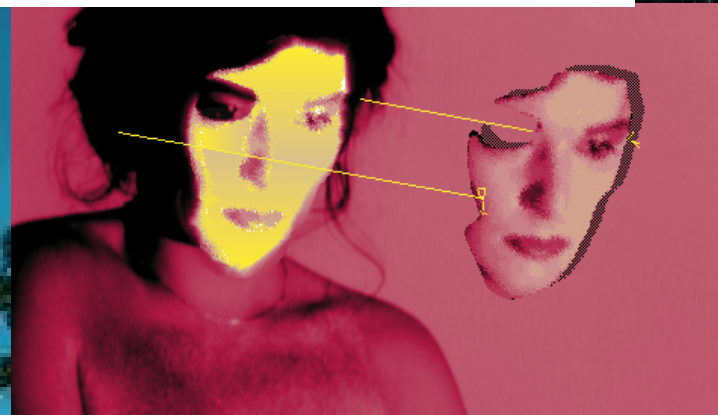











# Die Haut ein Spiegel der Psyche – Sicht des Dermatologen

Die gesellschaftliche und individuelle Bedeutung der Haut



**Table 4** Common diagnoses referred by dermatologists to psychiatrists

	<b>Psychocutaneous disorder</b>	<b>Number (%)</b>
	Delusion of parasitosis	42 (41.1)
	Neurotic excoriation	24 (23.5)
	Trichotillomania	17 (16.6)
	Depression associated with skin disease	11 (10.7)
	Skin-related obsessive–compulsive behavior	11 (10.7)
	Anxiety associated with skin disease	9 (8.8)
	Acne excoriee	8 (7.8)
	Psoriasis	6 (5.8)
	Alopecia areata	5 (4.9)
	Prurigo nodularis	5 (4.9)
	Body dysmorphic disorder	5 (4.9)
	Factitious dermatitis	4 (3.9)
	Atopic dermatitis	3 (2.9)
	Miscellaneous	4 (3.9)

# Psoriasis causes as much disability as other major medical diseases

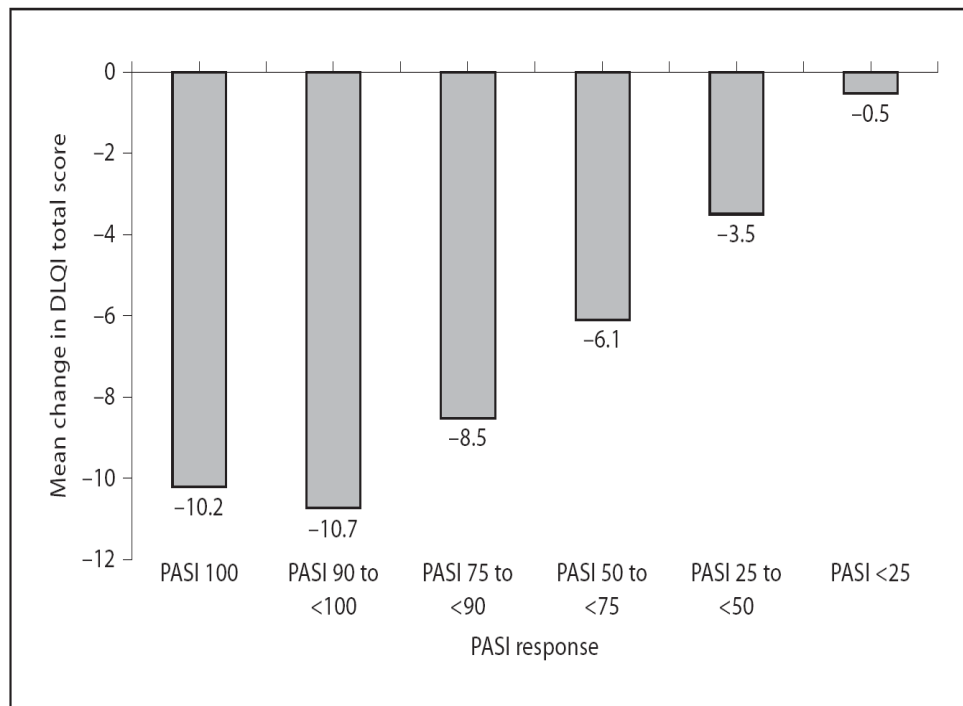
**Results:** Patients with psoriasis reported reduction in physical functioning and mental functioning comparable to that seen in cancer, arthritis, hypertension, heart disease, diabetes, and depression. Six aspects of psoriasis predicted physical functioning, and 5 different disease aspects predicted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

# Relationship between Clinical Response to Therapy and Health-Related Quality of Life Outcomes in Patients with Moderate to Severe Plaque Psoriasis

Dermatology 2008;216:260–270

Je geringer die betroffene Fläche der Psoriasis durch eine Therapie wird, desto besser die Lebensqualität



# 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.








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### Table 3. Common dermatological diagnoses referred by psychiatrists

*Southern Medical Journal* • Volume 103, Number 12, December 2010

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<b>Diagnoses</b>	<b>N (%)</b>
 Drug-related rash	61 (27.4)
 Acne	31 (13.9)
 Psoriasis	28 (12.6)
 Atopic dermatitis	28 (12.6)
 Alopecia areata	11 (4.9)
Anxiety/depression due to chronic skin disease	8 (3.6)
Urticaria	8 (3.6)
Pruritus	8 (3.6)
Delusion of parasitosis	7 (3.1)
Skin picking	6 (2.7)
Factitious dermatitis	5 (2.2)
Evaluation for suspected skin cancer	5 (2.2)
Trichotillomania	4 (1.8)
Fungal infections	3 (1.3)
Miscellaneous	21 (9.4)

---

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.

# Hautkrankheiten mit Bezug zur Psychosomatik

## 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].

<b>Skin disorders of primary psychological origin</b>	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



# Hautkrankheiten mit Bezug zur Psychosomatik

## 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

<b>Multifactorial skin disorders</b>	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	
<b>Secondary psychological disorders and comorbidities</b>	Congenital disfiguring skin disorders and sequelae (genodermatoses)  Congenital disfiguring skin diseases and sequelae  Comorbidities	Ichthyoses, epidermolyses, lipomatoses, phakomatoses  Infections, autoimmune skin diseases, trauma, keloid, neoplasias  Depressive disorders, anxiety disorders, obsessive-compulsive disorders, adaptive disorders, dissociative disorders, personality disorders

# The Relationship Between Psychiatric Illnesses and Skin Disease

*A Longitudinal Analysis of Young Australian Women*

In the generalized estimating equation models, depression symptoms and stress (but not anxiety) were significantly associated with skin problems ( $P < .005$ ).

*Arch Dermatol. 2009;145(8):896-902*

**Hautprobleme führen zu Stress und zu Depressionen**

# Symptomatologie dépressive et dermatoses

L. DEHEN (1), C. TAIEB (2), E. MYON (2), L. DUBERTRET (1)

**Discussion.** The prevalence of depressive symptoms among patients seen at a hospital dermatology department was 23.6% in this study.

Tableau III. – Type de dermatose et présence d'une symptomatologie dépressive.

Diagnostic	Malades n	Symptomatologie dépressive %
Psoriasis	n = 95 (12,3 %)	19 %
Dermatite atopique	n = 73 (9,4 %)	28,8 %
Acné	n = 34 (4,4 %)	32,4 %
Naevus	n = 31 (4 %)	13 %
Urticaire	n = 21 (2,7 %)	28,6 %
Vitiligo	n = 21 (2,7 %)	0,2 %

# Functional Brain Imaging Alterations in Acne Patients Treated With Isotretinoin

FIGURE 2. Effects of Isotretinoin and Antibiotics on Orbito-frontal Cortical Metabolism in Patients Receiving Treatment for Acne<sup>a</sup>

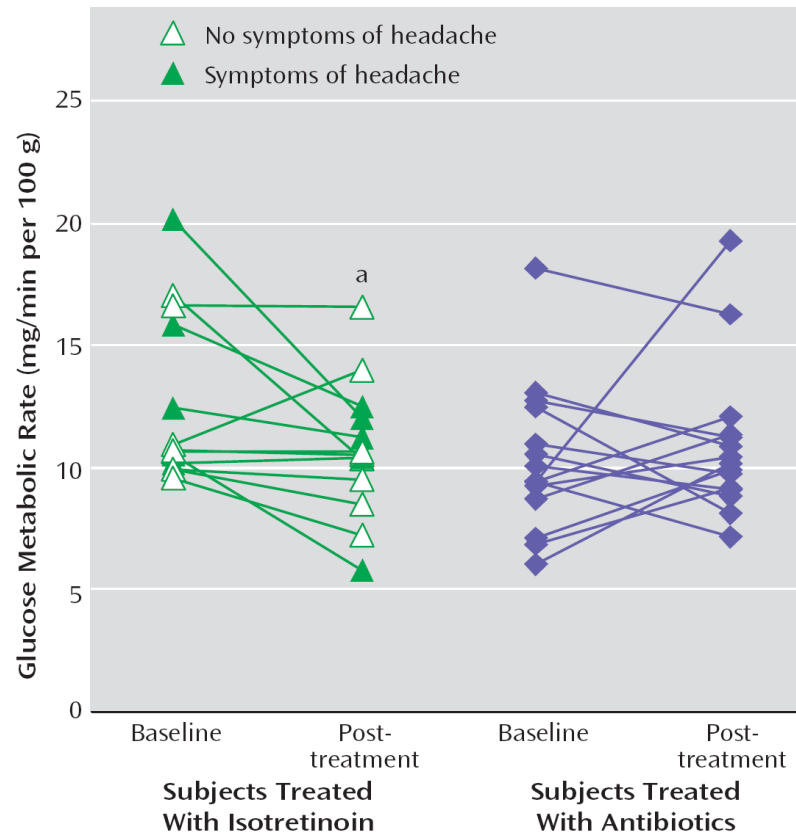
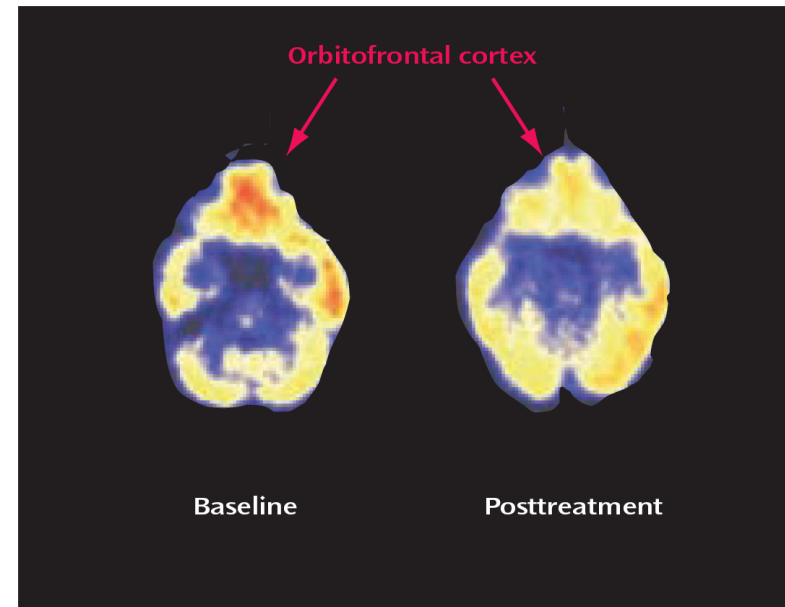


FIGURE 3. Effects on Regional Brain Metabolism in a Representative Patient Receiving Isotretinoin Treatment for Acne<sup>a</sup>



<sup>a</sup> There was a visible decrease in metabolism in the orbitofrontal cortex following isotretinoin administration in this patient. This patient suffered from headache, was noted by her family and clinician to have disturbed behavior, and dropped out of school. She did not, however, have a clinically significant increase in depression as measured by the Hamilton depression scale.

**Conclusions:** This study suggests that isotretinoin treatment is associated with changes in brain functioning.

*(Am J Psychiatry 2005; 162:983–991)*

# Chronic Administration of *13-Cis*-Retinoic Acid Increases Depression-Related Behavior in Mice



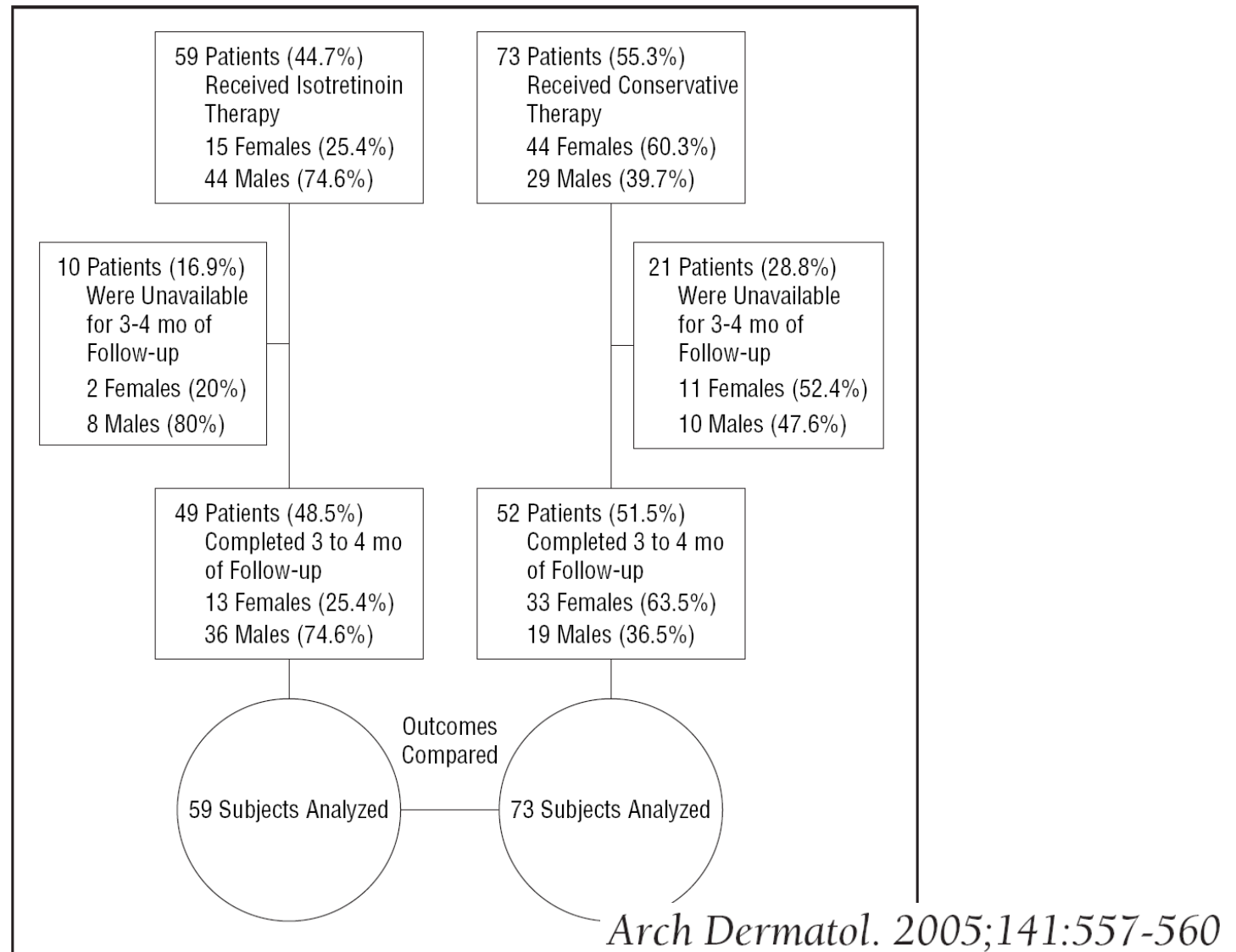
Use of a mouse model allowed us to examine the effects of *13-cis*-RA on depression-related behaviors exclusive of pre-existing conditions, self-image, and other factors that confound human studies. This report is the first to demonstrate that *13-cis*-RA administration enhances depression-related behaviors in mice. The mechanism by which this occurs is yet to be elucidated, although altered neuronal gene regulation and changes in hippocampal neurogenesis are likely to be involved.

*Neuropsychopharmacology* (2006) **31**, 1919–1927

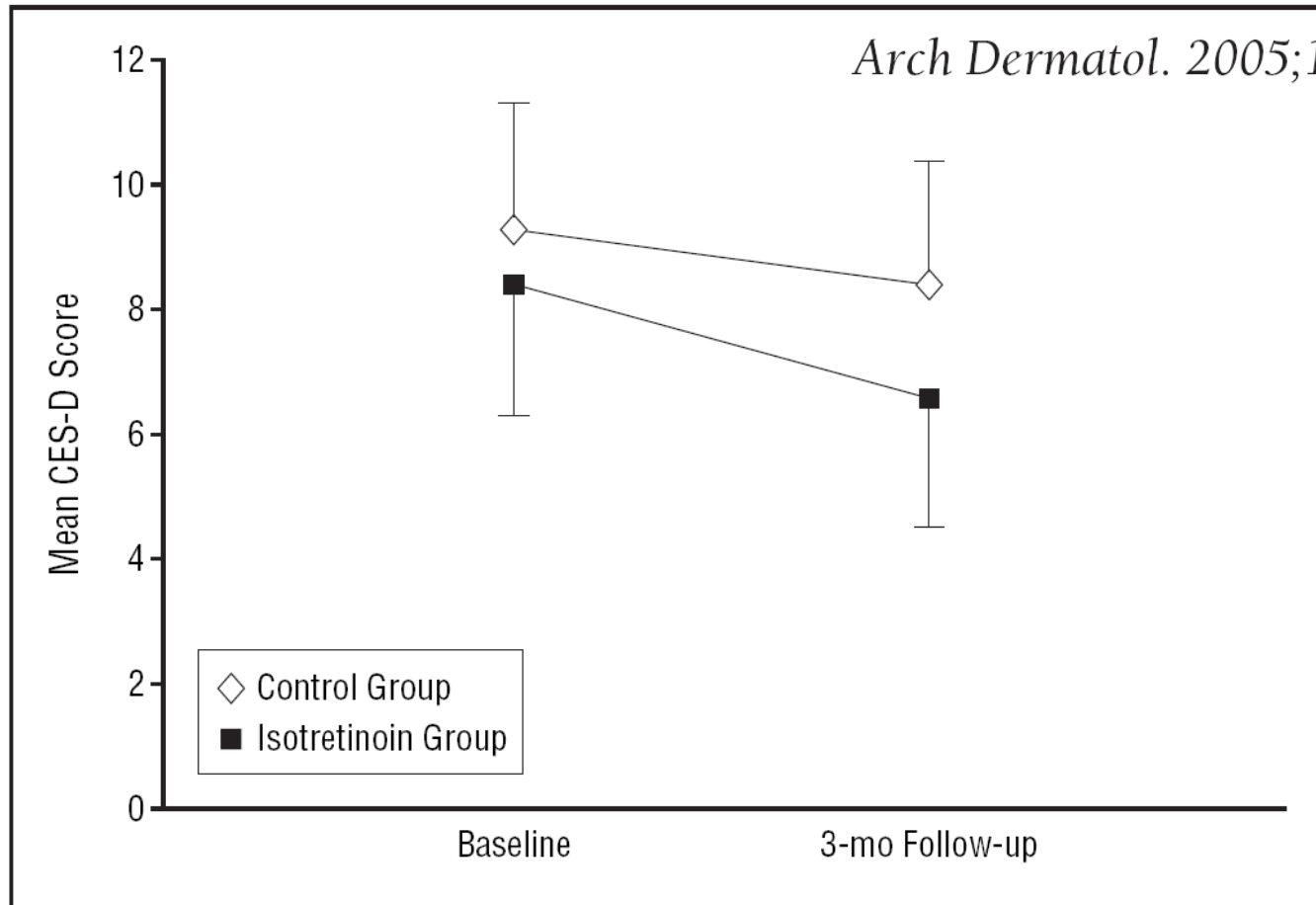
# Isotretinoin Therapy and Mood Changes in Adolescents With Moderate to Severe Acne

*A Cohort Study*

Prospektive,  
kontrollierte Studie



**Figure 1.** Flow of patients through the study period and analysis.



**Figure 2.** Mean Center for Epidemiological Studies Depression Scale (CES-D) scores at baseline and follow-up. The bars show the 95% confidence intervals.

**Conclusions:** The use of isotretinoin in the treatment of moderate-severe acne in adolescents did not increase symptoms of depression. On the contrary, treatment of acne either with conservative therapy or with isotretinoin was associated with a decrease in depressive symptoms.

# Comparison of depression, anxiety and life quality in acne vulgaris patients who were treated with either isotretinoin or topical agents

*International Journal of Dermatology* 2009, **48**, 41–46



( $P < 0.05$ ), and there were no difference between two groups in terms of BDI, HAD-A, HAD-D, and total HAD scores ( $P > 0.05$ ). At the end of fourth month quality of life and all psychological test scores had improved more in the isotretinoin group compared to topical treatment group ( $P < 0.05$ ).



# Editorial – Ist die Verschreibung von Isotretinoin noch vertretbar?

JDDG | 3·2007 (Band 5)

Peter Itin

Aufgrund der aktuellen Datenlage darf aber dennoch gefolgert werden, dass mit Sicherheit weit mehr Suizide durch Isotretinoin verhindert werden konnten, als durch die seltene, aber wahrscheinlich existierende Nebenwirkung einer Depressionsinduktion durch Isotretinoin hervorgerufen wurden.



Prof. Dr. med. Peter Itin

Präsident der Schweizerischen Gesellschaft für Dermatologie und Venerologie

# Somatization: the under-recognized factor in nonspecific eczema. The Hordaland Health Study (HUSK)

M. Klokk,<sup>\*†</sup> S. Stansfeld,<sup>‡</sup> S. Øverland,<sup>§</sup> I. Wilhelmsen,<sup>¶</sup> K.G. Gotestam,<sup>†</sup> S. Steinshamn<sup>†\*\*</sup> and A. Mykletun<sup>§††</sup>

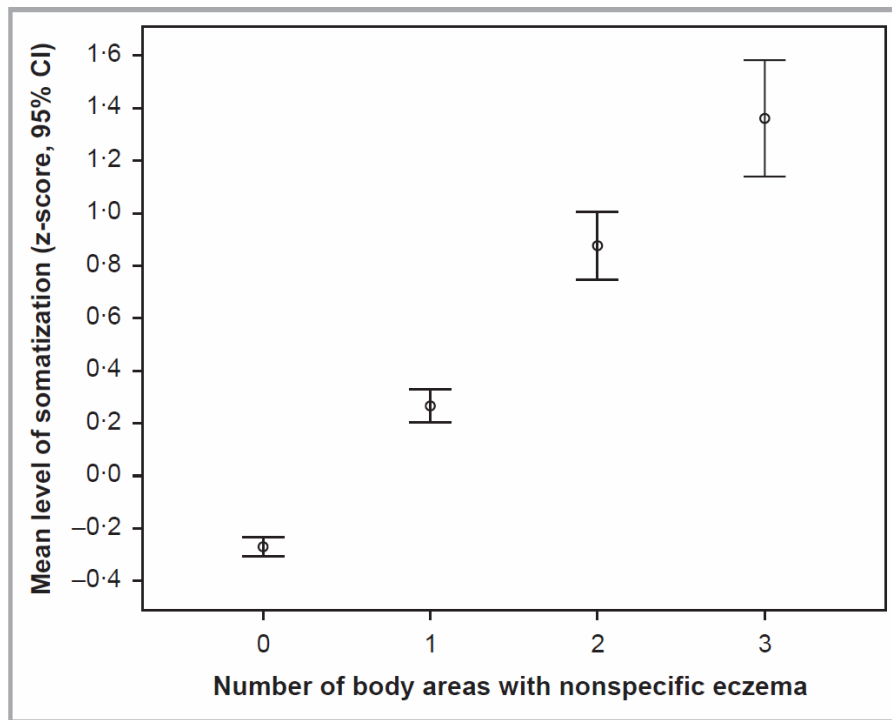


Fig 2. Dose-response relationship between somatization and number of body areas with nonspecific eczema. CI, confidence interval.

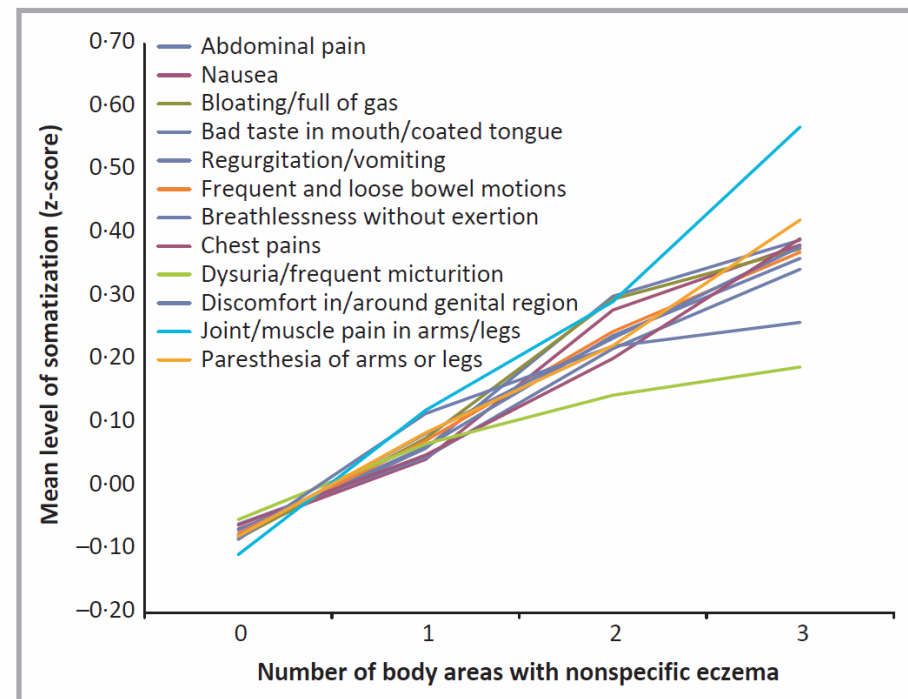


Fig 3. Dose-response relationship between individual somatic symptoms (listed in ICD-10 F45.0 somatization disorder) and number of body areas with nonspecific eczema.

# Well being, psychopathology and coping strategies in psoriasis compared with atopic dermatitis: a controlled study

	Psoriasis ( <i>n</i> = 37)	Atopic dermatitis ( <i>n</i> = 31)
Age of illness onset	33.9 (16.7)	25.8 (21.6)
Duration of illness	16.1 (15)	15.9 (16.9)
SCORAD/PASI	14.9 (12.6)	40.0 (9.2)
Need to scratch	2.57 (3.04)	4.42 (3.07)
CGI	4.2 (1.3)	4.3 (0.9)

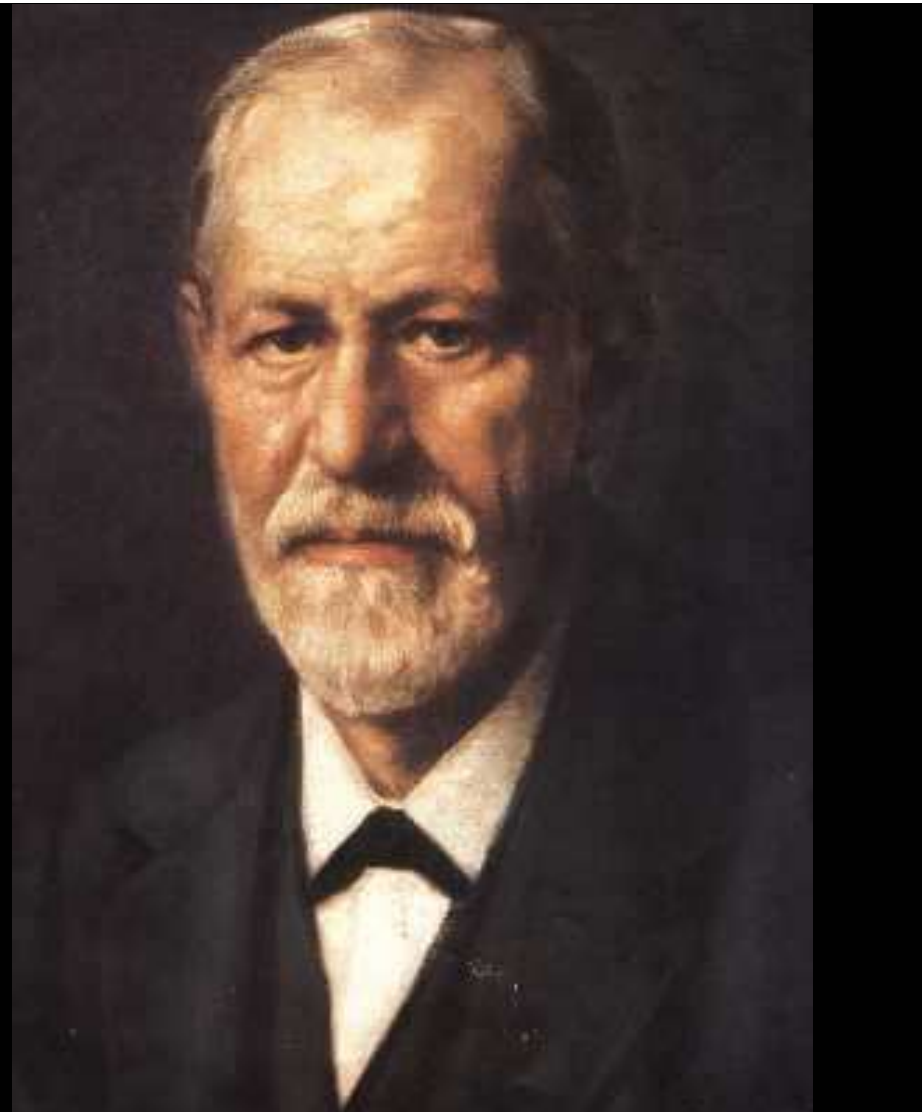
**Results** Psoriatic patients experienced reduced well being ( $P = 0.007$ ) and more anxiety and depression ( $P = 0.018$ ) than normal controls. Psoriatic patients also displayed more severe psychopathology ( $P = 0.039$ ) a more passive attitude towards life, and loss of meaning in life ( $P = 0.001$ ) as measured by the projective technique compared with AD patients and normal controls.

**Conclusions** We propose two explanations, derived from the psychological and the psycho-neuro-immunological domains. First, greater mental distress in psoriasis is because of the greater stigma it bears compared with AD. Alternatively, we hypothesize that the psoriatic inflammatory process may possibly have a direct central nervous system effect.

Der «Hunger» nach taktiler Nähe, nach warmer Umsorgung und Reizvermittlung kennzeichnet die erste Lebensphase des menschlichen Kindes. Der Haut kommt als Kommunikationsorgan hervorragende Bedeutung zu. SIGMUND FREUD



Hungerkrankheiten *R. Battegay*

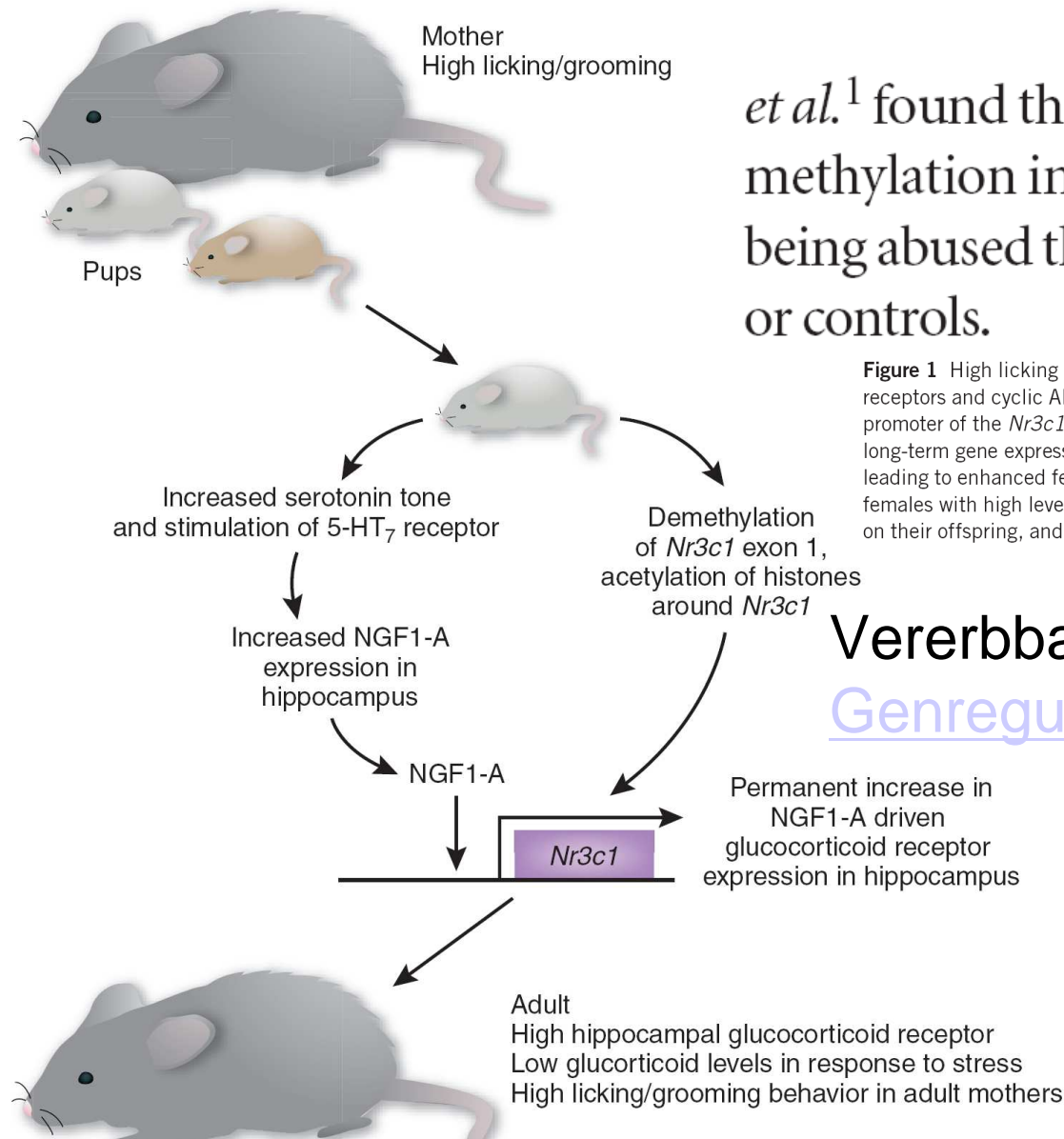


# How adversity gets under the skin

McGowan

*et al.*<sup>1</sup> found that there are lower levels of exon 1<sub>F</sub> methylation in suicide victims with a history of being abused than in nonabused suicide victims or controls.

**Figure 1** High licking and grooming of rat pups increases serotonin tone in the brain. Acting via 5-HT<sub>7</sub> receptors and cyclic AMP, this increases expression of NGF1-A, which binds to and activates the promoter of the *Nr3c1* gene. The pups also show demethylation of the *Nr3c1* promoter, which facilitates long-term gene expression. The result is high levels of hippocampal glucocorticoid receptor expression, leading to enhanced feedback inhibition and thus to low cortisol levels in response to stress. Notably, females with high levels of glucocorticoid receptor expression show high licking and grooming behaviors on their offspring, and thus intergenerational transmission of epigenetic regulation of the *Nr3c1* gene.



Vererbare Änderung der  
Genregulation und Genexpression

# 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**

## 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)	<i>P</i>
Time to death, median days	299	138	< .001
Clarke's level, mean $\pm$ SD	3.52 $\pm$ 0.87	3.84 $\pm$ 0.85	.03
Mitosis	5.68 $\pm$ 7.52	6.06 $\pm$ 8.02	.79
Thickness of primary tumor	2.84 $\pm$ 2.43	3.68 $\pm$ 3.21	.06
Age, years	55 $\pm$ 14	55 $\pm$ 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	

## Baseline psychosocial predictors of survival in localized melanoma<sup>☆</sup>

Final model of baseline psychosocial measures predicting survival time

Cox regression Journal of Psychosomatic Research 63 (2007) 9–15

	Hazard ratio	$P> z $	95% Confidence interval	
Age	1.04	.460	.93	1.17
Gender (M/F)	14.86	.013	1.77	124.67
Breslow (mm)	3.39	.000	1.74	6.60
Anger-in (repression)	1.37	.045	1.01	1.85
Cognitive Escape-Avoidance	.49	.001	.32	.75
Self-perceived QOL	2.88	.033	1.09	7.61
Hopelessness (yes/no)	21.15	.005	2.51	178.09

Anger nonexpression, hopelessness, and overpositive reporting of QOL—all proposed to include in the Type C response style or reflect emotional nonexpression—seem to comprise a set of factors that reduce survival, whereas denial/minimizing response to the diagnosis as such predicts longer survival.



*Die Haut - ein  
psychosomatisches  
Organ*

**Rot vor Wut**  
Blass vor Neid  
Auf der faulen  
Haut liegen

Man kann jemanden  
nicht riechen!



# MHC-dependent mate preferences in humans

CLAUS WEDEKIND<sup>1</sup>, THOMAS SEEBECK<sup>2</sup>, FLORENCE BETTENS<sup>3</sup>  
AND ALEXANDER J. PAEPKE<sup>1</sup>

<sup>1</sup> *Abteilung Verhaltensökologie, Zoologisches Institut, Universität Bern, CH-3032 Hinterkappelen, Switzerland*

<sup>2</sup> *Institut für Allgemeine Mikrobiologie, Universität Bern, Baltzerstrasse 4, CH-3012 Bern, Switzerland*

<sup>3</sup> *Institut für Immunologie und Allergologie, Inselspital Bern, CH-3010 Bern, Switzerland*



*Genetica* 104: 191–197, 1999.

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## Olfactory cues associated with the major histocompatibility complex

Frank Eggert<sup>1</sup>, Wolfgang Müller-Ruchholtz<sup>2</sup> & Roman Ferstl<sup>1</sup>

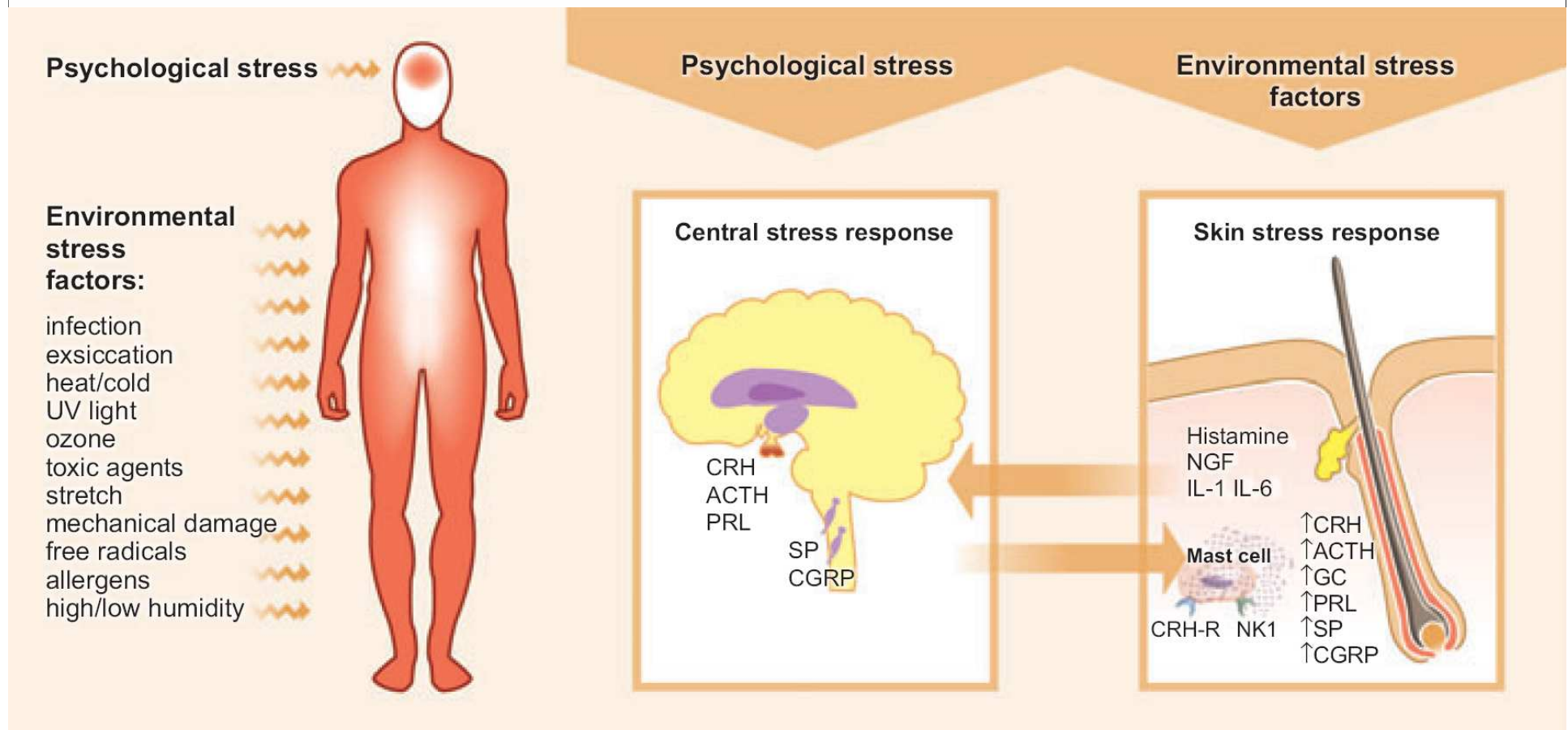
<sup>1</sup>*Department of Psychology, University of Kiel, D-24098 Kiel, Germany;* <sup>2</sup>*Department of Immunology, University of Kiel, D-24098 Kiel, Germany*

*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\*

# Neuroimmunology of Stress: Skin Takes Center Stage

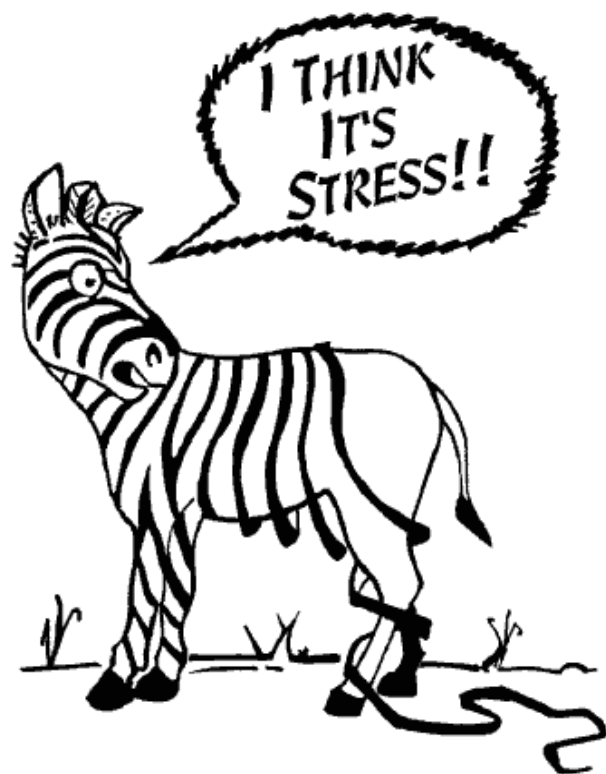


**Figure 1. Brain–skin cross-talk upon exposure to psychological stress or environmental stress factors.**

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.

# Stress-Induced Changes in Skin Barrier Function in Healthy Women



**JID 2001;  
117:309**

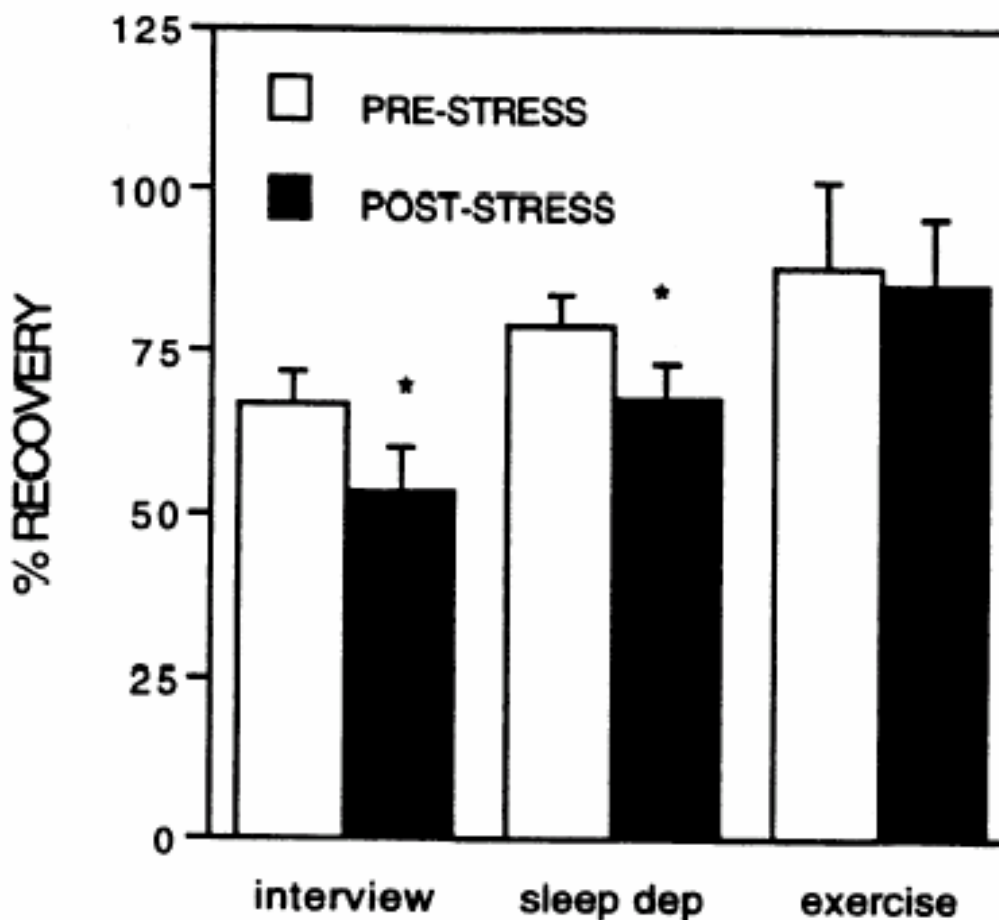
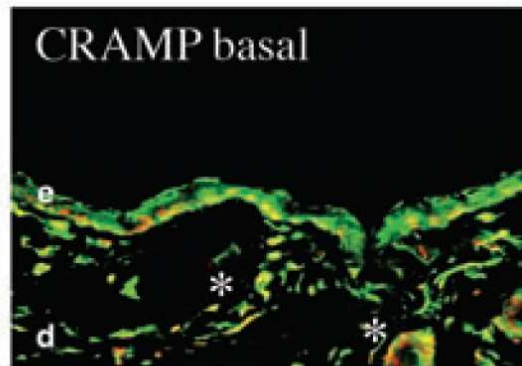


Figure 1. Interview stress and sleep deprivation, but not exercise stress, delayed skin barrier function recovery after tape stripping. \* $p < 0.05$ .

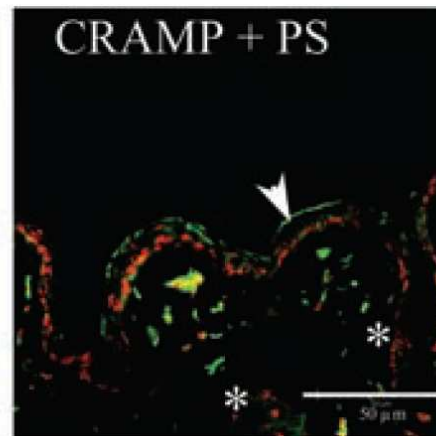
# Psychological stress downregulates epidermal antimicrobial peptide expression and increases severity of cutaneous infections in mice

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-

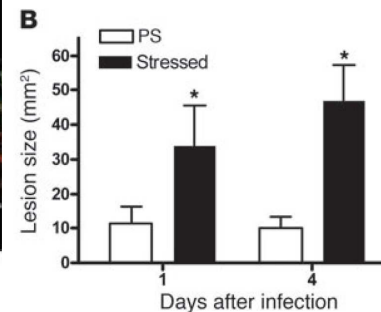
**A** Cathelicidin related AMP ohne Stress



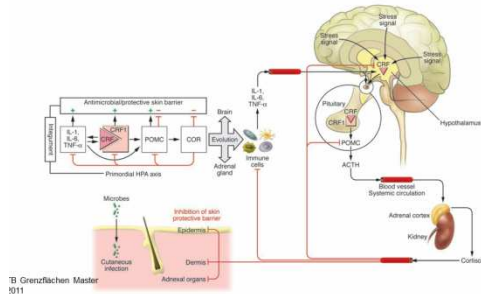
**B**



**A** Unstressed PS

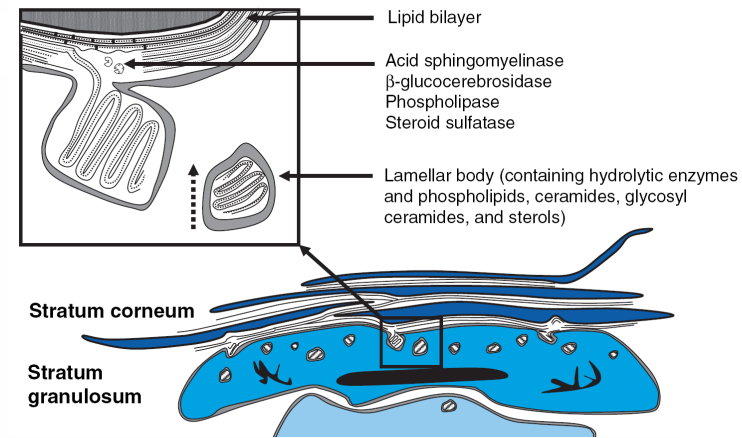


A nervous breakdown in the skin:  
stress and the epidermal barrier

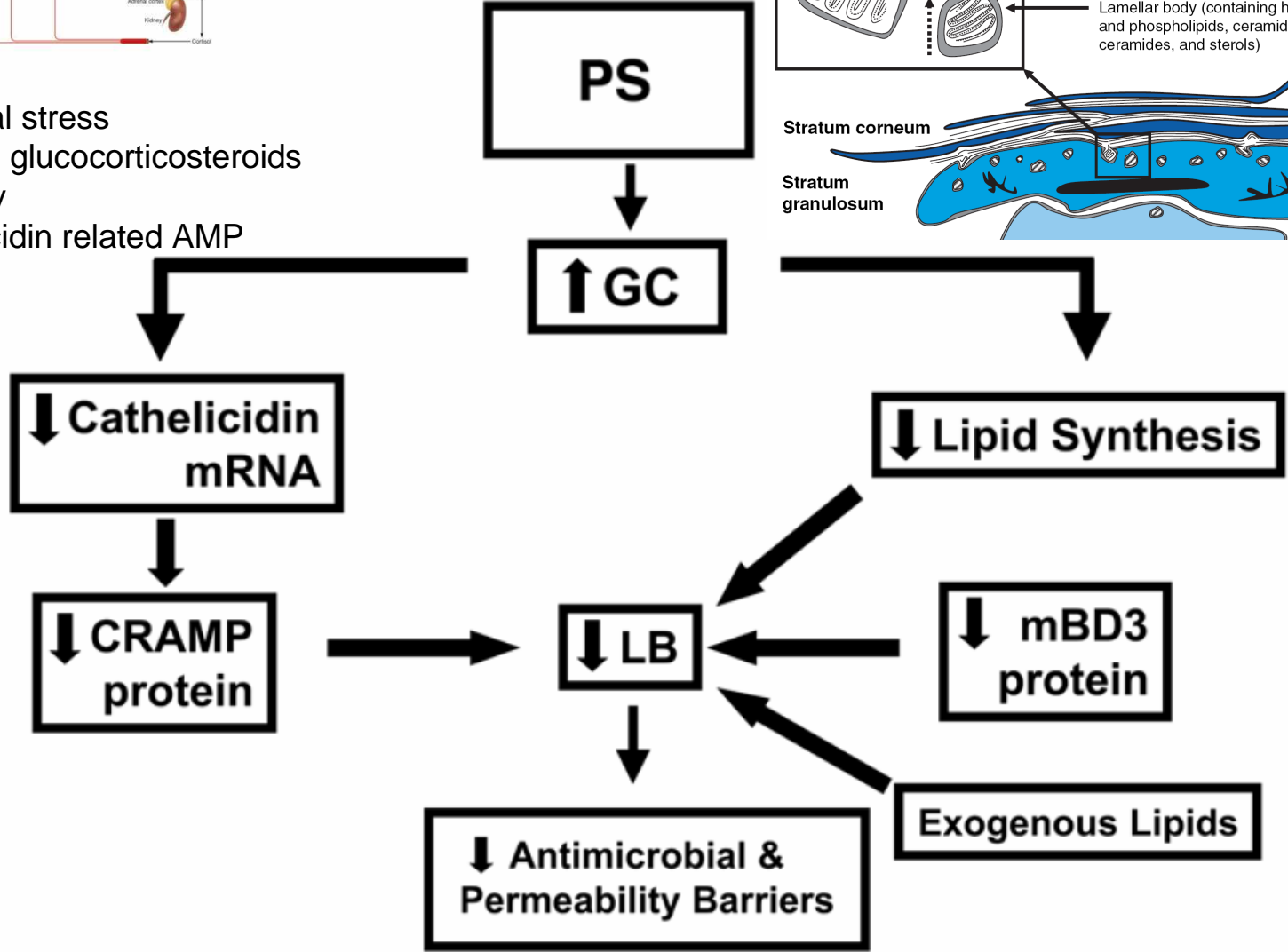


**CELL LIPIDS**

**CELL WATER**

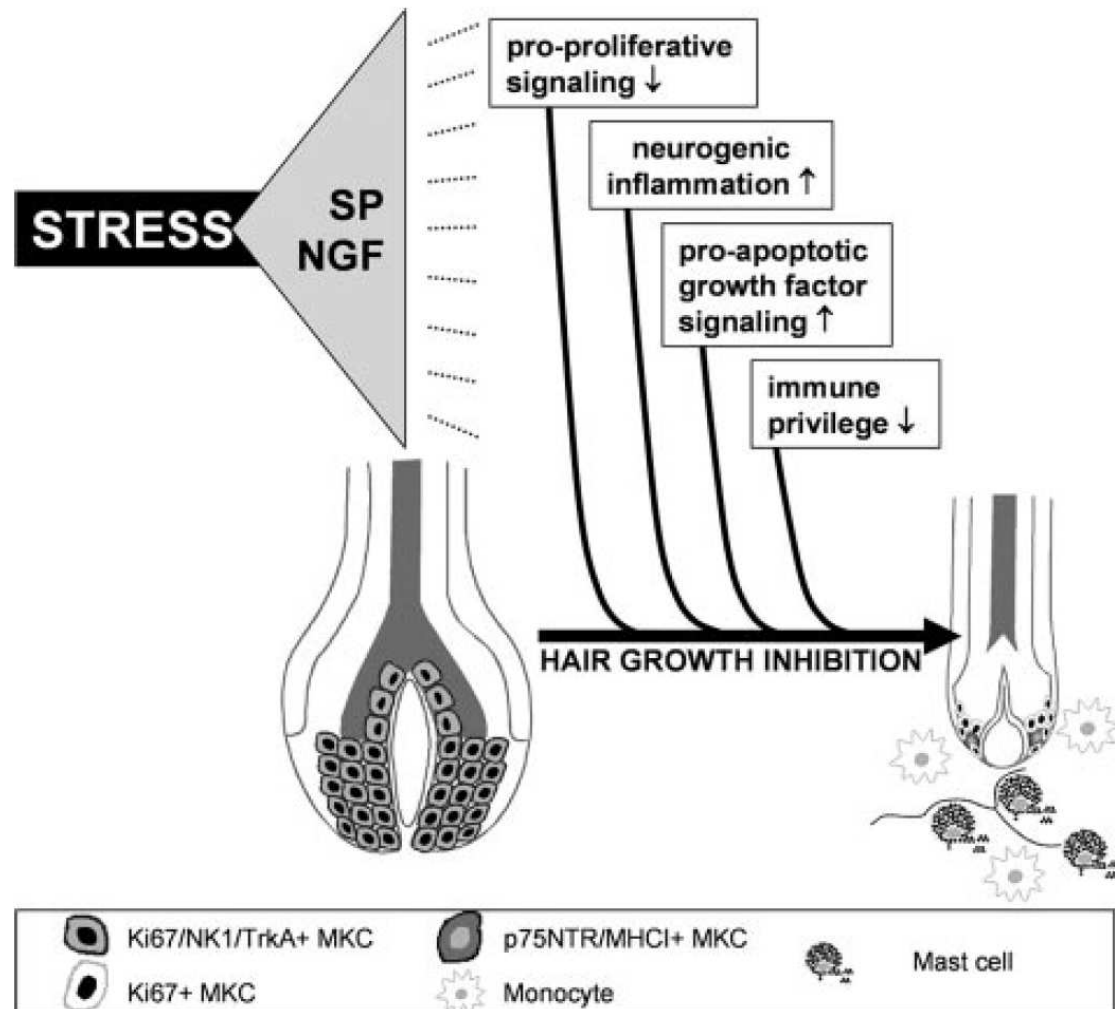


PS=psychological stress  
GC=endogenous glucocorticosteroids  
LB=lamellar body  
CRAMP=cathelicidin related AMP



# 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.

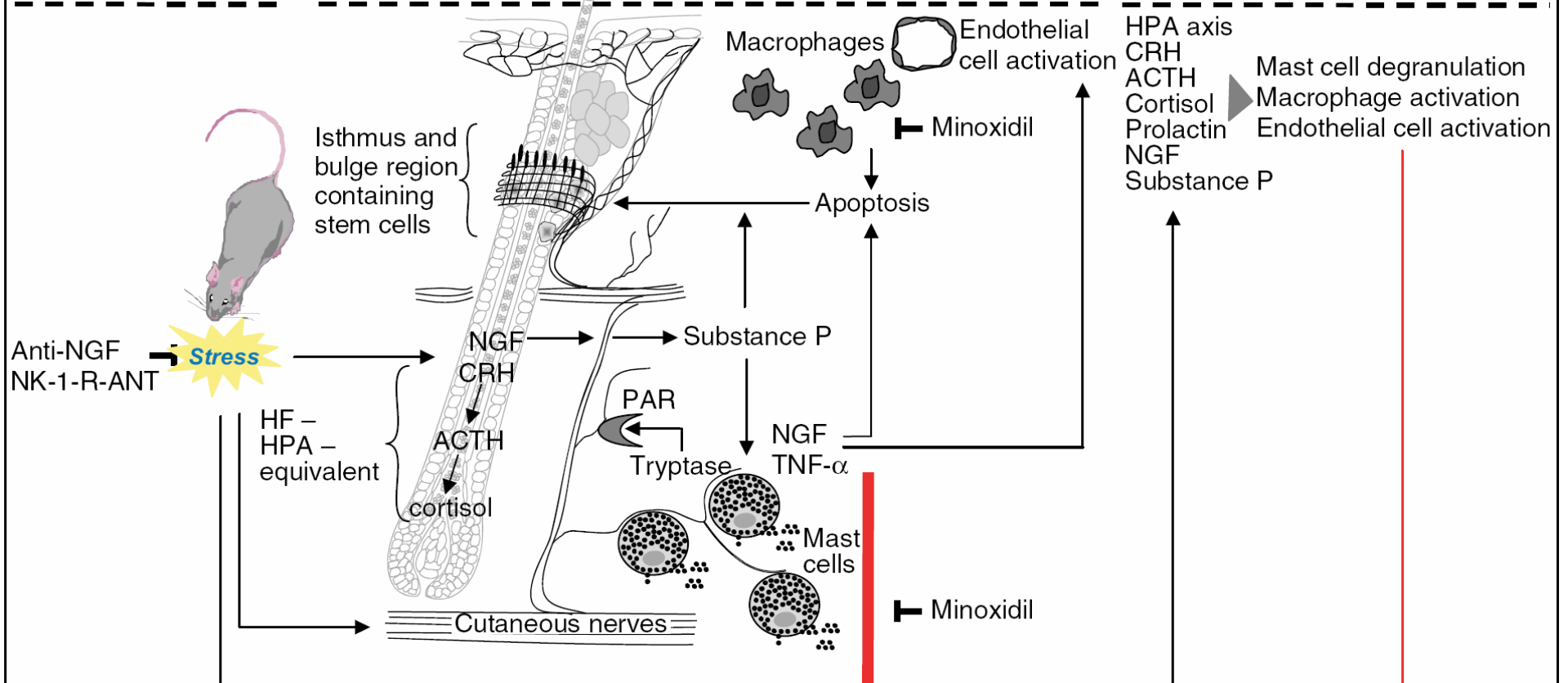


# The 'brain-hair follicle axis' revisited: hair growth inhibition by stress

Threat to individual

Local response at hair follicle

Systemic modulators



→ Stimulates

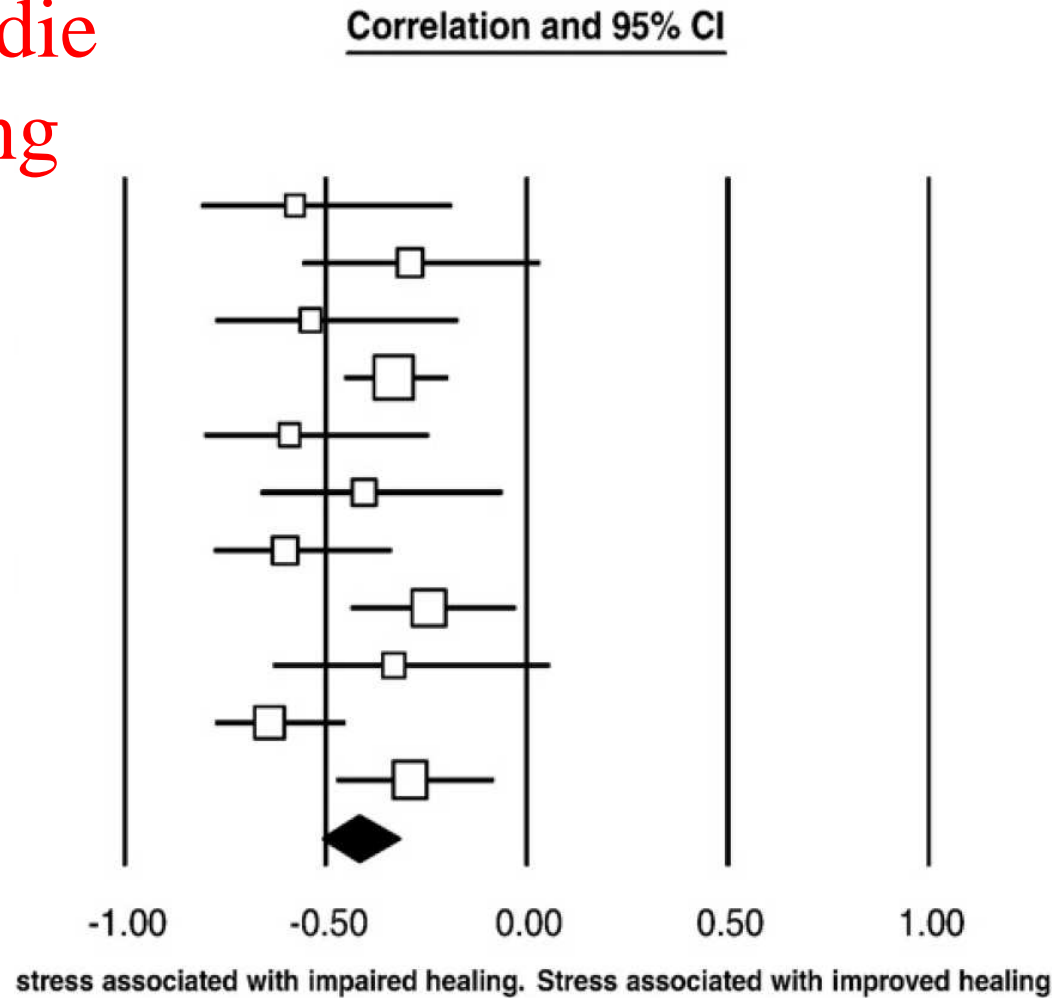
⊥ Inhibits

- Inhibition of hair growth
- Premature termination of hair growth



# Psychological stress and wound healing in humans: A systematic review and meta-analysis<sup>☆</sup>

Stress stört die Wundheilung



# Einstellung zur Hautbräunung in der Bevölkerung

■ Tan is main aim    
 ■ Like a tan but not the main aim    
 ■ Tan is not an aim    
 ■ Avoid getting a tan

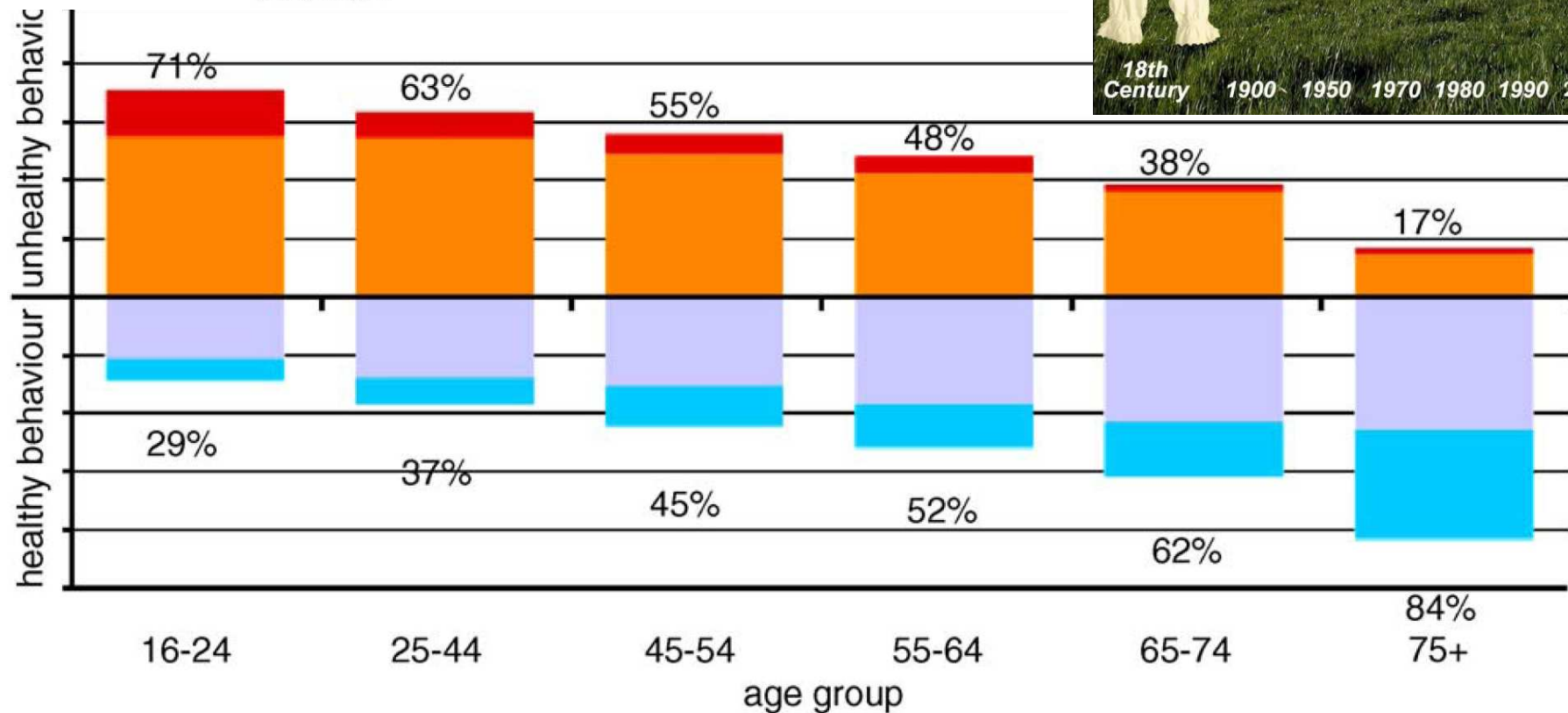


Fig. 1. Seventy percent of 16–24 year olds aim to get a tan on holiday (SunSmart ONS data 2004).

# A sex difference in facial contrast and its exaggeration by cosmetics

Perception, 2009, volume 38, pages 1211 – 1219

## Was macht ein Gesicht weiblich?



**Figure 4.** Variant of the Illusion of Sex. The face on the left appears male, while the face on the right appears female. Both images were produced by making slight alterations to the same original image. The eyes and lips were lightened to produce the left image, and darkened to produce the right image. The rest of the face was unaltered, and hence equally dark in both images. That decreasing or increasing facial contrast is sufficient to make a face appear male or female indicates that facial contrast plays a role in the perception of facial gender.

Gesicht und Sexualität

# 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) poisoning in Victor Yushchenko: identification and measurement of TCDD metabolites

*Lancet 2009; 374: 1179-85*

*O Sorg, M Zennegg, P Schmid, R Fedosyuk, R Valikhnovskiy, O Gaide, V Kniazevych, J-H Saurat*



**Figure 2:** Photographs of Victor Yushchenko before poisoning (A), and 3 months (B) and 3.5 years (C) after poisoning with 2,3,7,8-tetrachlorodibenzo-p-dioxin

**Haut – kriminelle Politatten**