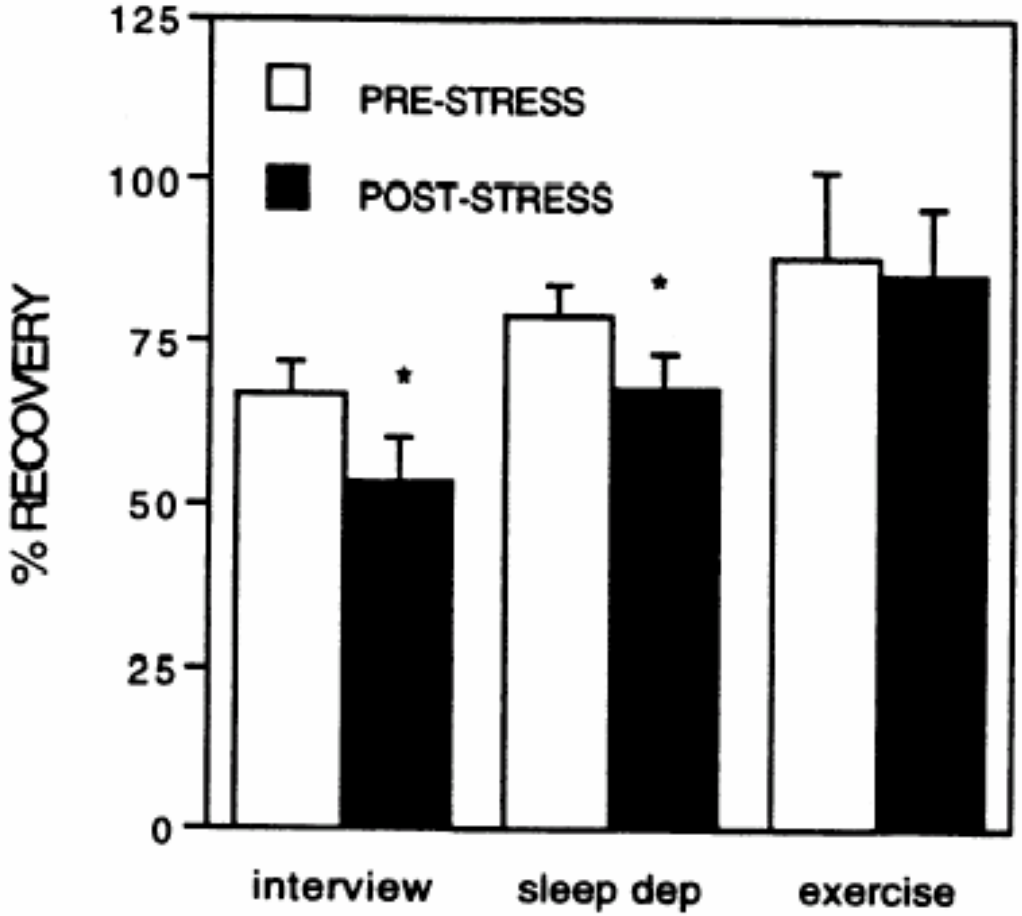
Stress-Induced Changes in Skin Barrier Function in Healthy Women



JID 2001; 117:309

Psychodermatologie 2009

Figure 1. Interview stress and sleep deprivation, but not exercise stress, delayed skin barrier function recovery after tape stripping. *$p<0.05$.

Neuroimmunology of Stress: Skin Takes Center Stage

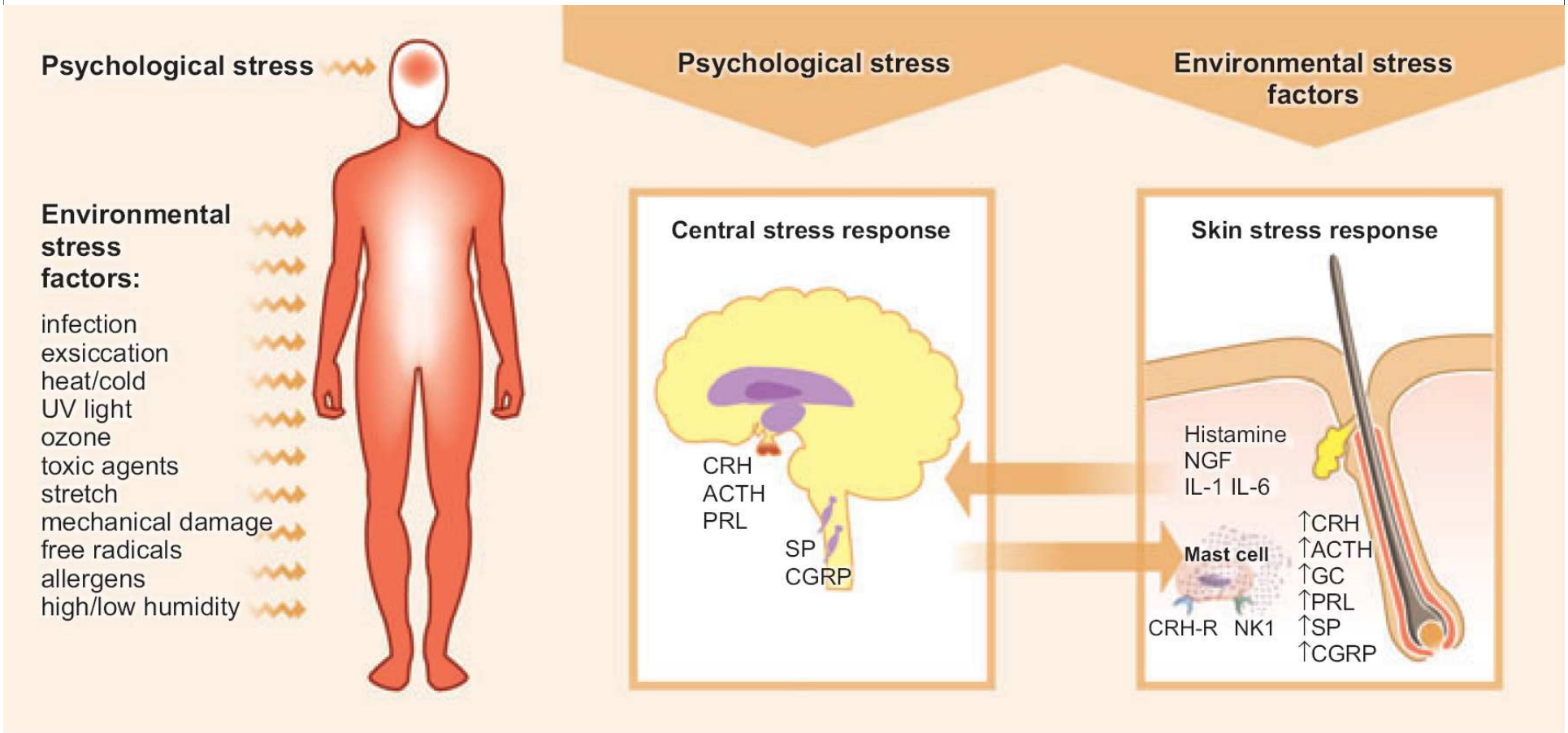


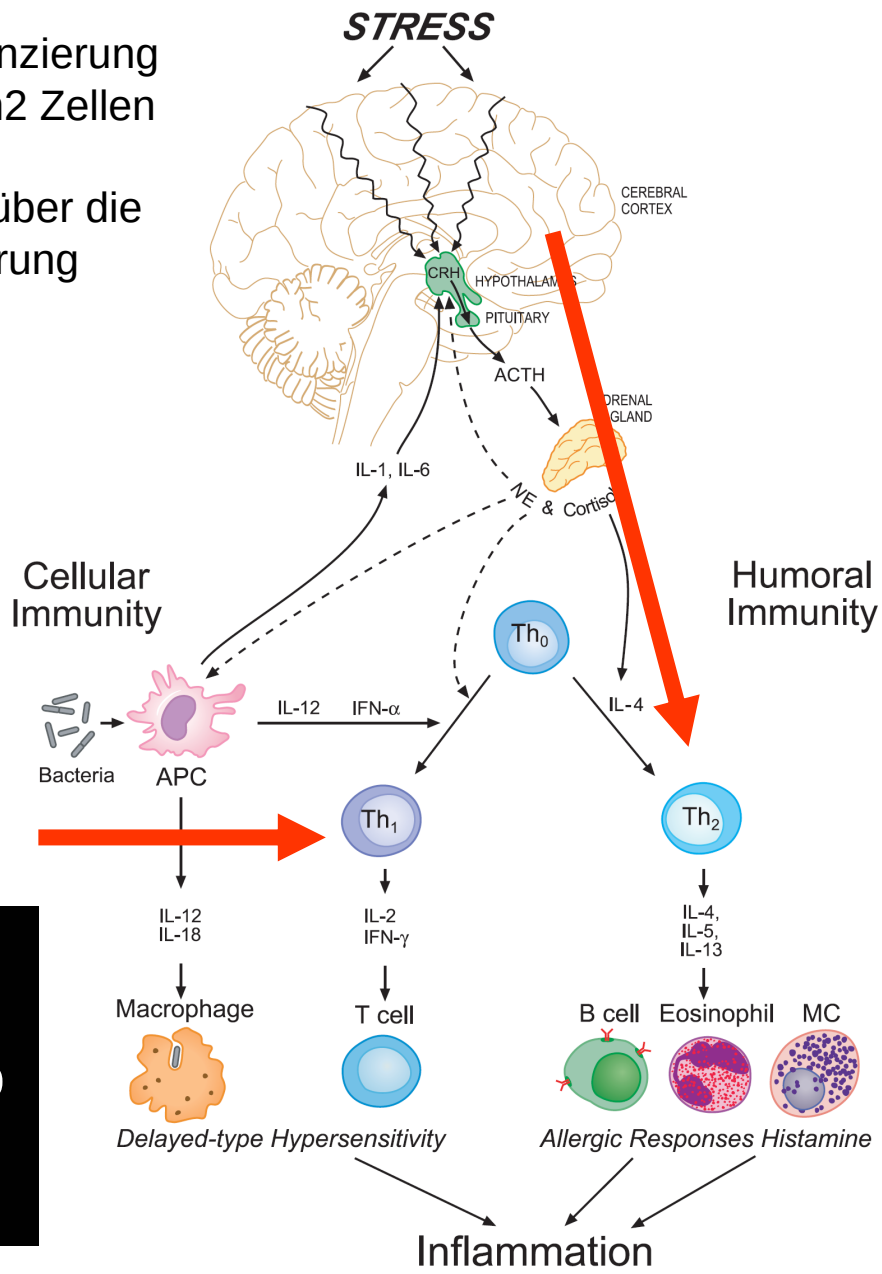
Figure 1. Brain–skin cross-talk upon exposure to psychological stress or environmental stress factors.

Psychologischer Stress führt zu einer Zytokin- und Hormonausschüttung in der Haut. „Hautstress“ bzw. Entzündungen der Haut mit Störung der Barrierefunktion führen zu zentraler Ausschüttung von Stresshormonen (Substanz P, Calcitonin, Nerve Growth Factor).

Journal of Investigative Dermatology (2006) **126**, 1697–1704.

Psychostress fördert die Differenzierung von naiven T Zellen (Th0) zu Th2 Zellen

Umweltstress (Bakterien) wirkt über die APZ in Richtung Th1 Zellaktivierung

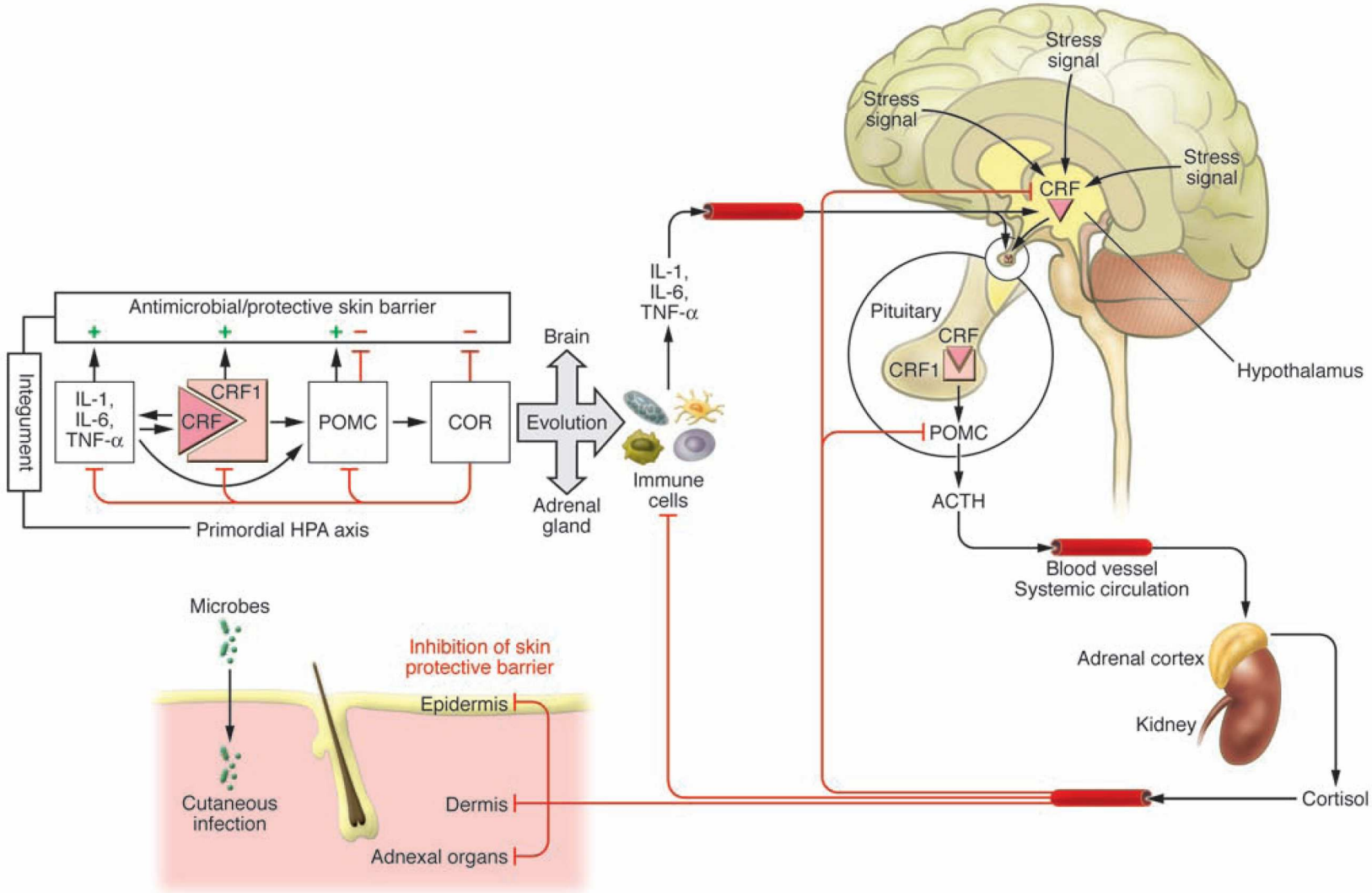


In 40 – 70% wird ein Neurodermitis-Schub oder ein Psoriasisschub durch Stressfaktoren ausgelöst.

Dermatologic Therapy, Vol. 21, 2008, 22–31

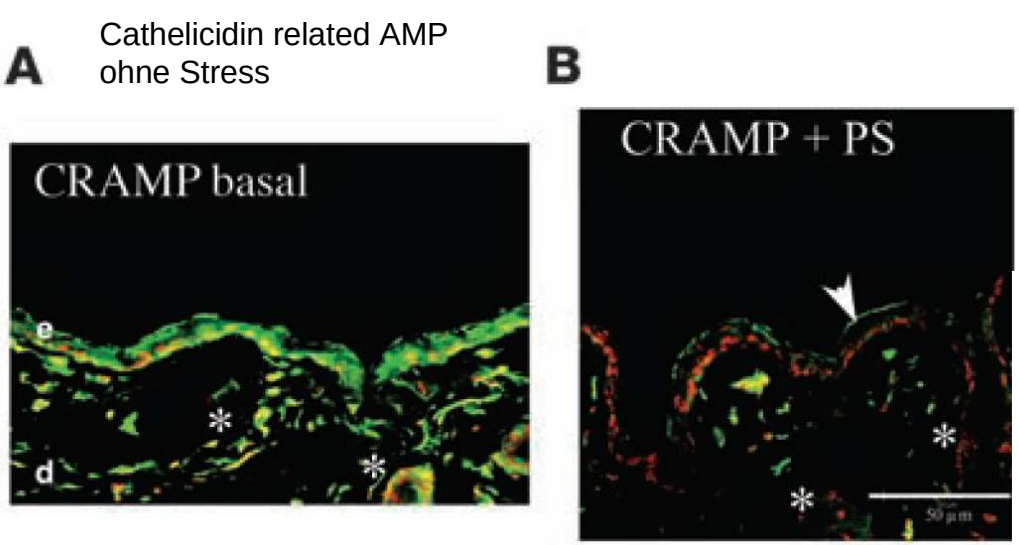
A nervous breakdown in the skin: stress and the epidermal barrier

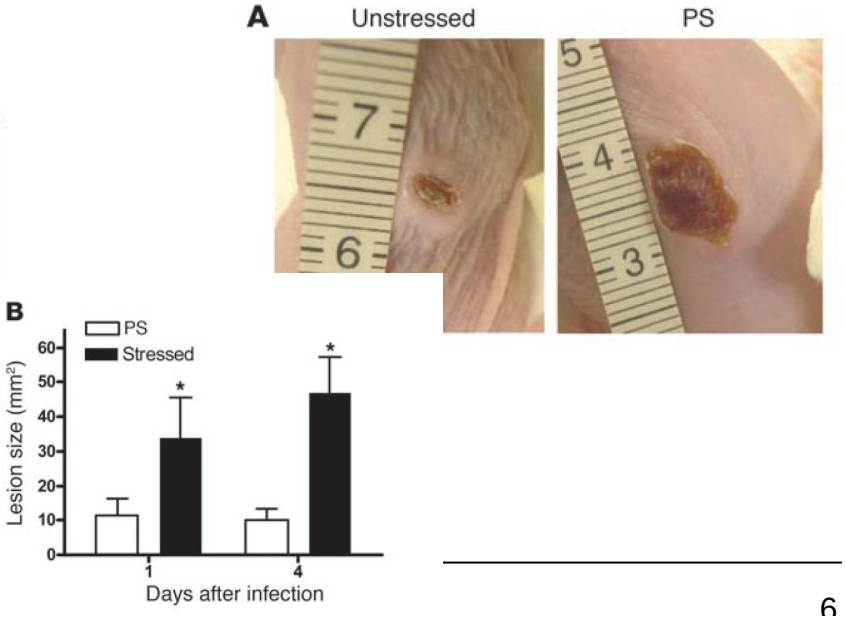
The Journal of Clinical Investigation http://www.jci.org Volume 117 Number 11 November 2007



Psychological stress downregulates epidermal antimicrobial peptide expression and increases severity of cutaneous infections in mice

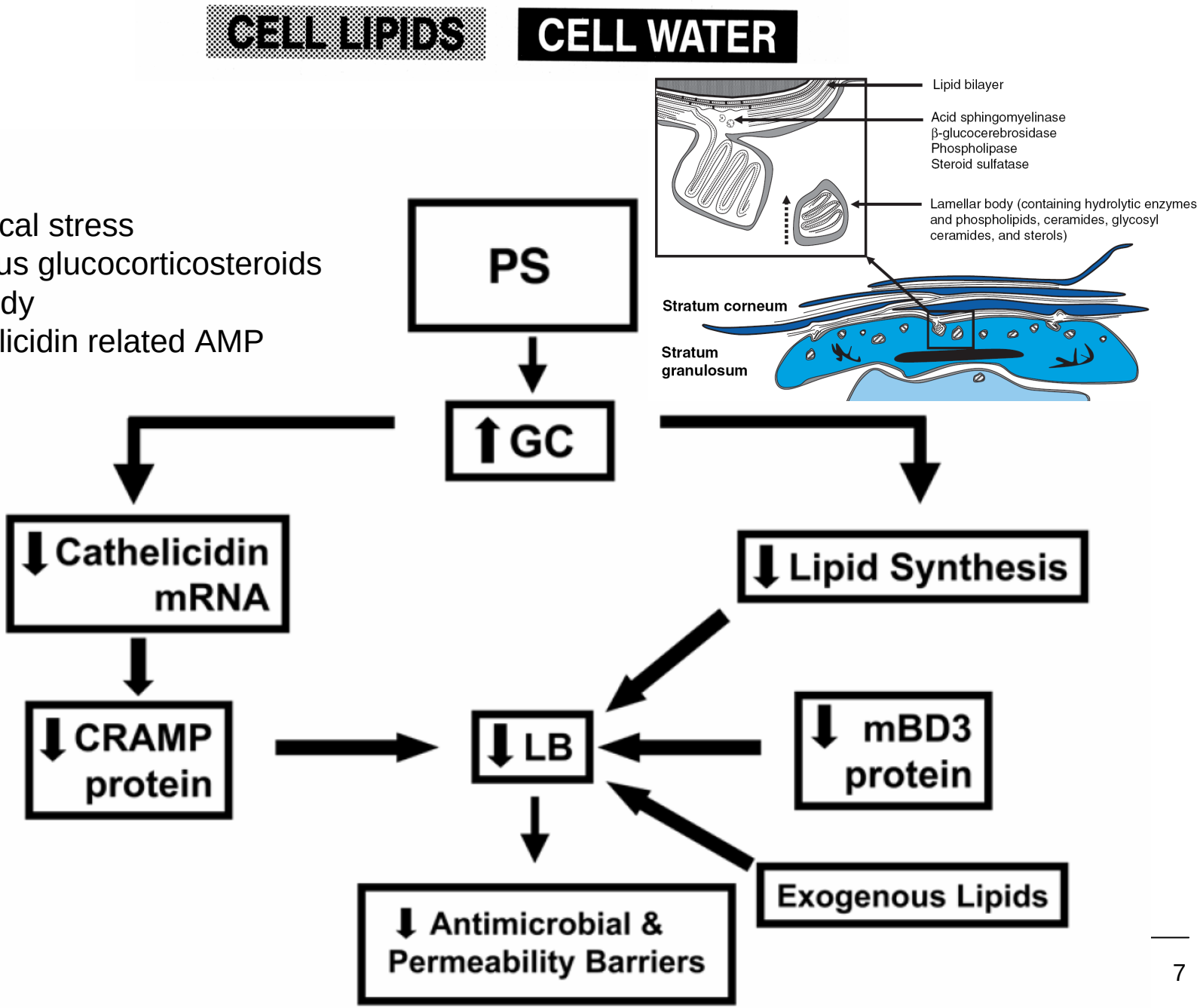
The skin is the first line of defense against microbial infection, and psychological stress (PS) has been shown to have adverse effects on cutaneous barrier function. Here we show that PS increased the severity of group A *Streptococcus pyogenes* (GAS) cutaneous skin infection in mice; this was accompanied by increased production of endogenous glucocorticoids (GCs), which inhibited epidermal lipid synthesis and decreased lamellar body (LB) secretion. LBs encapsulate antimicrobial peptides (AMPs), and PS or systemic or topical GC administra-





J. Clin. Invest. **117**:3339–3349 (2007)

PS=psychological stress
GC=endogenous glucocorticosteroids
LB=lamellar body
CRAMP=cathelicidin related AMP



Experimental Dermatology 2006: 15: 1–13
Blackwell Munksgaard . Printed in Singapore

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EXPERIMENTAL DERMATOLOGY
ISSN 0906-6705

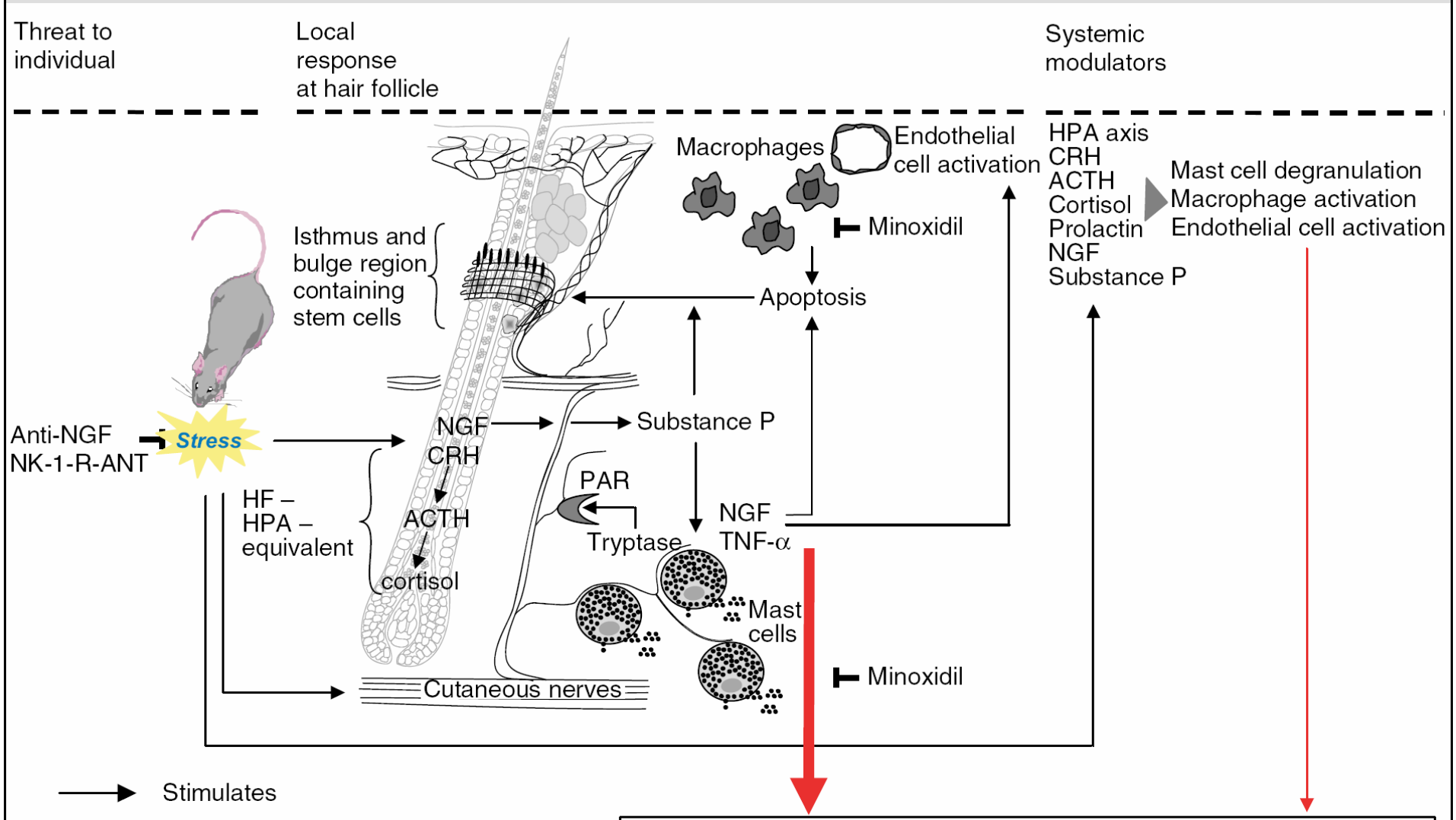
Review Article

Hair growth inhibition by psychoemotional stress: a mouse model for neural mechanisms in hair growth control

Substance P (SP) and NGF (nerve growth factor) are recruited as key mediators of stress-induced hair growth-inhibitory effects.

Thus there is now solid *in vivo*-evidence for the existence of a defined brain- HF axis. This axis can be utilized by psychoemotional and other stressors to prematurely terminate hair growth. Stress-induced hair growth inhibition can therefore serve as a highly instructive model for exploring the brain-skin connection and provides a unique experimental model for dissecting general principles of skin neuroendocrinology and neuroimmunology well beyond the HF.

The 'brain-hair follicle axis' revisited: hair growth inhibition by stress



- *Inhibition of hair growth*
- *Premature termination of hair growth*

Psychosocial Predictors of Survival in Metastatic Melanoma

Table 1. Comparisons Between Participants and Nonparticipants in Terms of Survival and Disease Characteristics

Variable	Participants (n = 125)	Nonparticipants (n = 118)	*P*
Time to death, median days	299	138	< .001
Clarke's level, mean ± SD	3.52 ± 0.87	3.84 ± 0.85	.03
Mitosis	5.68 ± 7.52	6.06 ± 8.02	.79
Thickness of primary tumor	2.84 ± 2.43	3.68 ± 3.21	.06
Age, years	55 ± 14	55 ± 14	.866
Ulceration, %	36	43	.41
Metastatic site, %			
Nonvisceral	12.8	10.4	.04
Brain	27.5	18.4	
Liver	29.4	20.8	
Bone	2.8	4.0	
Other visceral	27.5	46.4	

J Clin Oncol 1999

Psychotherapy and Psychosomatics

Psychother Psychosom 2001;70:86–91

Preliminary Evidence for Herpes labialis Recurrence following Experimentally Induced Disgust

Angelika Buske-Kirschbaum Andrea Geiben Cornelia Wermke
Karl-Martin Pirke Dirk Hellhammer

Conclusions:

The present findings suggest that experimentally induced emotional stress such as disgust may be associated with reactivation of HSV.

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Verrucae vulgares in Children: Successful Simulated X-Ray Treatment (a Suggestion-Based Therapy)

Table 1. Conditions and therapeutic outcome of 9 patients with verrucae vulgares treated with a simulated X-ray therapy

Patient No.	Age years	Warts before treatment	Localization of warts	Treatment sessions	Weeks	Warts after treatment
1	8	5	feet	3	8	0
2	9	6	hands and feet	4	9	4
3	6	8	hands and feet	2	6	0
4	7	5	feet	3	7	0
5	8	4	hands	4	8	1
6	12	10	hands and feet	5	9	10
7	5	4	face	3	8	0
8	6	2	right hand	4	6	0
9	10	7	feet	3	9	3

Dermatology 2002;204:287–289

Body Image and Quality of Life

R. Argentieri and S. Bondi Argentieri*

Summary

The concept of quality of life is currently essentially related to the body and its appearance, in the narcissistic style that dominates in our culture. Body image, however, is not only objective and real; it is also a mental representation, prevalently unconscious, rooted in the psychological sense of self.

According to psychoanalysis, at the beginning of life the mother's look functions like a mirror and the infant perceives himself as the mother sees him. If this primary experience is distorted or deficient, more or less serious pathological problems (intolerance for real or presumed physical defects, disturbances in the ideal body self, dysmorphobia...) will arise,

Table 1

Table 1 shows the *dermatological results of our study*. All relevant or common dermatological changes were mentioned spontaneously by the patients after being asked about self-observed skin changes. Further information was received by detailed questioning. The answers about cutaneous and mucocutaneous changes at time of the study were verified in the examination.

Wir untersuchten die dermatologischen Veränderungen bei 21 magersüchtigen Patientinnen (9-24-jährig)

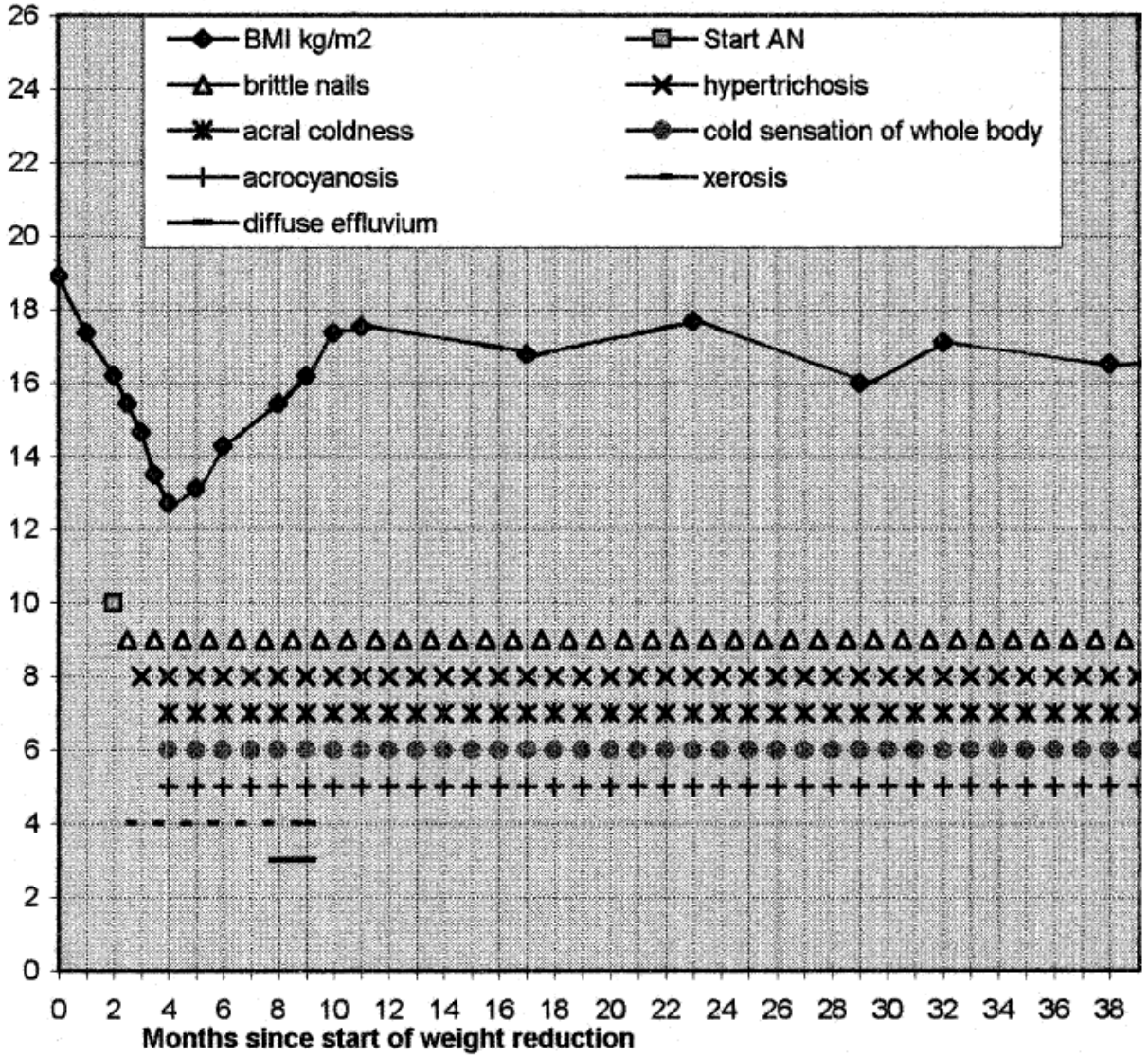
dermatological findings in anorexia nervosa	questions				examination	
	during anorexia nervosa		at time of examination			
	number	%	number	%	number	%
xerosis	12/21	100	14/21	67	15/21	71
cheilitis	12/21	57	12/21	57	16/21	76
hypertrichosis	15/21	71	12/21	57	13/21	62
diffuse effluvium[a]/alopecia[b]	18/21[a]	86	11/21[a]	52	5/21[b]	24
dry hair	11/21	52	10/21	48	10/21	48
acral coldness	21/21	100	11/21	52	8/21	38
acrocyanosis	17/21	81	8/21	38	7/21	33
cold sensation of the whole body	14/21	67	7/21	33	*	*
gingival changes	15/21	71	7/21	33	7/19	37
oral mucosal changes	4/21	19	2/21	10	2/19	11
sialadenosis	1/21	5	1/21	5	1/21	5
dental changes	1/21	5	1/21	5	1/19	5
nail changes	6/21	29	6/21	29	6/21	29
oedema	4/21	19	1/21	5	1/21	5
generalised pruritus	2/21	10	1/21	5	**	**
hypercarotenaemia	1/21	5	0/21	0	0/21	0
perniosis	1/21	5	0/21	0	0/21	0
bruises	1/21	5	0/21	0	0/21	0
facial purpura after vomiting	5/7	71	2/3	67	1/3	33
calluses on dorsum of hand	2/7	29	1/3	33	2/3	67
trichotillomania	3/21	14	3/21	14	0/21	0
artefacts	3/21	14	3/21	14	3/21	14
hand dermatitis	1/21	5	0/21	0	0/21	0
skin atrophy	***	***	***	***	1/21	5
subcutaneous atrophy	***	***	***	***	5/21	24
calluses from hyperactivity	***	***	***	***	3/21	14
periungual erythema	***	***	***	***	10/21	48
perleche	***	***	***	***	5/21	24
aphthous ulceration	***	***	***	***	2/19	11

Figure 1

Anorexia nervosa: the forbidden pleasure of eating.

Figure 2

BMI and occurrence of cutaneous and mucocutaneous changes during anorexia nervosa. "Start AN" shows subjective onset of anorexia nervosa. BMI (kg/m^2) is a short form for body mass index calculated by body weight (kg) / (height)^2 (m^2). According to the German Society for Nutrition (1992) underweight was defined at BMI <19 (kg/m^2).



Hautveränderungen beginnen ab einem BMI von <16

BMI: Körpergewicht in kg dividiert durch das Quadrat der Körpergrösse in Metern.

Hautveränderungen im Verlauf der Anorexie

Figure 4

Cheilitis and perleche.

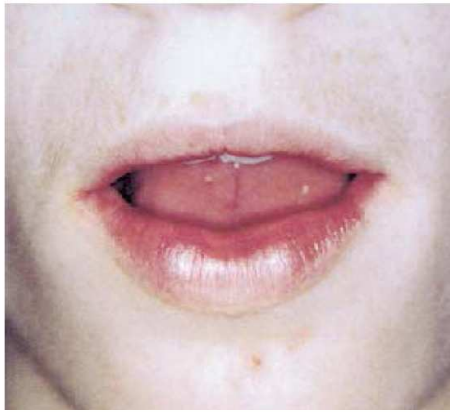


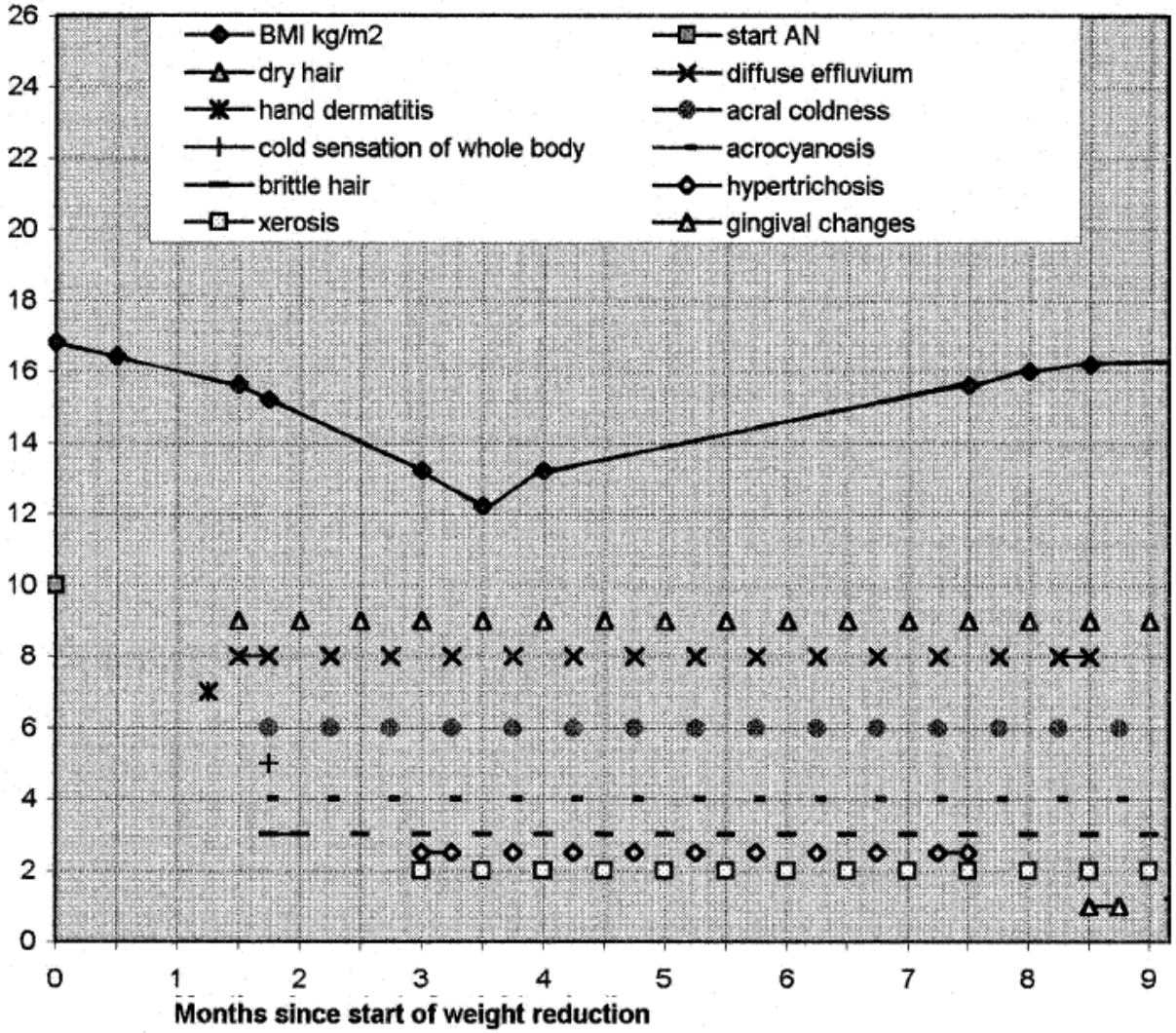
Figure 5

Hypertrichosis.

Figure 3

BMI and occurrence of cutaneous and mucocutaneous changes during anorexia nervosa.

Sobald sich der BMI zu normalisieren beginnt, bilden sich die kutanen Phänomene langsam zurück.



Proc Biol Sci. 1995;26:245-9

MHC-dependent mate preferences in humans

CLAUS WEDEKIND[1], THOMAS SEEBECK[2], FLORENCE BETTENS[3] AND ALEXANDER J. PAEPKE[1]

[1] *Abteilung Verhaltensökologie, Zoologisches Institut, Universität Bern, CH-3032 Hinterkappelen, Switzerland*
[2] *Institut für Allgemeine Mikrobiologie, Universität Bern, Baltzerstrasse 4, CH-3012 Bern, Switzerland*
[3] *Institut für Immunologie und Allergologie, Inselspital Bern, CH-3010 Bern, Switzerland*

Genetica **104:** 191–197, 1999.
© 1999 *Kluwer Academic Publishers. Printed in the Netherlands.*

Olfactory cues associated with the major histocompatibility complex

Frank Eggert[1], Wolfgang Müller-Ruchholtz[2] & Roman Ferstl[1]
[1]*Department of Psychology, University of Kiel, D-24098 Kiel, Germany;* [2]*Department of Immunology, University of Kiel, D-24098 Kiel, Germany*

Hormones and Behavior 47 (2005) 384–388

New evidence that the MHC influences odor perception in humans: a study with 58 Southern Brazilian students

Pablo Sandro Carvalho Santos, Juliano Augusto Schinemann, Juarez Gabardo, Maria da Graça Bicalho*

Haut – ein provokatives Organ

Mayo Clinic Proc 2001;77:29

Table 3. **Prevalence of Piercing by Body Site in Male and Female College Students***

	No. (%) male students (n=218)			No. (%) female students (n=228)		
Body site	Pierced	Not pierced	Removed	Pierced	Not pierced	Removed
Ear	68 (31)	135 (62)	15 (7)	63 (27)	161 (71)	4 (2)
Eyebrow	2 (1)	216 (99)	0 (0)	2 (1)	224 (98)	2 (1)
Nose	0 (0)	218 (100)	0 (0)	1 (0.4)	223 (98)	4 (2)
Cheek	0 (0)	218 (100)	0 (0)	0 (0)	228 (100)	0 (0)
Lip	0 (0)	218 (100)	0 (0)	1 (0.4)	225 (99)	2 (1)
Tongue	5 (2)	208 (95)	5 (2)	27 (12)	191 (84)	10 (4)
Nipple	2 (1)	211 (97)	5 (2)	12 (5)	214 (94)	2 (1)
Navel	1 (0.5)	216 (99)	1 (0.5)	67 (29)	154 (68)	7 (3)
Genitals	2 (1)	216 (99)	0 (0)	4 (2)	223 (98)	1 (0.4)

*Percentages may not equal 100% due to rounding. Some students had piercing at more than 1 site.

Eur J Dermatol 2008; 18 (1): 26-8

Prevalence of piercing in a German population

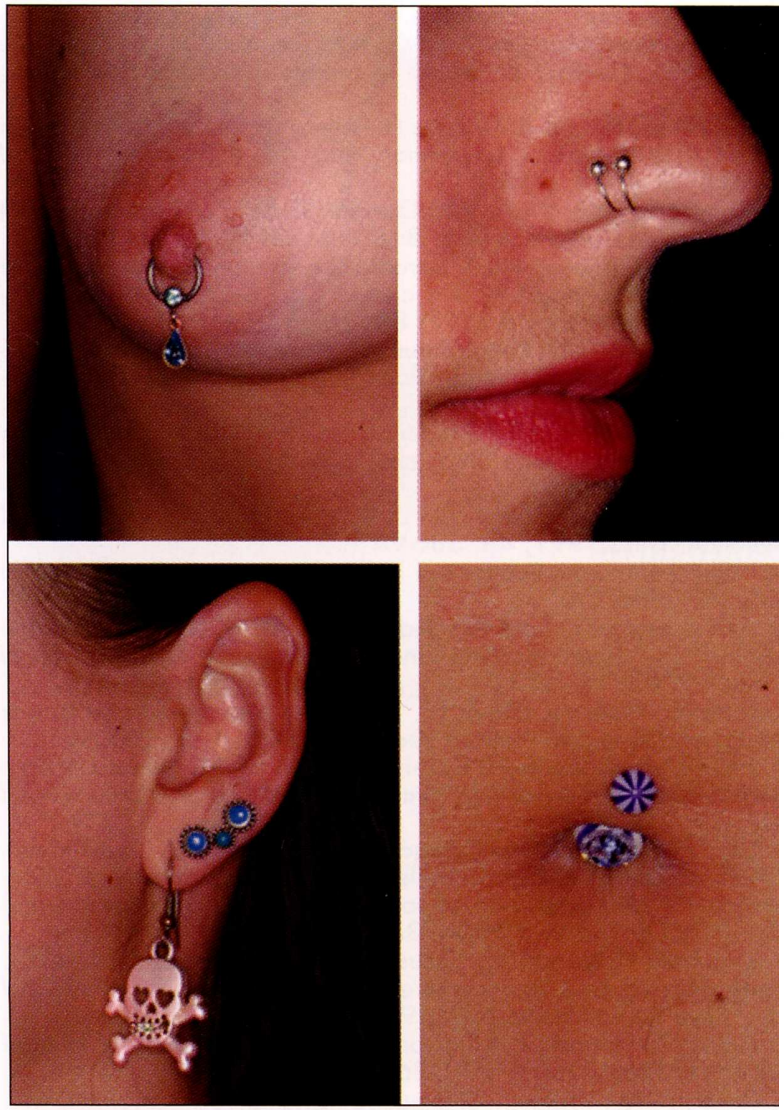


Table 1. Local distribution of 506 piercings in 389 patients (310 females, 79 males)

		Female		Male	
	n	n	%	n	%
Concha	171	142	45.8	29	36.7
Umbilicus	117	114	36.8	3	3.8
Nostril	84	72	23.2	12	15.2
Eyebrow	49	25	8.1	24	30.4
Tongue	32	28	9.0	4	5.1
Nipple	12	3	1.0	9	11.4
Lower Lip	10	9	2.9	1	2.4
Upper Lip	8	7	2.3	1	1.3
Frenulum	8	8	2.6	0	0
Genital area	7	4	1.3	3	3.8
Septum of nose	3	1	0.3	2	2.5
Chin	2	2	0.6	0	0
Tragus	2	2	0.6	0	0
Neck	1	0	0	1	1.3
	506	**417**		**89**	

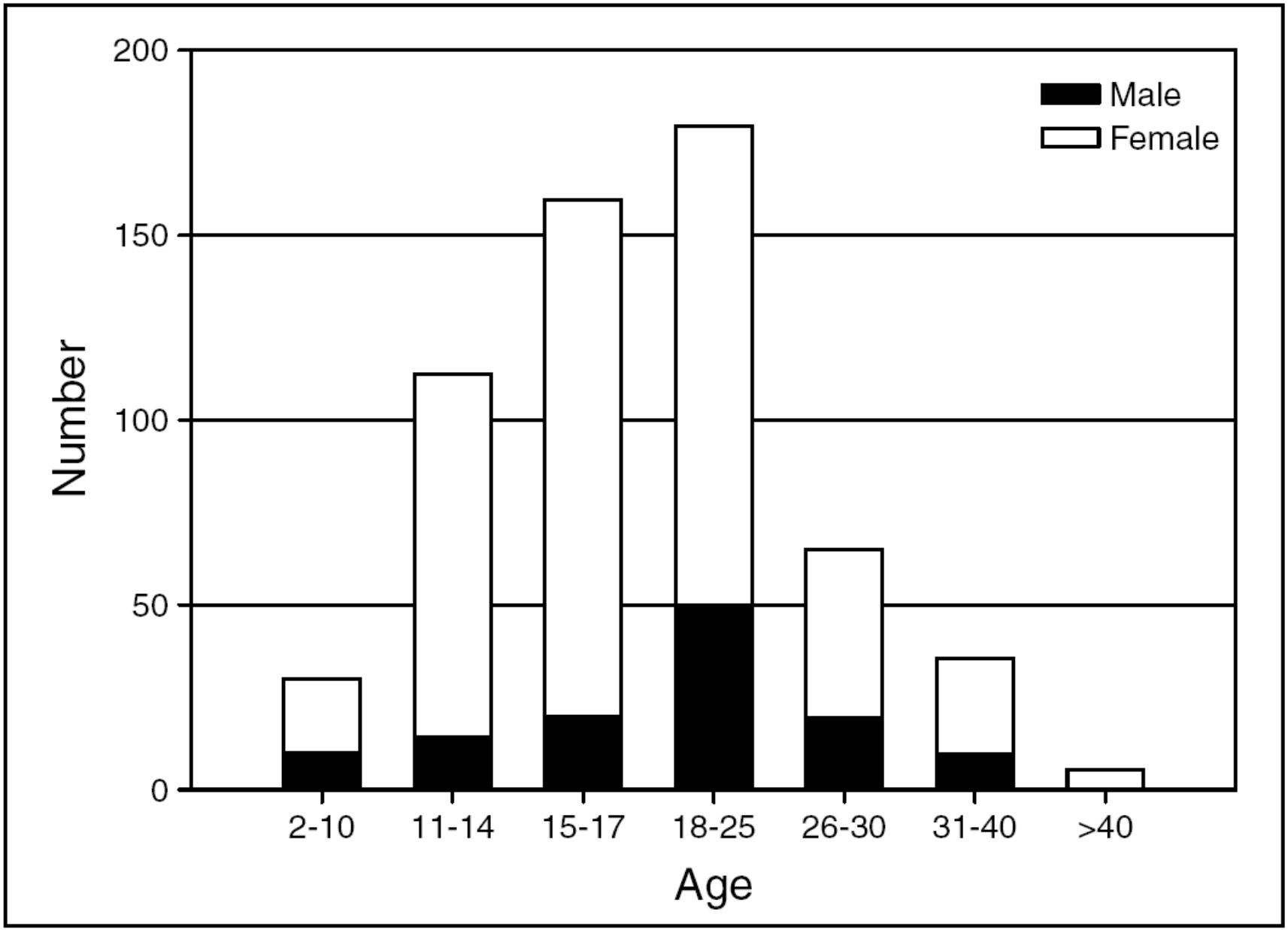


Figure 2. Age at time of piercing.

Die Haut ist ein Schmuckorgan und bestimmt die Interaktion mit der Umwelt.

Jede Hauterkrankung beeinträchtigt dieses Schmuckorgan und deshalb haben Hauterkrankungen immer eine Rückwirkung auf das Selbstwertgefühl.

Besonders bei
atopischer Dermatitis, Psoriasis, Akne vulgaris,
perioraler Dermatitis, Rosacea….

Psoriasis causes as much disability as other major medical diseases

Results: Patients with psoriasis reported reduction in physical functioning and mental functioning comparable to that seen in cancer, arthritis, hypertension, heart disease, diabetes, and depression. Six aspects of psoriasis predicted physical functioning, and 5 different disease aspects predicted mental functioning.

Conclusion: The impact of psoriasis on HRQL is similar to that of other major medical diseases. Different aspects of psoriasis are related to the different dimensions of HRQL supporting the need for multidimensional treatment models. (J Am Acad Dermatol 1999;41:401-7.)

Psoriasis und Lebensqualität

Table 2. Activities of Daily Living That Are Negatively Affected by Psoriasis in the Mail Survey

Activity	Respondents by Age Group, %		
	18-34 y (n = 1918)	35-54 y (n = 6625)	≥55 y (n = 8891)
Sleeping	20	22	22
Sexual activities	27	27	13
Using hands	8	16	19
Walking	7	11	14
Sitting for long periods	7	11	15
Standing for long periods	5	9	15
Performing job duties	10	12	9

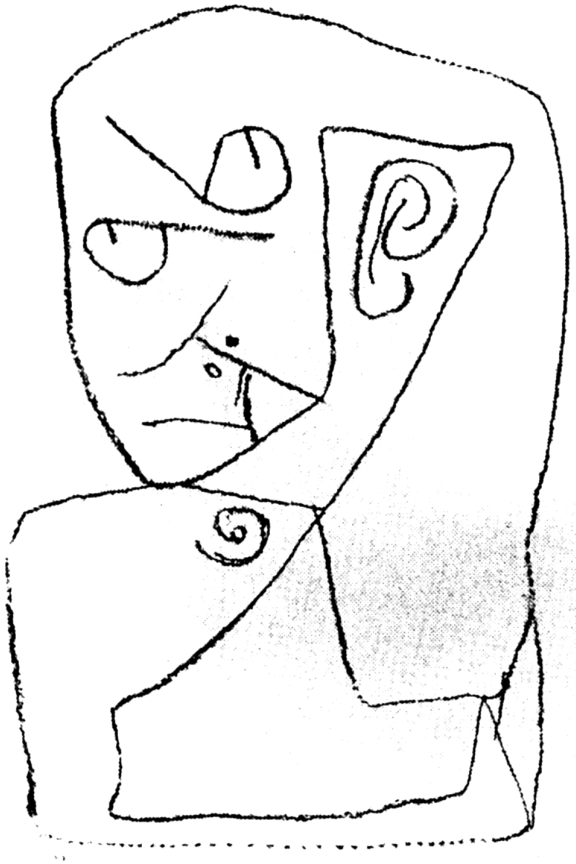
Lancet 1999;353:1516

Department of art

Endure!: how Paul Klee's illness influenced his art

(1879-1940)

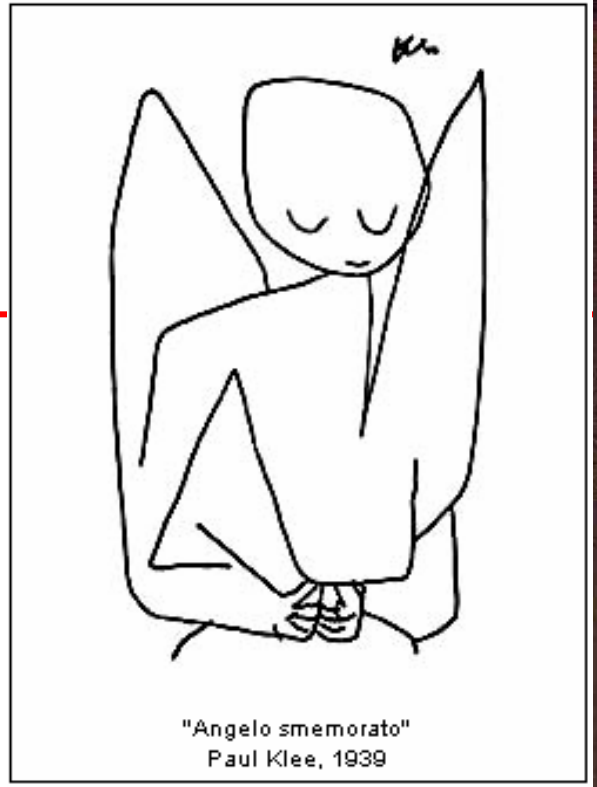
Figure 2: **Photograph of Klee, Feb 20, 1940**



© Paul-Klee-Foundation, Bern, Switzerland

Figure 3: ***Durchhalten!* 1940**

Paul Klee



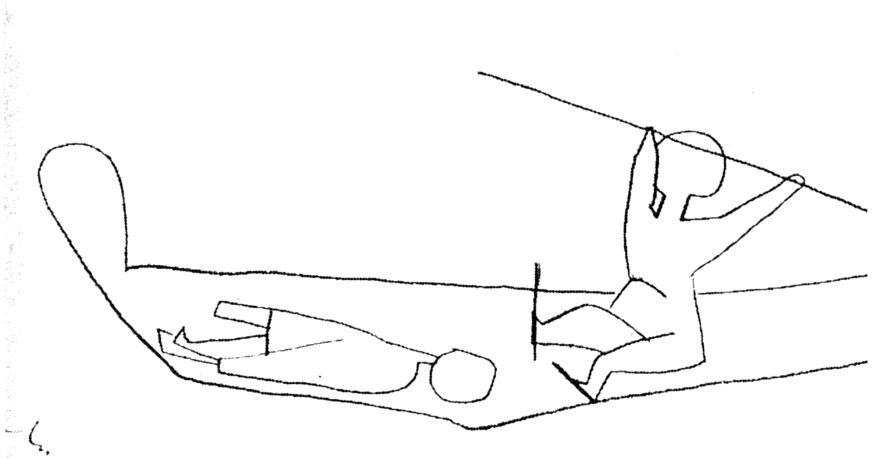


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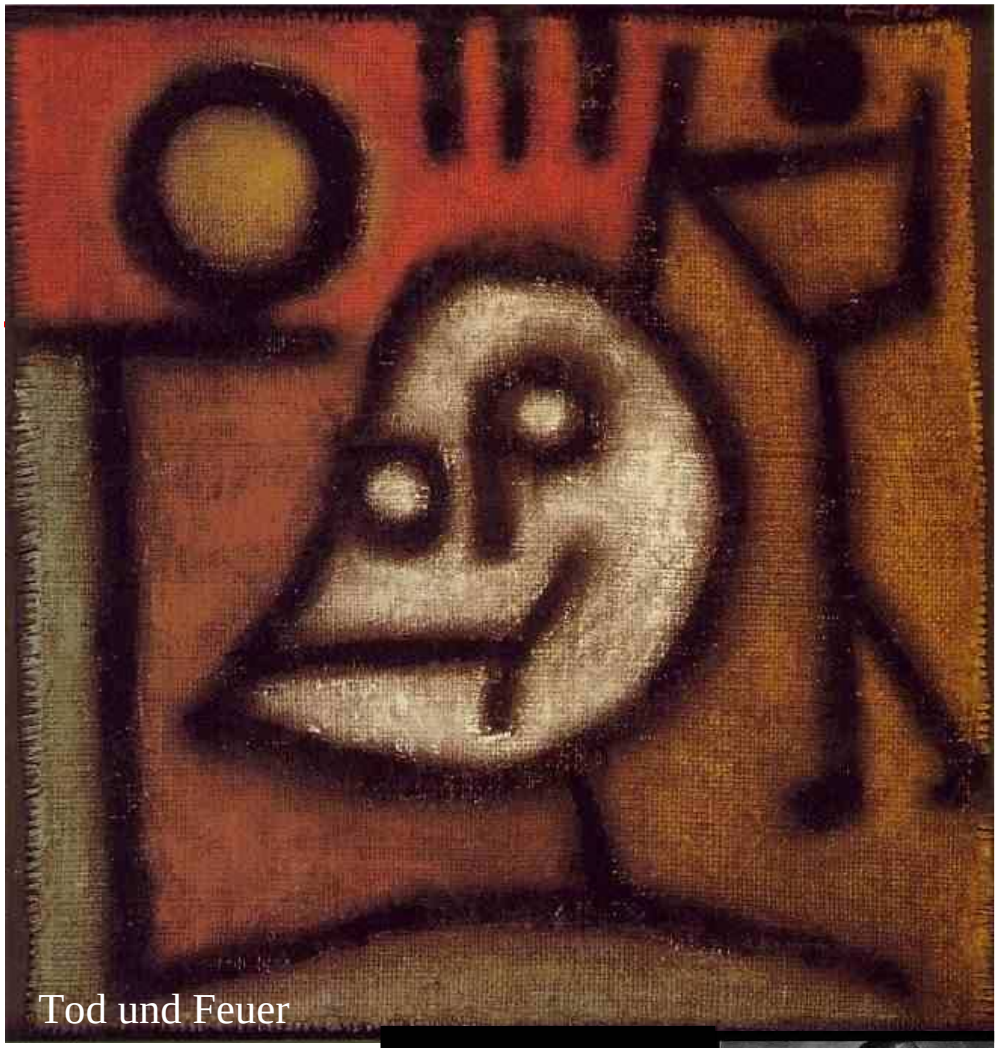
Figure 5: Der Kranke im Boot (The Sick One in the Boat) 1940



Dermatology 1998;197:230–234

Received: December 15, 1997
Accepted: May 12, 1998

Psychiatric Disorders in Patients Attending a Dermatology Outpatient Clinic

Conclusion: Psychiatric comorbidity in 33.4% of the dermatology outpatients indicates the need for considering emotional factors for an effective management of the cutaneous disorders.

Skin and psyche – From the surface to the depth of the inner world

Helmut Beltraminelli, Peter Itin
Department of Dermatology, University Hospital, of Basel Switzerland

Table 1: Classification of psychodermatoses after Harth and Gieler, 2006 [17].

Skin disorders of primary psychological origin	Artefacts	True artefacts, para-artefacts (neurotic excoriation, acne excoriée, morsicatio buccarum, cheilitis factitia, pseudo-knuckle-pads, onychophagia, trichotillomania), simulations
	Skin diseases resulting from delusion or hallucination	Parasitosis, obsession with own body odor, hypochondria, body dysmorphic disorder, folie à deux
	Somatoform disorders	Somatization disorder, hypochondria, somatoform autonomic function disorder, dysesthesias
	Skin disorders resulting from obsessive-compulsive behavior	Compulsive washing, lichen vidal

JDDG; 2008 · 6:8–14

Hautkrankheiten mit Bezug zur Psychosomatik

Multifactorial skin disorders	Atopic dermatitis, acne vulgaris, psoriasis vulgaris, alopecia areata, anal eczema, dyshidrosiform hand eczema, herpes labialis, hyperhidrosis, hypertrichosis, lichen ruber, lupus erythematosus, perioral dermatitis, sclerodermia, prurigo, rosacea, seborrheic eczema, leg ulcers, urticaria, verrucae vulgaris, vitiligo	
Secondary psychological disorders and comorbidities	Congenital disfiguring skin disorders and sequelae (genodermatoses)	Ichthyoses, epidermolyses, lipomatoses, phakomatoses
	Congenital disfiguring skin diseases and sequelae	Infections, autoimmune skin diseases, trauma, keloid, neoplasias
	Comorbidities	Depressive disorders, anxiety disorders, obsessive-compulsive disorders, adaptive disorders, dissociative disorders, personality disorders

JDDG; 2008 · 6:8–14

Hyperhidrose = verstärktes Schwitzen

European Journal of Neurology 2001, **8:** 247–252

Botulinum A toxin improves life quality in severe primary focal hyperhidrosis

(DLQI was reduced from 9.9 to 2.4; $P < 0.0001$). The study showed that focal hyperhidrosis may considerably reduce life quality and the disability experienced by the patients can be largely reversed by botulinum toxin injections.

Psychopathologien mit Relevanz für Hautkrankheiten

Angststörungen
Depressionen
Wahnvorstellungen, Phobien
Zwangsvorstellungen

Table 4. Dysesthesias in dermatology

Generalized cutaneous dysesthesias
Dermatodynia
Hemialgia (Pain in one side of the body)
Regional cutaneous dysesthesias
Head:
Glossodynia
Scalp Dysesthesia
Trichodynia
Urogenital pain syndrome:
Vulvodynia, Orchiodynia, Urodynia, Urethral syndrome, Phallodynia (Phallalgia, Penile pain syndrome), Prostatodynia, Coccygodynia, Perineal pain Syndrome, Anodynia, Proctodynia
Special form:
Erythromelalgia
Trigeminus neuralgia
Postzosteric Neuralgia
Proctalgia fugax

Schmerzen

Table 2. Dermato-Venerological Hypochondrias

- **Infections (Bacteria, Fungi, Viruses, Parasites)**
- Aids-Phobia
- Borreliaphobia
- Mycophobia (usually intestinal)
- Parasitophobia
- Syphilisphobia
- Venerophobia (unspecific form)
- **Neoplasia**
- Carcinophobia (unspecific)
- Melanomophobia (specific),
- **Other nosophobias and differential-diagnostic special forms**
- Amalgamphobia
- Electrosmog
- Light allergy
- Food allergy
- Eco- Syndrome:
- Sperm allergy

Unkorrigierbare Vorstellung, man leide an einer entstellenden Krankheit, welche aber nicht objektiviert werden kann.

Wird besonders häufig bei Patienten mit minimaler Akne gesehen.

Review

Body dysmorphic disorder

Definition

Body dysmorphic disorder (BDD) or "the distress of imagined ugliness" is a psychiatric condition which manifests as a preoccupation with an imagined defect in appearance.[1–3] If a slight defect is present, it does not warrant the overwhelming distress that results.

Katha ID,[b]

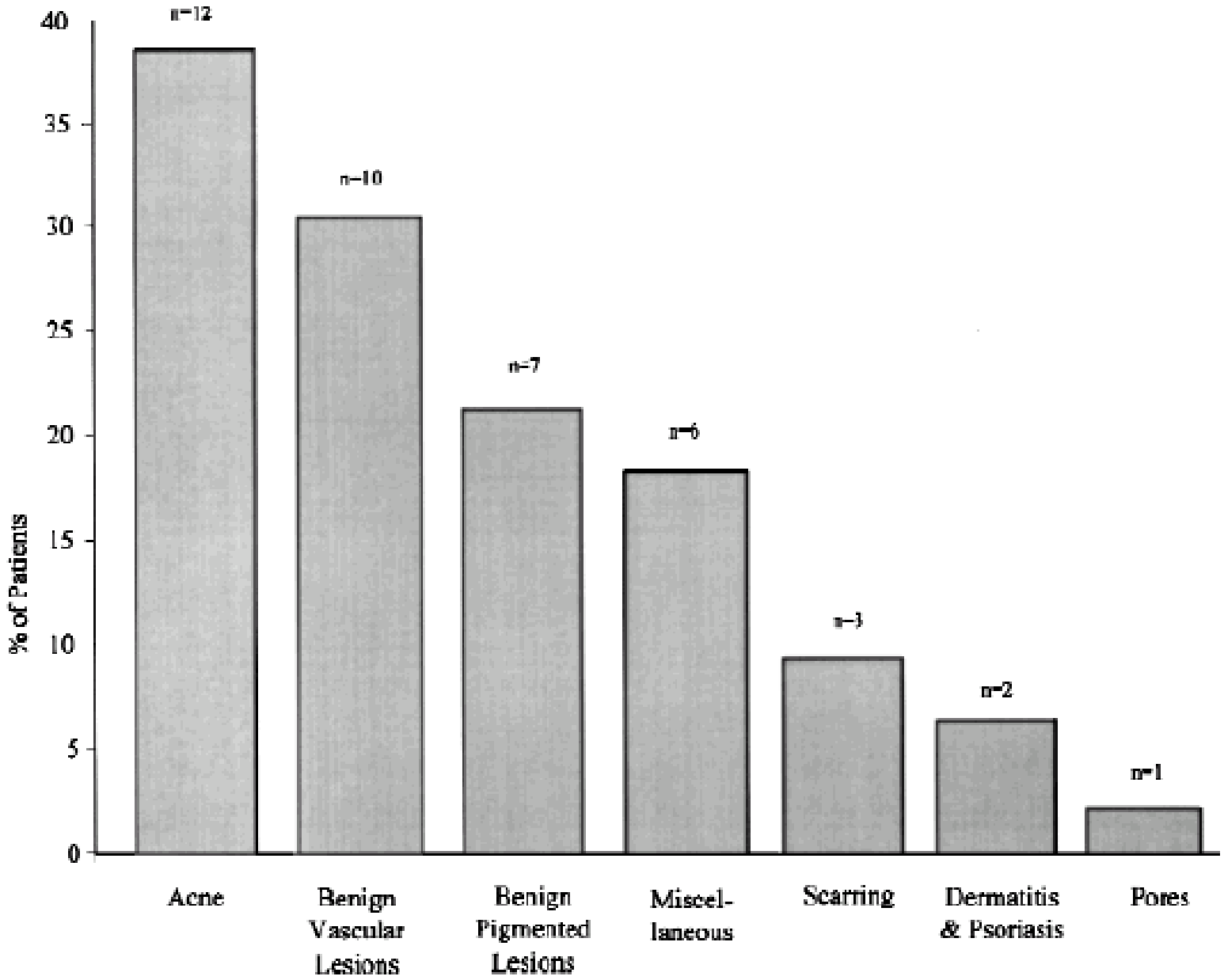


Fig 1. Dermatologic diagnoses of 32 patients who screened positive for body dysmorphic disorder. Some patients (n = 9, 28.1%) had more than one dermatologic diagnosis. Categories rep-

Table 3. Body dysmorphic disorders in dermatology

	Clinical pattern of complaints
Whole-body Disorders	**Anti aging**
	Dorian Gray-Syndrome
	Symptoms
	Hyperhidrosis
	Hypertrichosis
	Muscle mass
	Seborrhoea
	Special form
	Eating disorders
Region-related Disorders	**Head** (Ectopic sebaceous glands, Exfoliatio linguae, Flush, Hypertrichosis, psychogenic Effluvium, Seborrhoea)
	Breast (Proportion, Aerola)
	Genitals (Proportion, hair)
	Special form: Botulinophilia

Artefakt-Krankheit

Dermatitis Artefakta (Selbstschädigung)
Münchhausen-Syndrom
Verhexung
Rentenbegehren

Selbstschädigungen zeigen sich stets an erreichbaren Stellen

Table 3 Types of artefactual skin lesions

Types	No. patients
Physical injury	8
Chemical injury	6
Hair cutting or shaving	4
Applied pigment	4
Thermal injury	3
Purpura	3
'Dermatitis neglecta'	2
Introduction of foreign material	1
Simulation of exudate	1

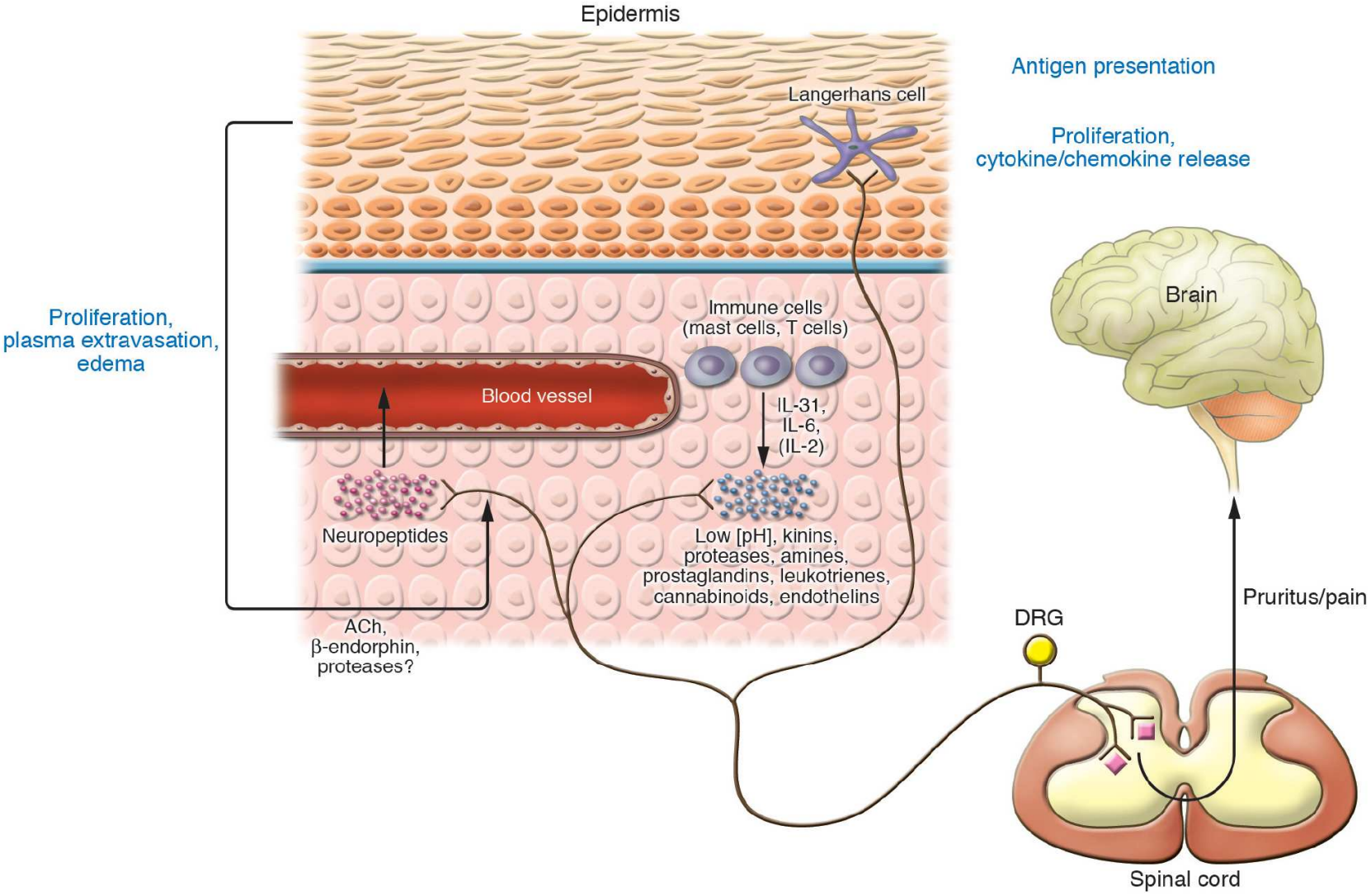
The Skin Picking Impact Scale (SPIS)

Scale Development and Psychometric Analyses

Final items selected for the Skin Picking Impact Scale (SPIS) with item difficulty levels and part-whole cor

Scale Item	Item Difficulty Level, %
I don't look people in the eye because of my skin picking.	42
I think my social life would be better if I didn't pick my skin.	58
I hate the way I look because of my skin picking.	65
It takes me longer to go out because of my skin picking.	55
I feel embarrassed because of my skin picking.	77
There are some things I can't do because of my skin picking.	45
I feel unattractive because of my skin picking.	68
It takes me longer than others to get ready in the morning because of my skin picking.	42
I don't like people looking at me because of my skin picking.	61
My relationships have suffered because of my skin picking.	52

Juckreiz führt zu einer psychischen Rückwirkung



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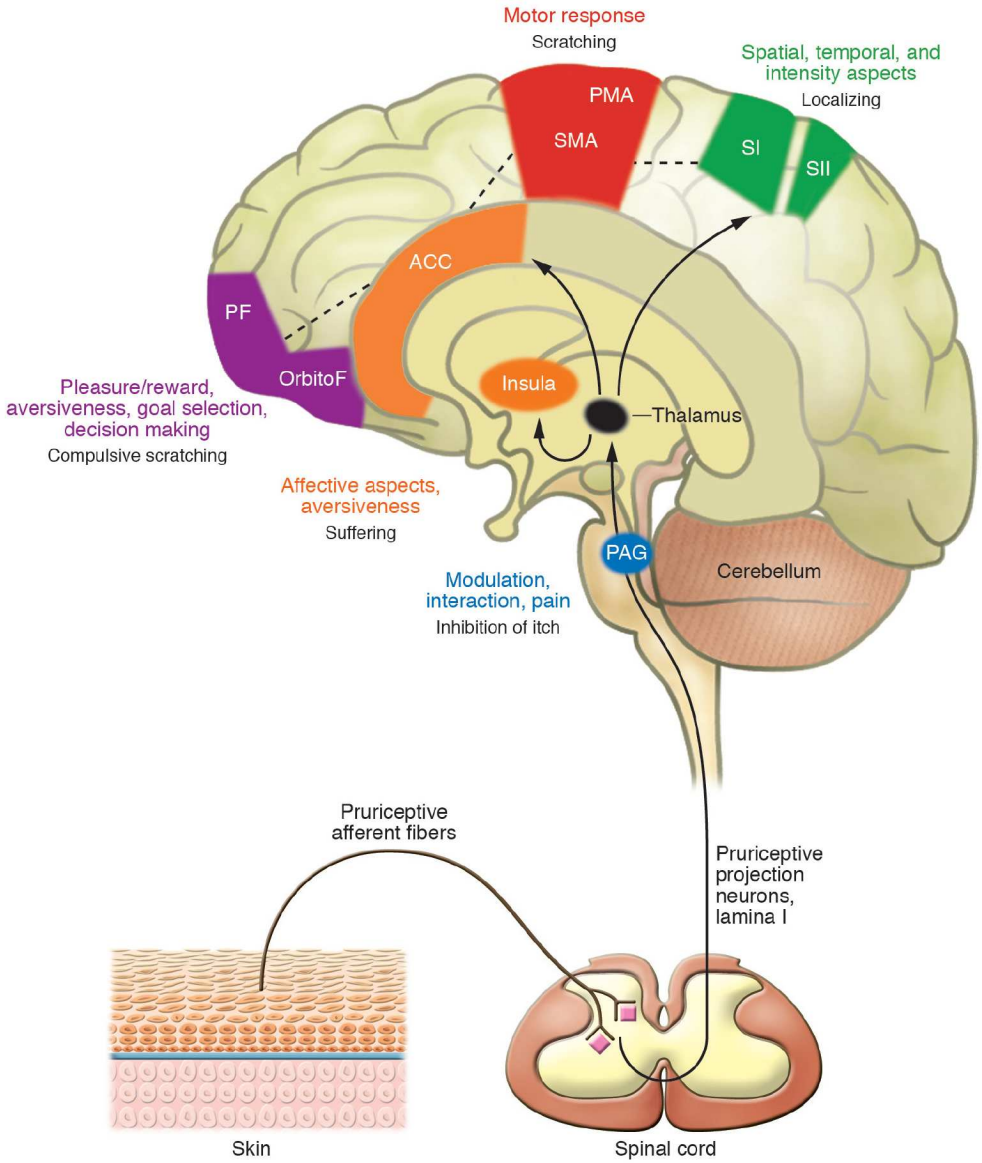

Figure 2
Central processing of pruritus. Pruriceptive primary afferent nerve fibers from the skin activate spinal neurons in lamina I of the dorsal horn, which project to the thalamus. Direct excitatory connections from the thalamus include anterior cingulate cortex (ACC), insular cortex (Insula), and primary and secondary somatosensory cortices (SI, SII). The putative function of brain areas activated in central imaging studies of itch are summarized. SMA, supplementary motor area; PMA, premotor area; PF, prefrontal cortex; OrbitoF, orbitofrontal cortex; PAG, periaqueductal gray.

Underlying Psychopathologies of Psychogenic Pruritic Disorders*

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Ergebnisse: Alle 65 Patienten wiesen affektive Störungen auf: Depression (20 Fälle), Angst (6 Fälle) und gemischte Angststörungen mit Depression (39 Fälle). Bei 12 Patienten lag außerdem eine Persönlichkeitsstörung vor. Denkstörungen wurden nicht diagnostiziert.

Schlussfolgerung: Patienten mit psychogenem Pruritus hatten eine oder mehrere zugrundeliegende Psychopathologien. Diese sollten erkannt und behandelt werden, um ihre Hauterkrankung effektiv behandeln zu können.

Report

Anxiety level and severity of skin condition predicts outcome of psychotherapy in atopic dermatitis patients

Jakob Linnet, Cand Psych, PhD, and Gregor B. E. Jemec, MD, DMedSci

Conclusions The results suggest that AD patients with a higher anxiety level are more likely to improve their psychologic and dermatologic condition after psychotherapy, but are more vulnerable to nonadherence when no adequate psychologic treatment is offered. The results underscore the importance of proper psychologic assessment and treatment in addition to dermatologic treatment.

Association of Dissatisfaction With Care and Psychiatric Morbidity With Poor Treatment Compliance

Conclusions: This is the first longitudinal study on dermatologic patients showing that dissatisfaction with care and psychiatric morbidity are significantly and independently associated with poor medication adherence. To improve medication adherence, particular attention should be dedicated to the physician's interpersonal skills, which emerged as a major component of patient satis-

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