

MeDALL

Mechanism of the Development of Allergy

Parental Questionnaire
(for parents of 4-9 year old children)

If parts or all of this questionnaire will be used, please refer to the origins of this questionnaire in all corresponding publications (see Supplement Fig. S4).



I) Asthma/Wheezing

- 1 Has your child had wheezing or whistling in the chest **in the past 12 months**?
☐ Yes ☐ No
- 2 How many attacks of wheezing has your child had **in the past 12 months**?
☐ None
☐ 1 to 3
☐ 4 to 12
☐ More than 12
- 3 Has your child had breathing difficulties (chest tightness, shortness of breath) **in the past 12 months**?
☐ Yes ☐ No
- 4 **In the past 12 months**, has your child had a **dry cough at night**, apart from a cough associated with a cold or chest infection?
☐ Yes ☐ No
- 5 Has your child **ever** been diagnosed by a doctor as having asthma?
☐ Yes ☐ No
- 6 In the **past 12 months**, how often, on average, has your child's **sleep** been disturbed due to wheezing?
☐ Never woken with wheezing
☐ Less than one night per week
☐ One or more nights per week
- 7 **In the past 12 months**, has wheezing ever been severe enough to limit your child's **speech** to only one or two words at a time between breaths?
☐ Yes ☐ No
- 8 **In the past 12 months**, has your child's chest sounded wheezy during or after **exercise**?
☐ Yes ☐ No



9 In the past 12 months, how often has your child been disturbed by coughing/ wheezing/ whistling/ difficulty breathing when doing **exercise**?

- ☐ Never
 - ☐ Hardly ever
 - ☐ Less than half of the times
 - ☐ More than half of the times
 - ☐ Always or almost always (includes no exercising at all due to symptoms)
 - ☐ Does not make exercise due to other reasons
-

10 Has your child taken any medicines for asthma or breathing difficulties (chest tightness, shortness of breath) **in the last 12 months**? (include any inhalers, nebulisers, tablets or liquid medicines)

- ☐ Yes ☐ No
 - ☐ If yes, which? _____
-

11 How often did you have to see a doctor or attend a hospital with your child **urgently** because of breathing difficulties (wheezing, chest tightness, shortness of breath) **in the last 12 months**?

Number: _____

Supplemental Questions

S1 Has your child ever had wheezing or whistling in the chest **at any time in the past**?

- ☐ Yes ☐ No
 - ☐ If yes at what age did it occur? ____ months/years
-

S2 In which month/s did this wheezing or whistling in the chest occur **in the past 12 months**? (You may choose several answers)

- | | | | |
|--------------------------------|-----------------------------|---------------------------------|--------------------------------|
| <input type="radio"/> January | <input type="radio"/> April | <input type="radio"/> July | <input type="radio"/> October |
| <input type="radio"/> February | <input type="radio"/> May | <input type="radio"/> August | <input type="radio"/> November |
| <input type="radio"/> March | <input type="radio"/> June | <input type="radio"/> September | <input type="radio"/> December |
-

S3 In the past 12 months, which of these factors do you think triggered your child's wheezing or whistling in the chest? (You might choose several answers.)

- | | |
|--|---|
| <input type="radio"/> Weather change (coldness, fog) | <input type="radio"/> Tobacco smoke |
| <input type="radio"/> Pollen | <input type="radio"/> Emotion, stress |
| <input type="radio"/> Gas exhaust, vapours, fumes | <input type="radio"/> Tears, laughter, excitement |
| <input type="radio"/> Dust | <input type="radio"/> Wool clothes |
| <input type="radio"/> Pets | <input type="radio"/> Food or drink |
| <input type="radio"/> Cold, flu or other respiratory infection | <input type="radio"/> Soap, spray, cleaning product |
| <input type="radio"/> Strong odours | <input type="radio"/> Exercise (during or after) |
| <input type="radio"/> Other (please specify): _____ | |



S4 In the past 12 months, how much did this wheezing interfere with your child's daily activities?

- ☐ Not at all
 - ☐ A moderate amount
 - ☐ A little
 - ☐ A lot
-

S5 Has your child had this wheezing or whistling in the chest been accompanied by an attack of breathlessness (dyspnoea) at least once **in the past 12 months**?

- ☐ Yes
 - ☐ No
-

S6 In the past 12 months, how many attacks of breathlessness has your child had?

- ☐ None
 - ☐ 1 to 3
 - ☐ 4 to 12
 - ☐ More than 12
-

S7 Has your child's sleep been disturbed due to an attack of breathlessness (dyspnoea) **in the past 12 months**?

- ☐ Yes
- ☐ No

If yes how often?

- ☐ Never woken with breathlessness
 - ☐ Less than one night per week
 - ☐ One or more nights per week
-

S8 If your child has had a dry cough at night and has been given bronchodilators (asthma relieving/ air passage widening medication) the effect of this medication on cough has been

- ☐ Rapid improvement (less than 30 minutes) although it could fade with time
 - ☐ Slow improvement (takes hours or days)
 - ☐ No improvement
 - ☐ Not used bronchodilators
-

S9 Have you ever given your child inhaled steroids?

- ☐ Yes
- ☐ No

If yes, how old was your child when s/he received inhaled steroids for the first time? ____

On average, how long did you give him (her) inhaled steroids since birth?

Specify the number of weeks: ____

S10 In the past 12 months, did you give your child oral steroids?

- ☐ Yes
- ☐ No



S11 Has your child **ever** been treated for **wheezing/breathing difficulties** with homoeopathy or acupuncture?

☐ Yes ☐ No

Cough and Phlegm

S12 **In the past 12 months**, has your child usually seemed congested in the chest or coughed up phlegm (mucus) with colds?

☐ Yes ☐ No

S13 **In the past 12 months**, has your child usually seemed congested in the chest or coughed up phlegm (mucus) when s/he did not have a cold?

☐ Yes ☐ No

S14 **In the past 12 months**, does your child seem congested in the chest or cough up phlegm (mucus) on most days (4 or more days a week) for as much as 3 months of the year?

☐ Yes ☐ No

S15 **In the past 12 months** has your child usually seemed congested in the chest or coughed up phlegm on most days (4 or more day a week) when s/he did not have a cold?

- ☐ No
☐ Yes, for less than 1 month a year
☐ Yes, for 1 or 2 months a year
☐ Yes, for 3 months a year or more
-

S16 **In the past 12 months** has a doctor said that your child has had a chest infection?

☐ Yes ☐ No



II) RHINITIS

- 12** In the **past 12 months**, has your child had problems with sneezing, or a runny, or blocked nose when he/she DID NOT have a cold or the flu?
- ☐ Yes ☐ No
-
- 13** If yes, please specify which of the symptoms your child had **in the past 12 months** when he/she DID NOT have a cold or the flu. (You may choose several answers) Please tick all items that apply:
- | | | |
|--------------|---------------------------|--------------------------|
| sneezing | <input type="radio"/> Yes | <input type="radio"/> No |
| runny nose | <input type="radio"/> Yes | <input type="radio"/> No |
| blocked nose | <input type="radio"/> Yes | <input type="radio"/> No |
-
- 14** If yes, **in the past 12 months**, has this nose problem been accompanied by itchy-watery eyes?
- ☐ Yes ☐ No
-
- 15** In which of the **past 12 months** did this nose problem occur? (You may choose several answers) Please tick all months that apply:
- | | | | |
|--------------------------------|-----------------------------|---------------------------------|--------------------------------|
| <input type="radio"/> January | <input type="radio"/> April | <input type="radio"/> July | <input type="radio"/> October |
| <input type="radio"/> February | <input type="radio"/> May | <input type="radio"/> August | <input type="radio"/> November |
| <input type="radio"/> March | <input type="radio"/> June | <input type="radio"/> September | <input type="radio"/> December |
-
- 16** In the **past 12 months**, did your child have trouble with the nose or eyes (without having a cold) in association with one of the following? (You may choose several answers) Please tick all items that apply:
- | | | | |
|---|---------------------------|--------------------------|----------------------------------|
| <input type="radio"/> animals, dust, mites | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |
| <input type="radio"/> grass, trees, flowers | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |
| <input type="radio"/> tobacco smoke | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |
| <input type="radio"/> housedust | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |
| <input type="radio"/> air pollutants | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |
- (e.g. gas exhaust, vapours, fumes, spray, cleaning products, heavy scent)
- ☐ other, please specify _____
-
- 17** Did your child take any medications, tablets, nasal sprays or eye drops against nasal allergy/hay fever **in the past 12 months**?
- ☐ Yes ☐ No If yes, which? _____
-
- Has your child ever been diagnosed by a physician with having allergic rhinitis (rhinitis to cat, dust...) or hay fever (rhinitis to pollens)?
- ☐ Yes ☐ No

**Supplemental Questions**

S17 Has your child ever been treated for **nasal allergy/hay fever** with homoeopathy or acupuncture?

☐ Yes ☐ No

S18 **In the past 12 months**, how often has your child been disturbed by a runny/itchy/ blocked nose or itchy/watery/red eyes in the following activities?

<input type="radio"/> Sleep:	<input type="radio"/> Never	<input type="radio"/> very occasionally	<input type="radio"/> frequently	<input type="radio"/> most of the time
<input type="radio"/> School/homework:	<input type="radio"/> Never	<input type="radio"/> very occasionally	<input type="radio"/> frequently	<input type="radio"/> most of the time
<input type="radio"/> Outdoor activities:	<input type="radio"/> Never	<input type="radio"/> very occasionally	<input type="radio"/> frequently	<input type="radio"/> most of the time

III) ATOPIC DERMATITIS OR ECZEMA**Core Questions**

18 Has your child had dry skin **in the past 12 months**?

☐ Yes ☐ No

19 Has your child **ever** had an itchy rash which was coming and going for at least 6 months?

☐ Yes ☐ No

20 Has your child had an itchy rash which was intermittently coming and going at any time **in the past 12 months**?

☐ Yes ☐ No

21 Has this itchy rash at any time affected any of the following places (You may choose several answers)? Please tick all that apply:

- ☐ the folds of the elbows
 - ☐ behind the knees
 - ☐ in front of the ankles
 - ☐ under the buttocks
 - ☐ or around the neck, ears or face
-

22 Has this rash cleared completely at any time **during the past 12 months**?

☐ Yes ☐ No

23 Has your child **ever** been diagnosed by doctor with having eczema /atopic dermatitis?

☐ Yes ☐ No



24 In which of **the past 12 months** did your child's eczema/itchy rash occur? (You may choose several answers) Please tick all months that apply:

- | | | | |
|--------------------------------|-----------------------------|---------------------------------|--------------------------------|
| <input type="radio"/> January | <input type="radio"/> April | <input type="radio"/> July | <input type="radio"/> October |
| <input type="radio"/> February | <input type="radio"/> May | <input type="radio"/> August | <input type="radio"/> November |
| <input type="radio"/> March | <input type="radio"/> June | <input type="radio"/> September | <input type="radio"/> December |
-

25 In the past 12 months, how often, on average, has your child been kept awake at night by this itchy rash?

- ☐ Never in the past 12 months
☐ Less than one night per week
☐ One or more nights per week
-

Contact Dermatitis

26 Has your child **ever** had eczema on her/his hands (itchy lesions, blisters, rash)?

- ☐ Yes ☐ No

If yes, at which age was the onset? _ _ years

27 Has your child **ever** had eczema after contact with (You may choose several answers, please tick all items that apply):

- ☐ items of metal (e.g. button, buckle, zipper, belt, watch or watchstrap, glasses or sunglasses, hair slide, cell phone, headset): please specify _____
☐ fashion jewellery (earrings, rings...)
☐ colorants
☐ cosmetics, perfume or fragrances
☐ shampoo or conditioner
☐ soap
☐ clothes
☐ latex, rubber (e.g. rubber gloves, balloons)

☐ other materials, please specify: _____

☐ **no**, not with any material
-

Optional Supplemental Questions

Severity of Eczema

S19 Has your child **ever** been treated for eczema/atopic dermatitis with homoeopathy or acupuncture?

- ☐ Yes ☐ No



IV) FOOD ALLERGIC REACTIONS

Core Questions

- 28** Has your child ever had one or several abnormal reactions after eating a particular **food**?
- ☐ Yes ☐ No If yes, please tick any which apply. **See table on page 10!**
-
- 29** How old was your child when the allergic reaction first occurred? _____ years
-
- 30** Does your child still have this allergic reaction when eating the food item?
- ☐ Yes ☐ No ☐ I don't know
-
- 31** **In the last 12 months**, how often has your child been seen by a doctor for food reaction, **other than during or immediately after an actual episode**? (Please tick any which apply)
- | | Never | 1 to 3 | 4 to 12 | More than 12 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| - Yes, by a general practitioner or a pediatrician | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - Yes, by a pulmonologist or an allergist (hospital or office) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - Other (please specify): _____ | | | | |
-
- 32** **In the last 12 months**, how often has your child been hospitalized due to adverse food reactions?
- _____ time(s) (If «no hospitalization», answer 0)
-
- 33** Did your child **ever** receive special injections or other treatments against allergy ("allergy vaccine"), immunotherapy, hyposensitisation or desensitisation?
- ☐ Yes ☐ No If yes, which allergen and when? _____

Supplemental Questions

- S20** If yes, first treatment started at age __ years and ended at __ years
- Against which allergen(s) _____ ☐ Not known
- Second treatment started at age __ years and ended at __ years
- Against which allergen(s) _____ ☐ Not known
- Third treatment started at age __ years and ended at __ years
- Against which allergen(s) _____ ☐ Not known
- (Cohorts that have asked this previously, should ask "since last follow-up" instead of "ever".)



Allergic reactions to medicine

34 Has your child ever had one or several abnormal reactions after taking a particular **medicine**?

☐ Yes ☐ No If yes, please tick all that apply. **See table on page 10!**

35 In the last 12 months, how often has your child been seen by a doctor for reactions to drugs, **other than during or immediately after an actual episode**? (Please tick any which apply)

	Never	1 to 3	4 to 12	More than 12
Yes, by a general practitioner or a pediatrician	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Yes, by a pulmonologist or an allergist (hospital or office)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify): _____				

36 In the last 12 months, how often has your child been hospitalized due to adverse food reactions?
_____ time(s) (If «no hospitalization», answer 0)

Allergic reactions to a vaccine

37 Has your child ever had one or several abnormal reactions after eating a particular **vaccination**?

☐ Yes ☐ No If yes, please tick any which apply. **See table on page 10!**

38 In the last 12 months, how often has your child been seen by a doctor for reactions to a vaccine, **other than during or immediately after an actual episode**? (Please tick any which apply)

	Never	1 to 3	4 to 12	More than 12
Yes, by a general practitioner or a pediatrician	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Yes, by a pulmonologist or an allergist (hospital or office)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify): _____				

39 In the last 12 months, how often has your child been hospitalized due to adverse vaccine reactions?

_____ time(s) (If «no hospitalization», answer 0)

Allergic reactions to food	No. 28
Allergic reactions to medicine	No. 34
Allergic reactions to vaccine	No. 37

[illegible]

**V) SOCIODEMOGRAPHIC CHARACTERISTICS**

40 Your child is

☐ male ☐ female

41 What is your child's height? ____ cm

What is your child's weight? ____ kg

42 Are you:

☐ Married (First marriage) ☐ Separated (but still legally married)
☐ Married (Second marriage) ☐ Divorced
☐ Single (never married) ☐ Widowed

43 Are you:

☐ Living with baby's other parent (father mother)
☐ Living with another partner
☐ Not living with a partner - but in a relationship
(eg partner living abroad or in another property)
☐ Not living with a partner and not in a relationship

44 Has the mother **ever** had **eczema** (excluding contact dermatitis and psoriasis)?

☐ Yes ☐ No If yes, ☐ doctor diagnosed
☐ self-diagnosed
☐ doctor- and self-diagnosed

If yes, how old were you at the onset of your **eczema**? ____ years

45 Has the mother **ever** had **asthma**?

☐ Yes ☐ No If yes, ☐ doctor diagnosed
☐ self-diagnosed
☐ doctor- and self-diagnosed

If yes, how old were you at the onset of your asthma? ____ years

46 Has the mother **ever** had hayfever or **allergic rhinitis**?

☐ Yes ☐ No If yes, ☐ doctor diagnosed
☐ self-diagnosed
☐ doctor- and self-diagnosed

If yes, how old were you at the onset of your allergic rhinitis/ hayfever? ____ years

47 Has the biological father **ever** had **eczema** (excluding contact dermatitis and psoriasis)?

- ☐ Yes ☐ No If yes, ☐ doctor diagnosed
☐ self-diagnosed
☐ doctor- and self-diagnosed

If yes, how old was he at the onset of his eczema? _____years

48 Has the biological father **ever** had **asthma**?

- ☐ Yes ☐ No If yes, ☐ doctor diagnosed
☐ self-diagnose
☐ doctor- and self-diagnosed

If yes, how old was he at the onset of his asthma? _____years

49 Has the biological father **ever had hayfever or allergic rhinitis?**

- ☐ Yes ☐ No If yes, ☐ doctor diagnosed
☐ self-diagnosed
☐ doctor- and self-diagnosed

If yes, how old were you at the onset of your allergic rhinitis/ hayfever? _____years

Supplemental Questions

S21 Since the last questionnaire, have you, or has a close relative been affected by:

- Serious health problems (e.g. chronic disease, depression, surgery, hospitalization)

Please specify the person(s) and the type of problem(s):

- Bereavement

S22 Since the last questionnaire, did you move?

- ☐ Yes ☐ No

S23 Since the last questionnaire, has there been a change in ...

- Your marital status?

- ☐ Yes, please specify: _____ ☐ No

- Your (or your partner's) occupational situation?

- ☐ Yes, please specify: _____ ☐ No



S24 Since the last questionnaire, has there been a new birth in your family?

☐ Yes, please specify when: _____ ☐ No

VI) NUTRITION

The cohort-specific Food Frequency Questionnaire for the measurement of nutrition will be used.

VII) AIR POLLUTION

The ESCAPE measurements will be used.

VIII) INDOOR ENVIRONMENT

Gas Stove

50 Do you use gas for cooking?

☐ Yes ☐ No

51 Do you have an extractor fan over the cooker?

☐ Yes ☐ No

If Yes, when cooking do you use the fan:

- | | | |
|----------------------|---------------------------|--------------------------|
| a) all of the time? | <input type="radio"/> Yes | <input type="radio"/> No |
| b) some o the time? | <input type="radio"/> Yes | <input type="radio"/> No |
| c) none of the time? | <input type="radio"/> Yes | <input type="radio"/> No |
-

Dampness and Mould

52 Would you consider your house or flat as damp?

☐ Yes ☐ No

53 Is there mould or are there mould stains within your dwelling (except on food)?

☐ Yes ☐ No

54 If yes, in which rooms of the flat or house?

- ☐ Room or bedroom of the child
- ☐ Rest of the flat
- ☐ Basement

**Smoking**

55 Does the child's mother smoke inside the home?

☐ Yes ☐ No

If **occasionally**, number of cigarettes **per week** inside the home: __

If **regularly (every day)**, number of cigarettes **per day** inside the home: __

56 Does the child's father smoke inside the home?

☐ Yes ☐ No

If **occasionally**, number of cigarettes **per week** inside the home: __

If **regularly (every day)**, number of cigarettes **per day** inside the home: __

57 Do others (except the child) smoke inside the home?

☐ Yes ☐ No

If **occasionally**, number of cigarettes **per week** inside the home: __

If **regularly (every day)**, number of cigarettes **per day** inside the home: __

Supplemental Questions

S25 Is the child's mother currently smoking?

☐ Yes ☐ No ☐ Don't know ☐ Don't answer

If occasionally, number of cigarettes _____ **per week**.

S26 If yes, how many cigarettes does the child's mother smoke on average?

1. _____ cigarettes / **week**

2. _____ cigarettes / **day**

☐ Don't know ☐ Don't answer

S27 Is the child's father currently smoking?

☐ Yes ☐ No ☐ Don't know ☐ Don't answer

If occasionally, number of cigarettes _____ **per week**.

S28 If yes, How many cigarettes does the child's father smoke on average?

1. _____ cigarettes / **week**

2. _____ cigarettes / **day**

☐ Don't know ☐ Don't answer



S30 How often during a day is your child in a room or enclosed place (e.g. vehicle) where people are smoking:

Weekdays

- ☐ All the time
☐ More than 5 hours
☐ 3-5 hours
☐ 1-2 hours
☐ Less than 1 hour
☐ Not at all

Weekends

- ☐ All the time
☐ More than 5 hours
☐ 3-5 hours
☐ 1-2 hours
☐ Less than 1 hour
☐ Not at all

Physical Activity (Craig et al., 2003)

S31 How many hours on average **per day** does your child sleep INCLUDING naps?

_____ hours

S32 How much time on average per day does your child spend watching TV/DVDs or playing computer games? (for children aged older than 7 years)

Weekdays

Hours_____ Mins_____

Weekends

Hours_____ Mins_____

S33 During a typical week, what type of physical activities does your child do **outside the school**? Please specify the duration of each activity **per day**.

E.g. dancing, swimming lessons or running, bicycling, skating, going to a trip, etc.
(EXCLUDE Wii-sports and the journey to school).

*To go to a trip (information for nurses): please count the hours that the child walks during the trip. For example, if the child goes twice a month to a trip (with his/her parents, Scouts etc) please extrapolate the hours that the child spends doing physical exercise per week. E.g. If the child walks a total of 6h (3h per two Saturdays per month) it will be counted as 1h 30 min. per week.

Day	Activity(es)*	Hours	Minutes
E.g.: Monday	Cycling 30m Swimming 30m	0 1 2 3 4+	0 30
Monday		0 1 2 3 4+	0 30
Tuesday		0 1 2 3 4+	0 30
Wednesday		0 1 2 3 4+	0 30
Thursday		0 1 2 3 4+	0 30
Friday		0 1 2 3 4+	0 30
Saturday		0 1 2 3 4+	0 30
Sunday		0 1 2 3 4+	0 30



- S34** During a typical week, what type of physical activities does your child do **during school time**, excluding activities during free time in the school yard? Please specify the duration of each activity per day.

Information for nurses: physical activity includes every programmed activity from physical education, swimming to dance lessons.

Day	Activity/es*	Hours	Mins
Monday		0 1 2 3 4+	0 30
Tuesday		0 1 2 3 4+	0 30
Wednesday		0 1 2 3 4+	0 30
Thursday		0 1 2 3 4+	0 30
Friday		0 1 2 3 4+	0 30
Saturday		0 1 2 3 4+	0 30
Sunday		0 1 2 3 4+	0 30

- S35** How much time during the day does your child spend on the schoolyard or playground?

_____ Hours

If your child has lunch at school, please include the time in hours spent on the playground or schoolyard after the meal.

_____ Hours

- S36** Do you know what kind of games does your child usually play on the playground/schoolyard?

☐ Yes ☐ No

If so, your child usually

- ☐ Sits down (taking, reading a book or playing sedentary games)
☐ Stands around or walk around
☐ Runs and plays a little bit
☐ Runs and plays quite a bit
☐ Runs and plays hard most of the time

Immunisations and Infections

- S37** Since the last questionnaire, has your child had one or several of the following infectious diseases:

- ☐ Chickenpox ☐ Scarlet fever ☐ Exanthematic disease
☐ Measles ☐ Mononucleosis
☐ Mumps ☐ Morbilliform
☐ Rubella pertussis ☐ Parotid disease

If yes, at what age? _____ years _____ months

Did this problem require, at least once, a consultation with a doctor?

☐ Yes ☐ No



S38 Which immunisations has your child received until now?
Add more rows as necessary

Vaccine	Date given (dd/mm/yy)