



## On the spot: which room will be the children's room?

Indoors, you are likely to find double the amount of harmful substances as outdoors. Among the sources for health problems you find: mould, tobacco smoke and formaldehyde.

You can considerably reduce the exposure of your child to harmful substances by being selective when choosing and buying the materials and furniture for the room.



### Tips!

Choose preferably a room that:

- Is easy to air and ventilate (big windows, ventilation strip)
- Is not situated too close to an open fireplace or the kitchen.
- Is draft and mould free.
- Start renovating activities well in time, preferably three months before your baby's due date. Make sure that the room and all furniture is thoroughly aired before the baby arrives.

### Tips!

- Keep walls and ceilings smooth, this avoids dirt and dust accumulation.
- Choose paint with little or no solvents (check the label) or use water based paint. Choose paint over wallpaper: clay plaster and paint let air and moist through and prevent mould.
- Do you want to use wallpaper? Washable (vinyl) paper is very convenient, but contains PVC and (chemical) softeners. Preferably use paper wallpaper and wall paste that is to be mixed with water.
- Avoid adhesives with claims of being anti-mould, as these are very likely to contain biocides.

## Walls and wood

Paint, varnish, kit and glue can contain a large amount of harmful substances. Air the room during and after any renovation activity.

Paint from before 1980 may contain lead. Undamaged lead paint can best be recoated, otherwise the paint should be removed with a (harmful) toxic paint remover. For wallpaper, choose a steam removal system over a scraper.

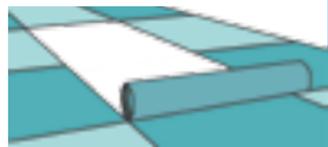


## Floors and floor covering

Babies are in contact with the floor a lot. Hard and smooth floors are easy to keep clean and dust free. Choose tile floors over linoleum in the kitchen and the bathroom. Do not use laminate with PVC, this contains chemical softeners (phthalates). Make sure when buying new laminate that it does not contain formaldehyde (ask!) and check what glue was used; sometimes this can be very toxic. Do you prefer carpet? Coconut and sisal are socially and environmentally friendly. Cotton or wool can contain traces of pesticides and paint; consider a carpet with an eco-label.

### Tips!

- Doorsteps are often sources of accumulated dust and dirt, it is better to keep the floor smooth.
- Choose wooden floors from European wood and bamboo, linoleum, cork linoleum, cork and natural rubber over tropical wood without the FSC label, laminate, vinyl cloth and synthetic rubber with a PVC layer.



### Tips!

- Ventilate and air out as much as possible - at least 2-3 times per day for 5-10 minutes. Do this to exchange contaminated indoor air with fresh air and also to avoid moulding.
- Vacuum and mop the floor regularly with chemical free products so that the baby can play safely on the floor.



## Living environment

Moisture and mould can lead to respiratory symptoms. Sources are for example: drying laundry inside, cooking, construction leaks and improper ventilation. Air fresheners do not freshen the air, but spread perfumes that can cause allergies as well as spreading solvents that can initiate smog; both cause headaches, migraines in adults and earinfections in babies.

Several substances are banned from products for small children, nevertheless these can still end up in your indoor environment through furniture, household machines and electronics.

## Furniture

Furniture, textiles and mattresses can contain a number of harmful substances. The glue, varnish or paint of furniture, even the textile itself, can contain many harmful substances.



### Tips!

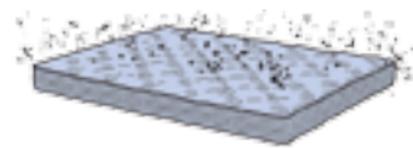
- You can buy formaldehyde free materials in ecological supply stores.
- Look for second hand furniture of real wood or furniture with one of the following eco labels: Ökotex, the European Ecolabel (Euro Flower), FSC-label and Blaue Engel. Look also for furniture made in the EU, this is often produced under stricter environmental regulation than elsewhere.
- Furniture should either connect to the floor or have enough space underneath to vacuum or mop the floor. The upper side of a closet should be easy to reach for cleaning or connect directly to the ceiling.

### Tips!

- Wash all textiles several times before use, so that you wash away the harmful substances.
- Choose smooth lamellae or shades over curtains, the latter can hold a lot of dust.
- Take a new mattress straight out of the wrapping and let it air out for a long time.
- Once in use, turn the mattress at least once a month. Protect the mattress against wear: put an mattress cover on top of the mattress under the sheet. Air the mattress regularly.
- Choose textile with an eco-label.
- Avoid textiles that are labelled with "wash before first use"; this may mean that formaldehyde is present.

## Textiles and mattresses

Mattresses that have been shipped, from for example China contain different chemicals to keep them insect and mould free. A large range of chemicals is normally used to colour textiles or make them wrinkle and stain free. Additionally, cotton textiles can contain traces of pesticides that were used during the growing process.



## Protect children – Avoid toxic chemicals!

### What are the risks for the baby's health?

Babies and young children are exposed to numerous chemicals everyday through products they use. Prolonged contact – for example while sleeping and playing on the floor – enhances penetration/inhalation into the body. Chemical substances can enter the body through the skin, but also through inhalation and through mouth contact. The baby's development is primarily regulated through hormones, often in very small quantities. If a hormone disrupting substance influences the process of development, there could be a negative, even irreversible, impact. In this way, chemicals can change the signals of the endocrine system, and in the long run, have an effect on the reproductive organs, as well as on the behaviour of the child.

Important sources for this guide: Dutch Environmental organisation, Dutch State institute for Healthcare and environment, SINlist Chemsec, a new Dutch institute for Food and Consumer products

### Why are children particularly vulnerable?

Children are more sensitive to chemical substances because their entire body (immune system, nerve system, brain, organs) is developing and not yet mature. The baby's skin is not only more vulnerable (the barrier function of the skin is not completely formed), it is also more permeable than an adult skin. A baby breathes much quicker than an adult and the lungs are not fully formed. Therefore, babies inhale more substances per kilogram of bodyweight than an adult. Moreover, the body of the baby is not yet capable of detoxing all substances properly, keeping them in the body longer and therefore prolonging the body's exposure. Substances can even reach the brain by inhaling through the nose. Therefore, certain substances that are considered "safe" by European legislation can still be harmful for small children according to scientific studies and health organisations.