



Link between

Positive Psychotherapy & Allergic Disease

from diagnosis to therapy



Allergic Diseases is a Global Public Health Issue

The prevalence of allergic diseases worldwide is rising dramatically in all countries.





❖ Allergy affect **up to 35%** of the world's population.
(WHO Report 2014)

- ❖ Asthma
- ❖ Rhinitis (hay fever)
- ❖ Atopic dermatitis
- ❖ Food allergy
- ❖ Drug allergy
- ❖ Insect Allergy



Food Allergy

Globally, 220 – 250 million people may suffer from food allergy.

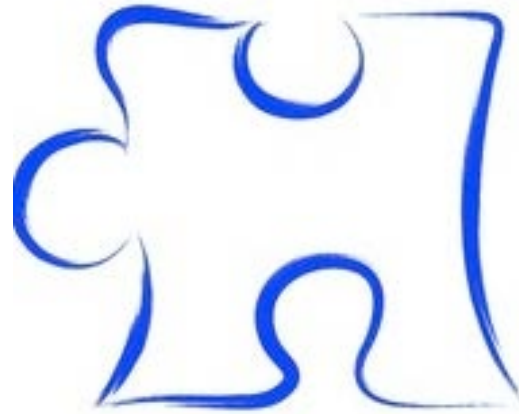
Allergy to Drugs

Adverse drug reactions (ADR) may affect up to **1/10 of the world's population** and affect up to 20% of all hospitalized patients



Groups involved in allergy research:

- Biologist:
 - Molecular Biologist
 - Biotechnologist
 - Immunologist
- Nutritionists
- Biochemist
- Chemist
- Medical Doctors
- few Psychiatrists



... Allergy diagnosis & therapy is still puzzeling ...

داستان فیل در تاریکی

مولانا

مثنوی معنوی



A Holistic Approach



ابوعلی سینا

دپزشک دودفیلسوفی دجامع دگرا



A Holistic Approach

A Holistic Approach towards Positive Psychotherapy





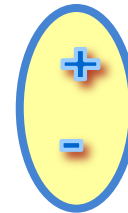
Three Principles of Positive Psychotherapy

1. Principle of Hope:
Positive Approach
2. Principle of Consultation:
Five Steps Model
3. Principle of Balance:
Balance Model

❖ The principle of hope

Understanding the Problems
Their Positive Aspects

Positive = Positum



PPT Five Stages for Allergy

The five stages of Positive Psychotherapy help to find a way to go from the allergy disease itself to ways of understanding & dealing with it

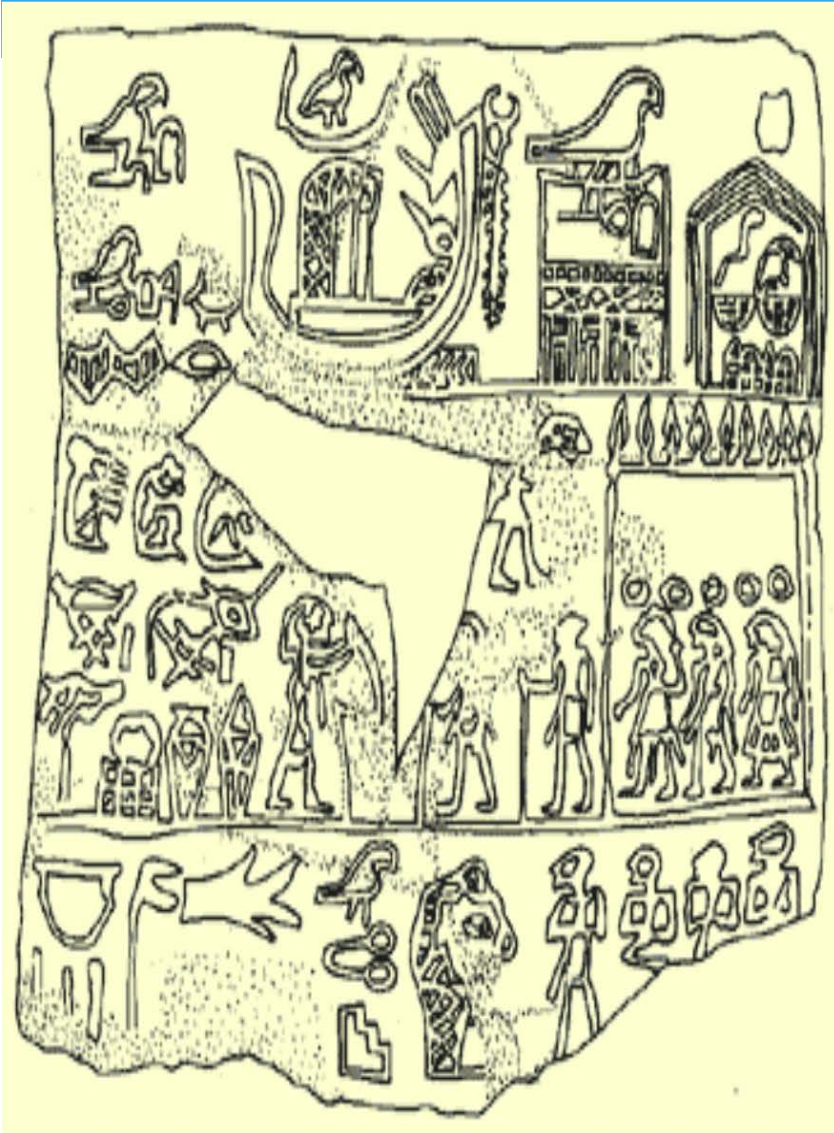


Five Steps Model of Positive Psychotherapy

1st Step: Observation and 2nd Step: Inventarisation

Allergy ?





The first recorded death from allergy was Pharaoh Menes of Egypt, who died of a wasp sting in 2641 B.C.

(according to the hieroglyphs in his tomb)

In **1906** Clement **von Pirquet** , along with Bela **Schick**, coined the word **allergy** (from the Greek **allos** meaning "**other**" and **ergon** meaning "**reaction**") to describe this hypersensitivity reaction



- ❖ Allergy is caused when the immune system reacts to a harmless substance by producing Immunglobulin E (IgE) antibodies.



IgE stimulate cells to release histamine and other mediator, causing an allergic reaction.

Dust

Pollen

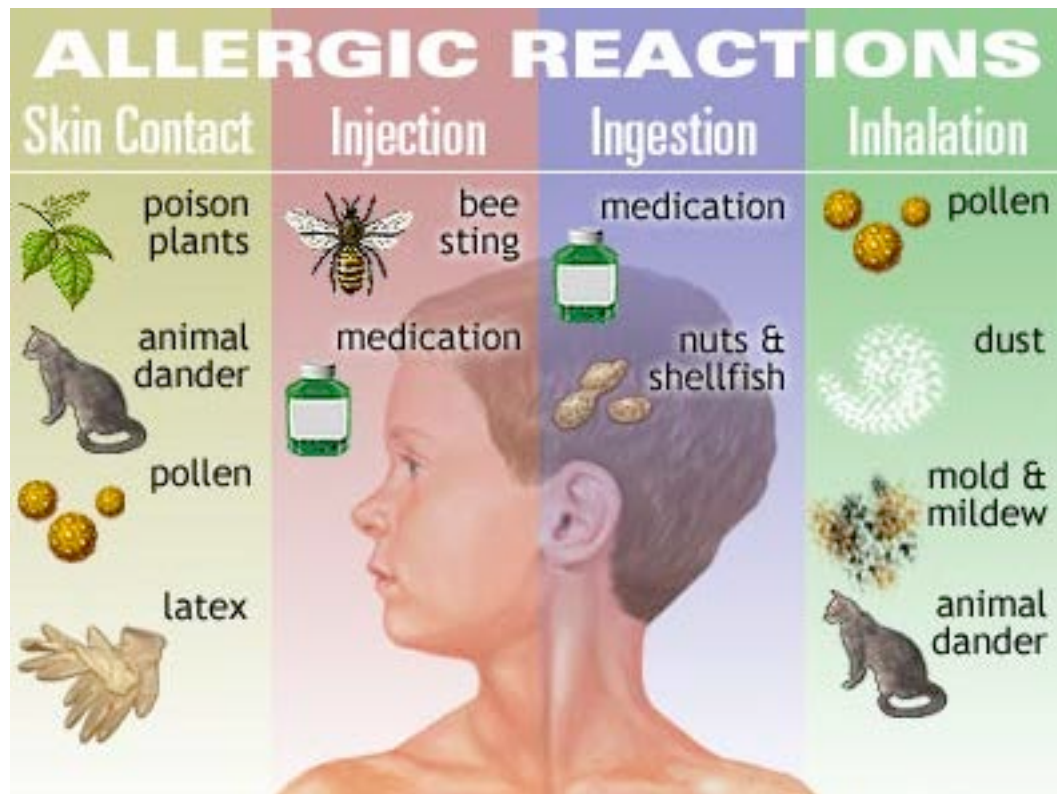
Grasses

Pet dander

Allergen sources



... it is possible to be allergic to anything





Scientists are beginning to understand what tips the balance in favour of Allergy

3 factors have been suggested to be important for triggering allergy:

Genetic Disposition

Hygiene Hypothesis

Dietary Hypothesis



Genetic factors

- ❖ **Disposition to Atopy:** production of high level IgE in response to allergens
- ❖ **Disposition to Expression of Atopic Phenotype** in a particular organ. As example atopic dermatitis (Eczema)

The biodiversity hypothesis and allergic disease:
world allergy organization position statement

Tari Haahtela^{1*}, Stephen Holgate², Ruby Pawankar³, Cezmi A Akdis⁴, Suwat Benjaponpitak⁵, Luis Caraballo⁶, Jeffrey Demain⁷, Jay Portnoy⁸, Leena von Hertzen¹, and WAO Special Committee on Climate Change and Biodiversity



Hygiene Hypothesis

- ❖ Low exposure to pathogens during childhood is assumed to be a reason for the increasing of allergic diseases in industrialized countries

H. Okada et. al ; Clin Exp Immunol. Apr 2010

The increased prevalence of allergy and the hygiene hypothesis: missing immune deviation, reduced immune suppression, or both?



Dietary Hypotheses

- ❖ Association between nutrient and food intake and the development of allergy

***Nutrients and Foods for the Primary Prevention of Asthma and Allergy:
Systematic Review and Meta-analysis***

Jessica Savage and Corinne Keet

Pediatrics 2011;128;S98

DOI: 10.1542/peds.2011-2107J

Th1 and Th2 cell imbalance in disease



1986 – Th1 vs Th2 model of T helper cell function (Mosmann & Coffman)



Five Steps Model of Positive Psychotherapy

3rd Step: Situational encouragement

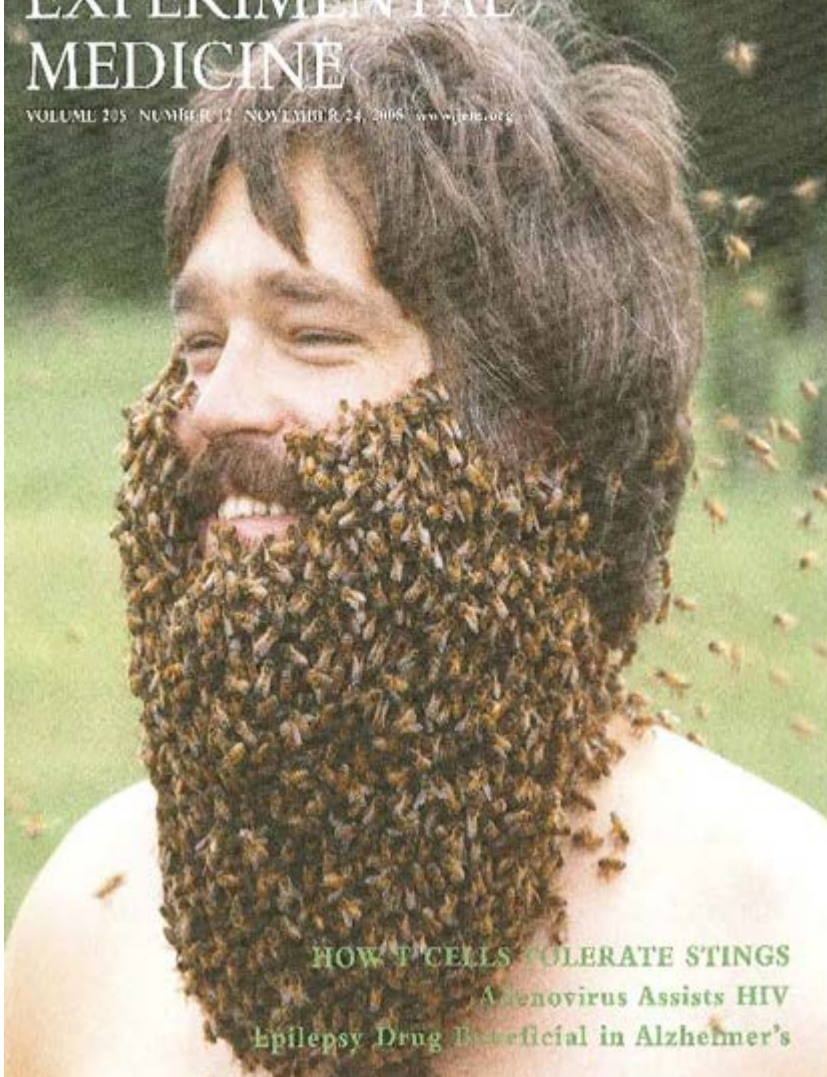
Human resources

Self help of Immunsystem

Immune Tolerance

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HOW T CELLS TOLERATE STINGS
Adenovirus Assists HIV
Epilepsy Drug Beneficial in Alzheimer's

Beekeepers show way to allergen tolerance

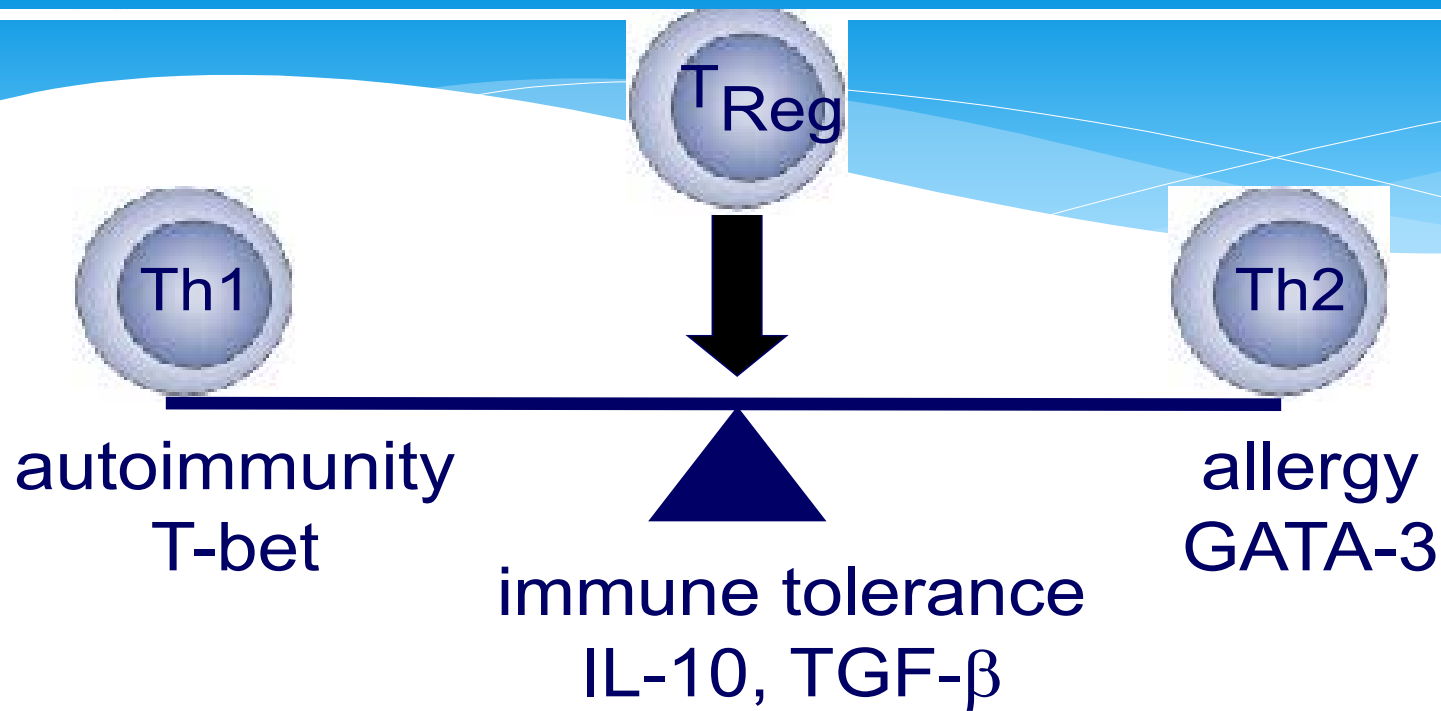
The Journal of Experimental Medicine,
November 10, 2008
Nicole LeBrasseur

Nature Reviews Immunology

Beekeepers hold clues for T-cell tolerance, By Sarah
Allan

New Scientist A sting a day

18 November 2008 by Ewen Callaway



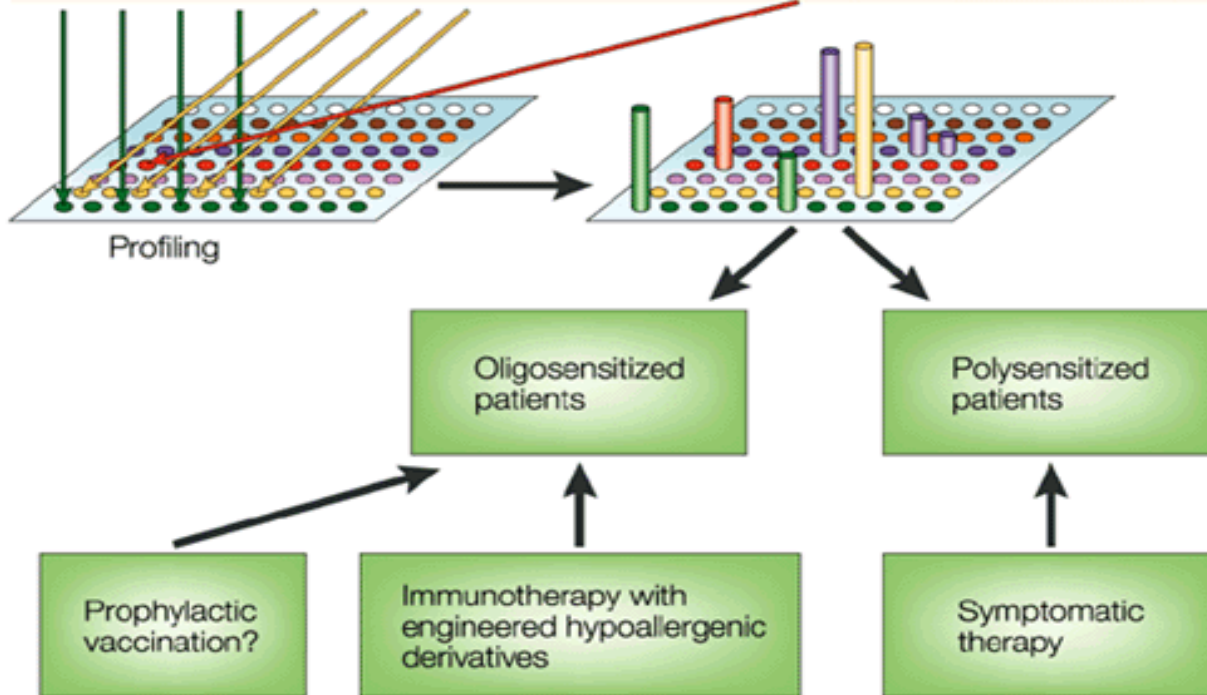
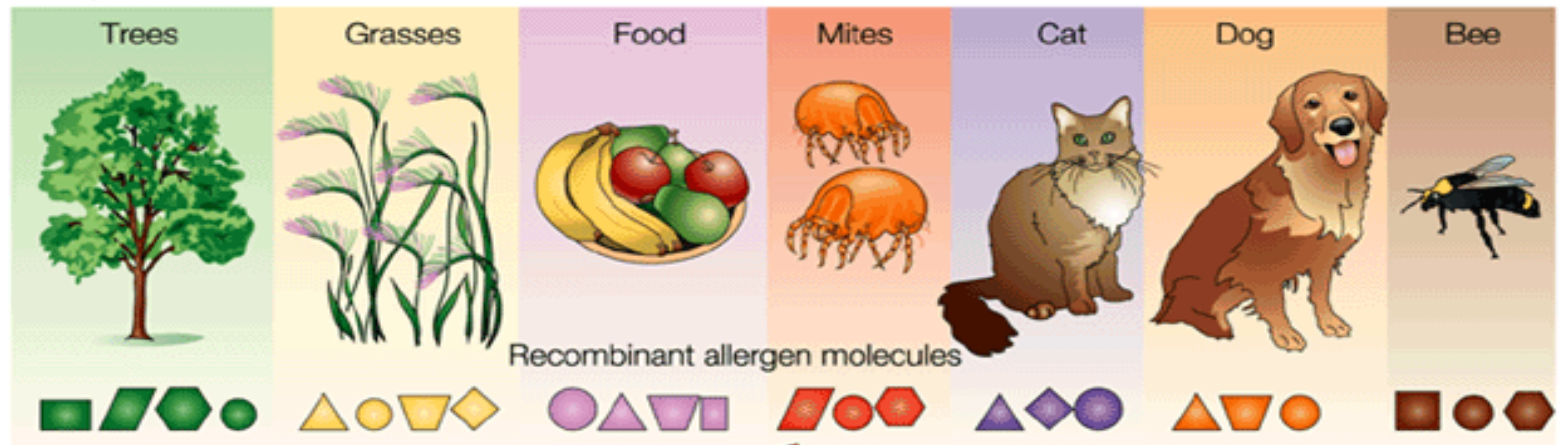
Prevention of allergy by a recombinant multi-allergen vaccine with reduced IgE binding and preserved T cell epitopes

Fariba Karamloo¹, Peter Schmid-Grendelmeier^{1,2}, Fatimah Kussebi¹, Mübeccel Akdis¹, Maria Salagianni³, Barbara R. von Beust², Andrea Reimers⁴, Judith Zumkehr¹, Lyudmilla Soldatova⁵, Zora Housley-Markovic⁵, Ulrich Müller⁴, Thomas Kündig², David M. Kemeny³, Michael D. Spangfort⁷, Kurt Blaser¹ and Cezmi A. Akdis¹

Epitope-specific T Cell Tolerance to Phospholipase A₂ in Bee Venom Immunotherapy and Recovery by IL-2 and IL-15 In Vitro

Cezmi A. Akdis,* Mübeccel Akdis,* Thorsten Blesken,* Daniel Wymann,* Sefik S. Alkan,‡ Ulrich Müller,§ and Kurt Blaser*

Allergen sources




Allergen Products available in Germany



Five Steps Model of Positive Psychotherapy

4th Step: Verbalization

Asthma and allergic disorders are common, important & expensive

- 
- ❖ **Immunotherapy (Desensitization)** Current immunotherapy treatments are limited because of potential allergic reactions; can be severe rarely.
 - ❖ This approach is **effective in some people for some allergies**, but in many it does not work, especially by food allergies
 - ❖ In most **controlled clinical trials** a high placebo effect is observed as compared to the treatment arm
 - ❖ Thus, **cure of Allergy** disease is currently very limited



❖ **Interestingly,**

Very recently scientists suggest **more direct links** between psychological stress, immunity & allergy

Psychodermatology: An Overview

Argentina Leon, MD,* Ethan C. Levin, MD,* and John Y.M. Koo, MD†

- ❖ **Atopic dermatitis** is one example, where clinical occurrence is often associated with psychological stress
- ❖ One third of dermatological patient have significant psychological issue in connection with their skin complaint
- ❖ The second examples include **asthma & anaphylactic reaction**

Intervention models on psycho-social health in families with an asthmatic child

Gustafsson D, Olofsson N, Andersson F, Lindberg B, Schollin J. Intervention models on psycho-social health in families with an asthmatic child. *Pediatr Allergy Immunol* 2000; 11: 241–245. © Munksgaard, 2000

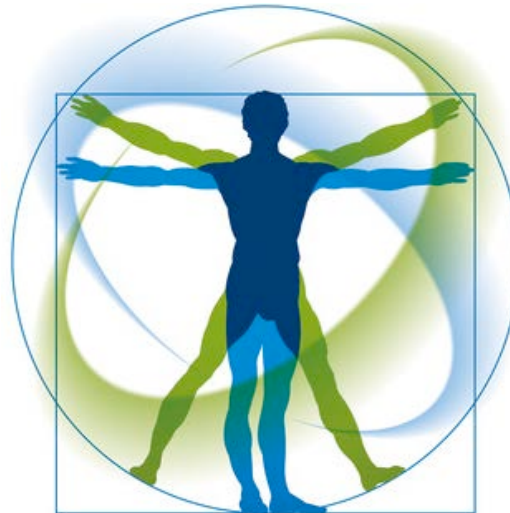
Dan Gustafsson¹, Niclas Olofsson², Florence Andersson¹, Berit Lindberg¹ and Jens Schollin¹
¹Department of Paediatrics, Örebro Medical Center Hospital, Örebro, ²Institution of Social

Psychoneuroimmunology of Psychological Stress and Atopic Dermatitis: Pathophysiologic and Therapeutic Updates

Andrea L. SUÁREZ¹, Jamison D. FERAMISCO², John KOO³ and Martin STEINHOFF²
¹Department of Dermatology, University of Colorado Denver, School of Medicine, Aurora, ²Departments of Dermatology and Surgery, and ³Psoriasis and Skin Treatment Center, University of California, San Francisco, USA

Psychoneuroimmunology & clinical allergology

indicate a need of holistic approaches that integrate
psyche of humans



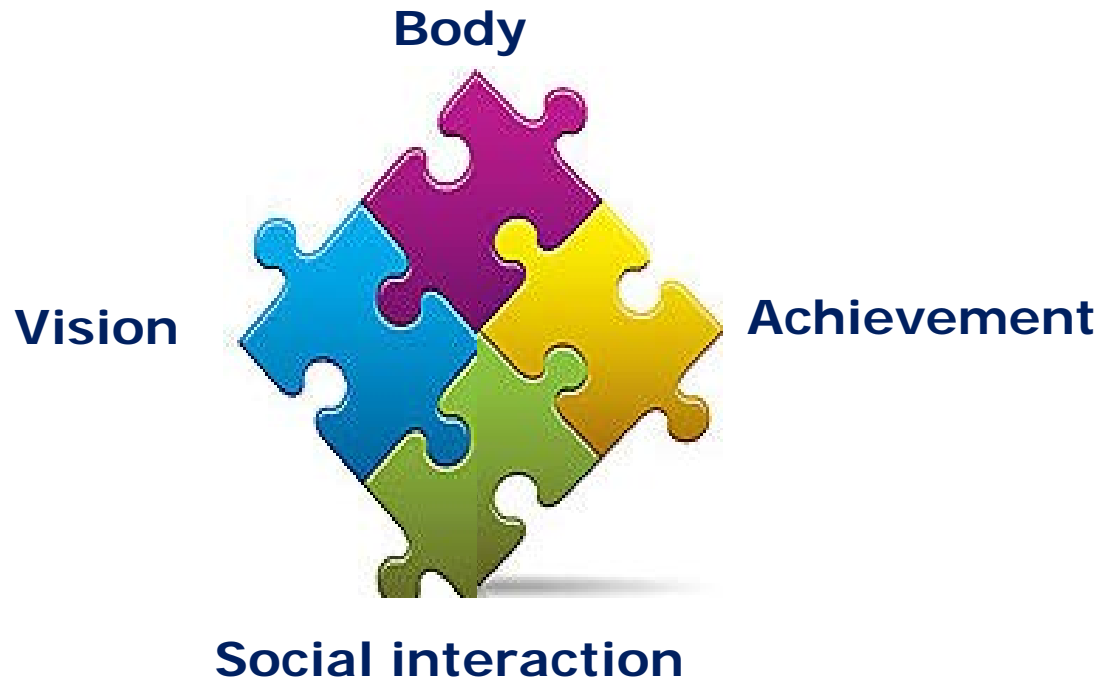
Five Steps Model of Positive Psychotherapy

5th Step: Expansion of goals

A life without Allergy



Balance Model of Positive Psychotherapy



Applying the **Balance Model** to the **Field of Allergy**



Balance Model for the Field of Allergy



Body of the Allergy Field as a system



- Characterization of allergens
- Mechanisms of allergy disorders
- Mechanisms of healthy immune response
- Genetic & Environment Factors



Achievement of the Field as a system

**Allergy treatments
(diagnosis and therapy)**



Achievement

Social interaction of the Allergy Field as a system

Interdisciplinary cooperation

- ❖ Medical Practitioner
- ❖ Psychotherapist & Psychiatrists
- ❖ Medical & Basic Scientist
- ❖ Pharmaceutical industry



Social
interaction



Future goal of the Allergy Field as a system

"The whole is greater than the sum of its parts."

Aristotle



A life without allergy

**Through a Holistic view of person :
Body, mind, Social, culture**

Future goal



currently situation in the **Field of Allergy**

Allergens, Immunsystem

Holistic view of man



Treatment

Interdisciplinary cooperation

Balance Model in the Field of Allergy

Allergens, Immunsystem

Holistic view of man



Treatment

Interdisciplinary cooperation

Conclusion

- ❖ This novel approach represents a **framework** in which biomedical and psychological methods can work & cooperate together and develop each other mutually to overcome allergy disease & reactions.

