

Skin Health Surveillance: Making it effective and beneficial

Helen Taylor

EnviroDerm Services



Skin Health Surveillance: Making it effective and beneficial

- Why do skin health surveillance
- Key available methods
 - Questionnaires
 - Visual assessment
 - Skin condition measurement
- How can it be used
- Building effective systems



Why Bother?

- For a complete skin management system
- Our 'Early warning'
- Regulatory requirements
- Economic implications
- Social effects



Key Methods

- Questionnaires
- Visual Assessment
- Skin Condition Measurement



Why a questionnaire is important

- To gain background information
- To provide information in a structured manner for analysis
- To ensure that all aspects are covered
- To ensure compliance with the regulations
- To raise awareness
- To help decide if a problem is occupational or not
- Gives time for acclimatisation and relaxation of the test subject



When to use a questionnaire

- Every time a skin health assessment is made
- When carrying out pre-placement assessment
- For skin health surveillance and monitoring

More than one questionnaire may be needed



Information in a questionnaire

- Name
- Occupation
- Age
- Male/female
- Right or left handed
- Description of work done
- Use of personal protective equipment
- Frequency of PPE use
- Frequency of chemical contact
- Skin Problems – current or previous
- Allergies?
- Medically Confirmed?



Information in a questionnaire

- Use of moisturiser
- Frequency of moisturiser use
- Skin care and cosmetic products used
- Housework??
- Dishwasher??
- Gloves for housework??
- Gloves at any other time??
- Hobbies
- Other non work activities
- Second job?



Suggested uses of the information

- To advise an individual
- To distinguish between occupational and non-occupational skin problems
- In management reports (e.g. to support the need for action)
- Identifying system weaknesses so that they can be addressed
- To provide supporting data for medical referral



Visual Assessment

- Visual and tactile examination of the skin
- Scoring system
 - Osnabrück scoring system
 - Simple scoring systems
- Comparison chart



Osnabrueck Scoring System

- Six morphological signs of hand eczema
 - Erythema
 - Scaling
 - Papules
 - Vesicles
 - Infiltration
 - Fissuring
- Each given a score
- Scores are added for final score

UNIVERSITÄT OSNABRÜCK

D. Gollig, M. Coker, U. Pehri, K. C. Assi, S. N. Jahn, A. Harnow
Hand Eczema Severity Index
— A study of the Osnabrueck Hand Eczema Severity Index
Contact Dermatitis, 2020; 83: 442-47

OHSI
Osnabrueck Hand Eczema Severity Index
zur klinischen Beurteilung der Schwere von Handekzemen

<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>
Erythem		Schuppung		Papule		Vesikel		Infiltration		Rhagade
[0-3]		[0-3]		[0-3]		[0-3]		[0-3]		[0-3]

Funktion der Hände / Hände zusammen
(Maximal 8 Punkte)

Definition der Hautveränderungen

Erythem: Rötung (als unscharfe oder abgegrenzte) im Hautverlauf, lokal oder auf dem Boden einer Infiltration oder Papell.

Schuppung: Rötungsfeld mit mäßiger Abschilferung der Hornzellen.

Papule: Oberflächliche unscharfe Erhabenheit von 1 mm bis 5 mm im Durchmesser.

Vesikel: Bis zitronengroße, abkammige Bläschen mit klarer, seröser, gelegentlich bläulich gelber Inhalt. (Detail = Sonderfall eines Vesikels mit eitrigen Inhalt).

Infiltration: Großflächige ein- oder mehrfache Verdickung der Haut.

Rhagade: Spaltförmige Hautrisse.
Definitionen: Keine < 5 mm / grau < 5 mm / hoch / unheilbar / hoch blutend.

Simple Scoring technique

- Look at the individuals skin
- Assign their skin a score based on the scoring system being used

Score	Details	
0	Skin looks normal	
1	1 of	Dryness, Redness, discolouration, thickening, cracking, flaking, blisters, open sores, bleeding, infection
2	2 of	
3	3 of	
4	4 of	
5	5 or more of	

Visual Assessment



Quick

Inexpensive

Can be done 'on-site'

Valid for all visible skin conditions



Subjective, no quantitative data

Requires experience/training

May not indicate sub-clinical damage

Surface conditions do not always correlate with conditions in the skin



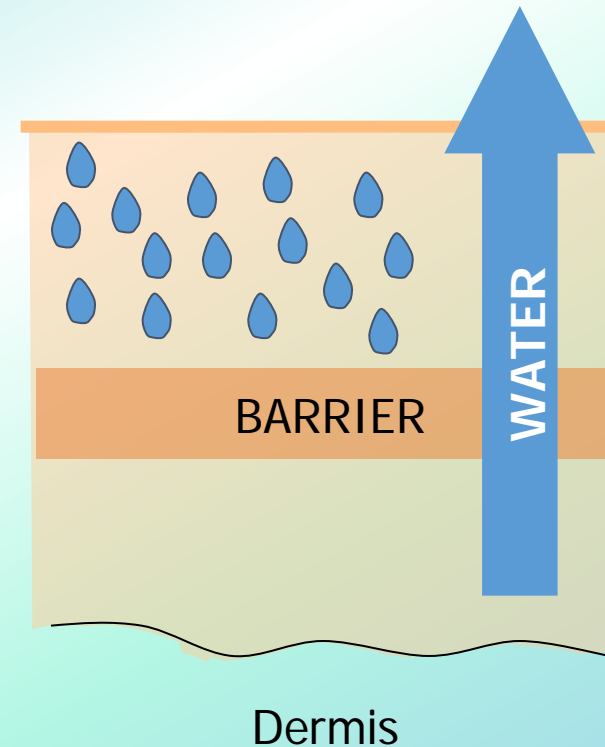
Skin Condition Assessment

- Uses scientific equipment to measure skin parameters
- Different parameters build a picture of the condition of the skin
 - Transepidermal water loss
 - Skin hydration
 - Skin colour/pigmentation
 - pH



Important parameters

- Transepidermal Water Loss (TEWL)
 - Barrier function
- Skin Hydration
- Skin Colour (erythema)
 - Quantify rash
- Skin pH
 - Microorganism barrier



Skin Condition Assessment



Non-invasive

Simple measurement methods

Quantitative data

May indicate sub-clinical damage

Can build a picture of skin condition



Only valid for certain skin conditions

Measurements can't be made everywhere



How can it be used?

- Pre-placement assessment
- Identifying problem areas
- Health surveillance/monitoring
- Assessing intervention
- Investigating a problem



Setting up a skin health surveillance system

- Decide which techniques are relevant for your organisation
- Decide how you will use the techniques
- Set out what you will do and when



Increasing Resources: The importance of responsible people

- Only brief training required
- More frequent skin checks
- Non health and safety qualified personnel
 - Line manager
 - First aider
- Report those with problems
- Advise to seek assistance



Skin Health Surveillance System

- Involve colleagues to improve resources
- Set up a system including
 - Questionnaire
 - Visual assessment
 - Skin condition measurement
- Ensure regular monitoring of all employees
 - The frequency will depend on your organisation, the work carried out, and the number of employees
 - The more frequent the better particularly where exposure is to irritant chemicals or work situations



Case Study One: Engineers travelling around different locations

- Regional manager has regular meeting with each engineer (at least once per month)
- Regional managers were trained as responsible person
 - Questionnaires
 - Visual assessment
 - Skin condition measurements (hydration)
- Initially skin check & measurements made every 3 months
- Questionnaires with visual assessment results and skin condition measurements returned to health and safety team
- Results tracked any skin problems or decline in skin condition triggered input by health and safety team



Case Study Two: Engineering/Manufacturing site

- Annual health check conducted by occupational health service
- Monthly skin check conducted by responsible person
 - Simple yes or no skin check
- Those with 'skin problem' referred to health and safety department who call in occupational health service where necessary

Case Study Three: Health care setting

- Very large number of employees. Ratio of occupational health professional to worker greater than 1:1000
- Workers have initial health screen on starting employment
- Responsible person does skin check every 6-12 months
- Those with possible problems referred to occupational health department
- Spot checks conducted to ensure responsible people are carrying out the checks
- Workers can self refer to occupational health department with concerns

Thank you for your attention!

Questions?



If you think of any questions later,
please feel free to contact us

www.enviroderm.co.uk

+44 (0) 1386 832 311

info@enviroderm.co.uk

helen@enviroderm.co.uk