

## Press Release No. 36/2013

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## Not to be sniffed at: Stuffy air in schoolrooms and the home

### Federal authorities publish comprehensive guide on children's health

Stuffy air in schools can have a direct impact on children's health. Now at the beginning of the school year, after school buildings have been remediated or refurbished, is a time when contamination of school rooms may have occurred. Since schools and child care centres are crowded spaces with many people, the levels of carbon dioxide can also rise rapidly. This is why it is especially important to ventilate rooms. Children often react more sensitively to harmful environmental influences than adults. Even though a number of chemicals have been banned in toys, the concentration of problematic substances in household dust or inside air that are emitted by everyday objects remains high. This is especially true in schoolrooms and nurseries where there are often high levels of contamination by unwanted chemicals. This and more information is in the guide on environment and children's health titled *Umwelt und Kindergesundheit – gesünder groß werden*, a free publication by four federal authorities: the Federal Office for Radiation Protection (BfS), the Federal Institute for Risk Assessment (BfR), the Robert Koch Institute (RKI) and the Federal Environment Agency (UBA). In addition to many tips on healthy indoor space, the guide has a lot of practical information on environment-related child illnesses and on preventative health measures, e.g. safe children's furniture and chairs and how to manage electromagnetic radiation from baby monitors and telephones.

Children and adolescents frequently spend more than 90 per cent of their time indoors. The new parents' guide focuses on the quality of life indoors for children, including at school. Depending on age and type of school, children spend up to eight hours in schoolrooms (even longer if they attend an after-school care centre). These rooms have notoriously excessive levels of carbon dioxide and particulate matter. Building products or new furniture can emit unwanted chemicals, after refurbishment in particular. The problem in older school buildings or buildings with faulty construction can be mould formation. Poor air quality can make children tired and cause headache, which then has an impact on their ability to concentrate and, of course, on their

learning achievement. It is therefore very important to ventilate rooms intensively and at regular intervals – not only during breaks but also during instruction. Airing rooms during breaks only is not adequate, especially in the summer, because the circulation of air between outdoors and indoors is slower when temperature differences are minimal. Healthy breathing air is at the least just as important for learning achievement as good nutrition and sufficient sleep. Children's rooms or nurseries must also be aired regularly. UBA advises against the use of any type of perfume spray or other air fresheners as these products introduce more chemicals to indoor air and merely mask poor air quality.

The parents' guide also points out that children behave differently than adults. They often crawl and play on the ground, potentially exposing themselves to larger quantities of chemicals than adults. The likelihood of ingesting chemicals can be further increased by the hand-to-mouth contact or sucking on objects which is typical of children's behaviour. Parents are reminded to take this into account when purchasing children's items. New toys should be checked for their condition: they should be avoided if they smell unpleasant or if fragrance has been added. The GS Seal for Tested Safety and the Blue Angel for environmentally friendly and low-emissions products provide good orientation when purchasing children's items. The authors of the guide discuss the important criteria to keep in mind when buying changing tables, baby tubs or children's high chairs. There is also advice on how to move house with small children.

Precautions can also be taken with baby monitors, wireless routers and mobile phones which all use radio waves, or electromagnetic fields, for data communication. There are limits on exposure levels but children may react more sensitively than adults, and they will be making use of these technologies for a lifetime. The Federal Office for Radiation Protection (BfS) therefore recommends reducing exposure to the lowest possible levels. Experts at the BfS explain in the new guide how to handle this issue without forgoing the benefits of the mobile phone or baby monitor. Features in baby monitors can vary quite a bit. The radiation from products with the Blue Angel ecolabel is lower than in other devices. One important factor is that distance to the device reduces exposure; therefore, the baby monitor should be kept as far away from the child's bed as possible. Furthermore, battery-operated models are not only more practical, they emit less radiation than those with a power adapter.

Mobile phones should be banned from the children's room in general. They are strictly not a suitable toy for infants and toddlers, for the greatest source of everyday exposure is usually the mobile phone when it is on – and it affects adults, too. Children should only make calls with a mobile phone when necessary as it is better to use the well-known fixed phone with a cord. Cordless phones are less harmful than mobile telephones. One should make sure to purchase mobile and cordless phones that are low in radiation. WLAN access points, wireless routers and the base stations of cordless telephones are ideally placed in the corridor or in a room where one spends little time. Bedrooms and nurseries are not the appropriate place for these devices. WLAN routers can be switched off when not in use, which is recommended at nighttime.

### **Further information and links**

**The brochure Umwelt und Kindergesundheit – Gesünder groß werden was issued in the framework of the Action Programme Environment and Health Germany (APUG), which brings together representatives from different federal institutions to collaborate on research**

projects and informational and educational campaigns. The brochure can be ordered or downloaded free of charge at: <http://www.umweltbundesamt.de/uba-info-medien/4322.html>

For more information on the Action Programme Environment and Health Germany, go to: <http://www.apug.de>

Schulen: Besser Lernen in gesunder Luft: a guide on better learning at schools with healthy air, is available here: <http://www.umweltbundesamt.de/uba-info-medien/3837.html>

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