

Supplementary Table SI. Questions and response options (in Dutch and English) used in the current study, including references

Topic	Question and response options	References
Age	What is your year of birth?	None.
Sex	What is your sex? <ul style="list-style-type: none"> • Male (1) • Female (2) 	None.
Atopic dermatitis	Have you ever been diagnosed with atopic dermatitis or atopic eczema by a doctor? <ul style="list-style-type: none"> • Yes (1) • No (2) 	Barbarot et al. 2018; question P1.(1)
Asthma	Have you ever had asthma? <ul style="list-style-type: none"> • Yes (1) • No (2) 	None.
Allergic rhinitis	Do you have any form of nasal allergy, including 'hay fever', or have you ever had this? <ul style="list-style-type: none"> • Yes (1) • No (2) 	None.
Lifetime prevalence of hand eczema	Hand eczema is a skin disease of the hands. Symptoms are redness, desquamation/dry skin and sometimes vesicles and/or fissures. Hand eczema can cause itch and/or pain. Have you ever (now or in the past) had hand eczema? <ul style="list-style-type: none"> • Yes (1) • No (2) 	NOSQ-2002; question D1, adjusted.(2)
1-year prevalence of hand eczema	Have you had hand eczema within the past 12 months? <ul style="list-style-type: none"> • Yes (1) • No (2) 	NOSQ-2002; question D1, adjusted.(2)
Physician diagnosed prevalence of hand eczema	Has a physician ever diagnosed hand eczema? <ul style="list-style-type: none"> • Yes (1) • No (2) 	None.

Persistence hand eczema	<p>How often have you had hand eczema in the past 12 months?</p> <ul style="list-style-type: none"> • Only once and for less than 3 months (1) • Only once but for 3 months or more (2) • More than once (3) • (Nearly) all the time (4) 	NOSQ-2002; question D4, modified to 12 months and to the definition of chronic hand eczema by Diepgen et al..(2,3)
Severity of hand eczema at worst (ever)	<p>Which group did your hand eczema match at its worst? (lifetime)</p> <ul style="list-style-type: none"> • Almost clear (1) • Moderate (2) • Severe (3) • Very severe (4) 	Oosterhaven et al.; question 46. Based on the Photographic guide by Coenraads et al. combined with a question from Hald et al..(4–6)
Severity of hand eczema at worst (12 months)	<p>Which group did your hand eczema match at its worst over the past 12 months?</p> <ul style="list-style-type: none"> • Almost clear (1) • Moderate (2) • Severe (3) • Very severe (4) 	Oosterhaven et al.; question 46. Based on the Photographic guide by Coenraads et al. combined with a question from Hald et al..(4–6)
Severity of hand eczema average (12 months)	<p>On average, which group did your hand eczema match over the past 12 months?</p> <ul style="list-style-type: none"> • Almost clear (1) • Moderate (2) • Severe (3) • Very severe (4) 	Oosterhaven et al.; question 46. Based on the Photographic guide by Coenraads et al. combined with a question from Hald et al..(4–6)

Supplementary Table SII. Non-responder analysis

	Total, n (%) (n=134 790)	Responders, n (%) (n=57 796)	Non-responders, n (%) (n=76 994)	P-value
Age, mean +/- SD	52.6 +/- 12.7	55.3 +/- 12.6	50.5 +/- 12.3	<0.001
Sex				
Male	55 793 (41.4)	22 861 (39.6)	32 932 (42.8)	<0.001
Female	78 997 (58.6)	34 935 (60.4)	44 062 (57.2)	
Eczema	20645 (15.3)	9051 (15.7)	11 594 (15.1)	<0.001
Psoriasis	3728 (2.8)	1724 (3.0)	2004 (2.6)	<0.001
Severe acne	3836 (2.8)	1583 (2.7)	2253 (2.9)	0.042

All characteristics are self-reported. Questions regarding skin diseases including eczema, psoriasis and severe acne were included in the baseline assessment. Abbreviations: *n*, number; *SD*, standard deviation.

Missing values: Age and sex: 0, skin diseases: Exact missing values for the question regarding skin diseases could not be calculated as the question was designed as a multiple response question, 2138 responders and

2479 non-responders did not respond to the question at all. *P*-values <0.05 are shown in bold.

Supplementary Table SIII. Severity of hand eczema in subjects with chronic hand eczema

Severity	Subjects with chronic hand eczema, n (%) (n=2702)	Subjects with hand eczema which was not chronic, n (%) (n=1524)
At worst (ever)		
Almost clear	1361 (50.4)	1122 (73.7)
Moderate	891 (33.0)	308 (20.2)
Severe	315 (11.7)	61 (4.0)
Very severe	133 (4.9)	32 (2.1)
At worst (12 months)		
Almost clear	1427 (52.9)	1190 (78.2)
Moderate	987 (36.6)	297 (19.5)
Severe	226 (8.4)	31 (2.0)
Very severe	60 (2.2)	<10 (<0.7)
Average (12 months)		
Almost clear	1832 (67.9)	1333 (87.8)
Moderate	761 (28.2)	177 (11.7)
Severe	89 (3.3)	<10 (<0.7)
Very severe	16 (0.6)	<10 (<0.7)

Severity was measured by using the modified photographic guide for self-assessment.(5,6) Abbreviations: n, number. Missing values: Severity at worst (ever): 2 with chronic HE, 1 with HE which was not chronic;

Severity at worst (12 months): 2 with chronic HE, 2 with HE which was not chronic; Severity average (12 months): 4 with chronic HE, 6 with HE which was not chronic. Numbers smaller than 10 are presented as <10

to avoid possible identification of subjects.

Supplementary Table SIV. Severity of hand eczema (HE) in participants reporting a physician diagnosed HE.

	At worst ever (n=8591)				At worst 12 months (n=4225)				Average 12 months (n=4219)			
	Almost clear (n=4890)	Moderate (n=2592)	Severe (n=757)	Very severe (n=352)	Almost clear (n=2619)	Moderate (n=1286)	Severe (n=256)	Very severe (n=64)	Almost clear (n=3167)	Moderate (n=939)	Severe (n=95)	Very severe (n=18)
Physician diagnosed HE n (%)	1408 (28.8)	1288 (49.7)	553 (73.1)	282 (80.1)	755 (28.8)	589 (45.8)	181 (70.7)	44 (68.8)	996 (31.4)	482 (51.3)	76 (80.0)	12 (66.7)

For severity at worst (12 months), and severity on average (12 months) only patients are included who indicated to have had HE in the past 12 months. Severity was measured by using the modified photographic guide for self-assessment.(5,6) Abbreviations: *HE*, hand eczema; *n*, number. Missing values: Severity at worst (ever): 3; Severity at worst (12 months): 1; Severity average (12 months): 4.

Appendix SI. Data of missing values

Table I. Characteristics of the participants of the lifelines cohort, who responded to the question regarding lifetime prevalence of hand eczema (HE), stratified for sex

Missing values: Age: males 0, females 0; Gender: males 0, females 0; Atopic dermatitis: males 335, females 681; Asthma: males 80, females 115; Allergic rhinitis: males 551, females 861; Lifetime prevalence HE: males 0, females 0; 1-year-prevalence HE: 9 males, 33 females; Prevalence Physician diagnosed prevalence HE: 11 males, 37 females; Prevalence chronic HE: males 10, females 40; HE persistence (12 months): males 10, females 40; Severity at worst (ever): males 14, females 33; Severity at worst (12 months): males 11, females 36; Severity average (12 months): 10 males, 43 females.

Table II. Crude prevalence estimates and age-standardized prevalence estimates of hand eczema (HE) in the Dutch general population, stratified for sex

Missing values: Lifetime prevalence HE: males 0, females 0; 1-year-prevalence HE: 9 males, 33 females; Prevalence Physician diagnosed prevalence HE: 11 males, 37 females; Prevalence chronic HE: males 10, females 40.

Table III. Characteristics of the participants of the lifelines cohort with hand eczema (HE), stratified for HE prevalence and sex

Missing values for Lifetime prevalence: Lifetime prevalence HE: 0 males, 0 females; Age: 0 males, 0 females; Gender: 0 males, 0 females; Atopic dermatitis: 104 males, 318 females; Asthma: 7 males, 20 females; Allergic rhinitis: 51 males, 116 females; Severity at worst (ever): 14 males, 33 females.

Missing values for 1-year-prevalence: 1-year-prevalence HE: 9 males, 33 females; Age: 0 males, 0 females; Gender: 0 males, 0 females; Atopic dermatitis: 58 males, 139 females; Asthma: 6 males, 14 females; Allergic rhinitis: 27 males, 75 females; HE persistence: 1 male, 7 females; Severity at worst (ever): 2 males,

2 females; Severity at worst (12 months): 2 males, 3 females; Severity average (12 months): 1 male, 10 females.

Missing values for physician diagnosed prevalence: Physician diagnosed HE: 11 males, 37 females; Age: 0 males, 0 females; Gender: 0 males, 0 females;

Atopic dermatitis: 34 males, 164 females; Asthma: 2 males, 8 females; Allergic rhinitis: 27 males, 42 females; HE persistence: 1 male, 3 females; Severity at worst (ever): 0 males, 3 females; Severity at worst (12 months): 0 males, 1 female; Severity average (12 months): 0 males, 4 females.

Supplemental references

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3. Diepgen TL, Andersen KE, Chosidow O, Coenraads PJ a., Elsner P, English J, et al. Guidelines for diagnosis, prevention and treatment of hand eczema. *JDDG J der Dtsch Dermatologischen Gesellschaft*. 2015;13(1):e1–22.
4. Oosterhaven JA, Flach PA, Bültmann U, Schuttelaar ML. Presenteeism in a Dutch hand eczema population—a cross-sectional survey. *Contact Dermatitis*. 2018;79(1):10–9.
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6. Hald M, Veien NK, Laurberg G, Johansen JD. Severity of hand eczema assessed by patients and dermatologist using a photographic guide. *Br J Dermatol*. 2007;156(1):77–80.