

## Neurodermatitis

### Introduction

Neurodermatitis (atopic dermatitis, atopic eczema) is a chronic inflammatory skin disorder and is one of the most common illnesses in childhood and adolescence (Ring 2011; Bieber et al. 2013). Along with hay fever and bronchial asthma, neurodermatitis is an atopic disease characterised by the production of allergen-specific immunoglobulin E-antibodies. Neurodermatitis is generally accompanied by severely itchy, dry, flaky and irritated skin. In most cases, the disorder appears within the first two years of a child's life, occurs in episodes and has varying symptoms depending on the age of the sufferer (Bieber 2008; Bieber et al. 2013). Symptoms often decrease with age (Wahn, Wichmann 2000; Illi et al. 2004). However, studies indicate that children affected by neurodermatitis are at a higher risk of other allergic diseases in later life, e.g. bronchial asthma or hay fever (Bieber et al. 2013). Because of the itchiness and the visible skin rashes, neurodermatitis can have a severe impact on the psychological wellbeing and quality of life of sufferers. Frequently reported consequences include sleep disorders, low self-esteem and problems in school or with peer relationships (Wahn, Wichmann 2000; Bieber 2008).

### Indicator

KiGGS Wave 1 recorded the lifetime and 12-month prevalence ("Ever" and "In the last 12 months") of neurodermatitis. Parents of children taking part in KiGGS for the first time were asked whether the illness had ever been medically diagnosed in their child, whether the illness had appeared in the last 12 months, and whether their child had taken medication for the illness in the last 12 months. Parents of children taking part in the KiGGS follow-up were asked if their child had had the illness since the last KiGGS survey or had used medication for the illness since then, if the illness had been medically diagnosed for the first time during this period, if the illness had appeared in the last 12 months and if their child had taken medication for the illness in the last 12 months. This data was merged to calculate the lifetime and 12-month prevalence (Schmitz et al. 2014). The tables show the lifetime and 12-month prevalence of neurodermatitis, differentiated according to sex, age and social status.

### Key results

- ▶ The lifetime prevalence of neurodermatitis in children and adolescents is 14.3%, while the 12-month prevalence is 6.0%.
- ▶ The 12-month prevalence is highest in babies and small children.
- ▶ There are no differences between the sexes in terms of the prevalence of neurodermatitis.
- ▶ Neurodermatitis is more widespread in children and adolescents with high social status than in children and adolescents of the same age with low social status. Statistically relevant differences in the lifetime prevalence are evident in boys.

### Conclusion

A comparison of the data from KiGGS Wave 1 with the data collected six years previously in the KiGGS baseline study shows that there has been a statistically significant decrease in the 12-month prevalence of neurodermatitis from 7.3% to 6.0% with respect to the entire age group from 0 to 17 years. The decrease was most pronounced in 7 to 10 year olds (Schmitz et al. 2014). Unlike other allergic diseases such as bronchial asthma and hay fever, neurodermatitis does not affect boys more frequently than girls (Schlaud et al. 2007; Schmitz et al. 2014). This is reflected in the results of the school entry health examinations in Brandenburg. In the last ten years, the proportion of children starting school who have medically diagnosed neurodermatitis has remained relatively stable at around 7% among both sexes (Ministry of Environment, Health and Consumer Protection of the Federal State of Brandenburg 2014). In international comparisons, according to data from the International Study of Asthma and Allergy in Childhood (ISAAC), Germany lies in the mid-range of countries in terms of the symptom prevalence of neurodermatitis (Asher et al. 2006).

Note: A detailed description of the study as well as explanations on the method are available on the KiGGS study website, [www.kiggs-studie.de](http://www.kiggs-studie.de), and in Lange et al. (2014). Further results regarding neurodermatitis can be found in Schmitz et al. (2014).

## Literature

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**Table 1**  
**Prevalence of neurodermatitis in 0 to 17-year-old girls according to age and social status**

|                               | Lifetime prevalence |                    | 12-month prevalence |                  |
|-------------------------------|---------------------|--------------------|---------------------|------------------|
|                               | %                   | (95% CI)           | %                   | (95% CI)         |
| <b>Girls</b>                  | <b>14.3</b>         | <b>(13.1–15.7)</b> | <b>6.3</b>          | <b>(5.5–7.3)</b> |
| <b>Age</b>                    |                     |                    |                     |                  |
| 0 to 2 years                  | 8.3                 | (6.3–11.0)         | 7.1                 | (5.1–9.6)        |
| 3 to 6 years                  | 13.7                | (11.0–16.9)        | 7.9                 | (6.1–10.1)       |
| 7 to 10 years                 | 13.1                | (10.9–15.8)        | 5.3                 | (4.0–6.9)        |
| 11 to 13 years                | 19.4                | (15.9–23.5)        | 6.5                 | (4.7–9.0)        |
| 14 to 17 years                | 15.9                | (13.5–18.6)        | 5.3                 | (4.0–7.1)        |
| <b>Social status</b>          |                     |                    |                     |                  |
| low                           | 14.1                | (10.7–18.5)        | 4.9                 | (3.1–7.7)        |
| medium                        | 13.4                | (12.1–14.9)        | 6.6                 | (5.6–7.8)        |
| high                          | 17.2                | (15.1–19.6)        | 7.0                 | (5.8–8.4)        |
| <b>Total (girls and boys)</b> | <b>14.3</b>         | <b>(13.4–15.3)</b> | <b>6.0</b>          | <b>(5.4–6.6)</b> |

**Table 2**  
**Prevalence of neurodermatitis in 0 to 17-year-old boys according to age and social status**

|                               | Lifetime prevalence |                    | 12-month prevalence |                  |
|-------------------------------|---------------------|--------------------|---------------------|------------------|
|                               | %                   | (95% CI)           | %                   | (95% CI)         |
| <b>Boys</b>                   | <b>14.3</b>         | <b>(13.1–15.6)</b> | <b>5.7</b>          | <b>(4.9–6.5)</b> |
| <b>Age</b>                    |                     |                    |                     |                  |
| 0 to 2 years                  | 10.9                | (8.7–13.5)         | 9.1                 | (7.1–11.7)       |
| 3 to 6 years                  | 12.9                | (10.5–15.8)        | 6.9                 | (5.1–9.3)        |
| 7 to 10 years                 | 14.6                | (12.3–17.2)        | 5.5                 | (4.2–7.0)        |
| 11 to 13 years                | 15.3                | (12.5–18.6)        | 4.1                 | (2.7–6.2)        |
| 14 to 17 years                | 16.7                | (14.3–19.3)        | 3.8                 | (2.8–5.3)        |
| <b>Social status</b>          |                     |                    |                     |                  |
| low                           | 10.0                | (7.1–14.0)         | 6.2                 | (3.8–9.9)        |
| medium                        | 15.1                | (13.6–16.7)        | 4.8                 | (4.1–5.6)        |
| high                          | 16.6                | (14.8–18.5)        | 7.9                 | (6.5–9.5)        |
| <b>Total (girls and boys)</b> | <b>14.3</b>         | <b>(13.4–15.3)</b> | <b>6.0</b>          | <b>(5.4–6.6)</b> |

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