



**Editorial**

**Demographic Change and Challenges in Housing**

**Challenges facing the elderly**

Demographic change means an ageing and shrinking population. The number of elderly people who are childless and therefore don't have a family support is growing. The situation is also deteriorating for elderly people who do have children, as some children may be obliged to live far from their parents for work reasons, for example. In the past, the majority of elderly people requiring care and assistance was supported by family and neighbours. However, this kind of support will break down in the near future, not only because the next generation will be smaller, but also because of the steadily growing proportion of working women in the workforce.

There is an increasing number of neighbourhoods – primarily dating from the 1960s and 1970s – which have high proportions of elderly people who remained living in their family homes when their children left home. The population density in these neighbourhoods is falling – particularly in rural districts in economically disadvantaged regions – and young families do not move in. This results in poorer local services (less consumer purchasing power in the catchment area) and spatial isolation of the elderly.

If no action is taken to address this situation, people's request for personal and individual assistance at their old age can be complied with only in the rarest cases.

There are many good reasons for developing new forms of housing for the elderly that can fill the gap for those who have no family at all to support them or whose family members are obliged to live elsewhere for work reasons. New

**Table of Contents**

**Editorial**

Demographic Change and Challenges in Housing ..... 1

**Demographic Change and New Forms of Housing for the Elderly**

Village of Eichstetten and City of Braunschweig - two German best-practice examples ..... 2

Designing Dementia-friendly Environments 3

Living life as usual - De Hogeweyk: unique form of housing for elderly people with dementia ..... 6

**Publications and Resources** ..... 9

**Literature** ..... 10

**Events Announcement** ..... 25

**Message Board** ..... 27

forms of housing must be established which also enable the residents themselves to support each other (on an informal basis) within the scope of their abilities.

**Challenges facing municipal authorities**

The development of new, humane and affordable forms of housing for the elderly is not a task the elderly should be left to tackle alone. In light of demographic change and a lack of cash in the public purse, it is also advantageous for municipal authorities to take innovative steps to counter the foreseeable trend of an increasing number of people in the need of care turning to social welfare services. In the future, municipal authorities will need to take an approach that is tailored not only to the elderly, but also to children and families. They should develop municipal action strategies which offer solutions to tackle the anticipated changes in geriatric care

and the increasing need for affordable care and assistance services. These new strategies should primarily focus on the concept of living "at home". Unless innovative developments are launched, the growing number of elderly people (particularly the very elderly) will lead to a considerable increase in demand of residential care places. The high capital and running costs associated with this phenomenon would also weigh on the budgets of municipal authorities.

### **Challenges facing the housing industry**

The housing industry is interested in making its housing stocks sufficiently attractive over the long term to enable elderly people to remain in their homes even when their level of mobility becomes increasingly restricted. Demographic change will cause a drop in the number of households in the long term, which entails the risk of rising vacancy rates. It is therefore a new challenge to develop residential products that offer multiple features such as services in close proximity to dwellings and mutual assistance in the community (to avoid vacant properties).

This kind of development coincides with the interests of most elderly people who wish to remain in a familiar neighbourhood in their old age. In quantitative terms, new forms of housing for elderly people must therefore primarily be achieved through measures designed to adapt existing housing stocks (structural alterations, facilities and fittings). In terms of the affordability of the services that are required as people become increasingly dependent on care and assistance, it should be the goal to develop community concepts that aim to achieve synergy effects in the provision of professional services and the mobilization of social networks.

*Dr. Marie-Therese Krings-Heckemeier, empirica ag, Berlin/Bonn, Germany.*  
[berlin@empirica-institut.de](mailto:berlin@empirica-institut.de)  
[bonn@empirica-institut.de](mailto:bonn@empirica-institut.de)

---

## **Village of Eichstetten and City of Braunschweig - two German best-practice examples**

*Dr. Marie-Therese Krings-Heckemeier, empirica ag, Berlin/Bonn, Germany.* [berlin@empirica-institut.de](mailto:berlin@empirica-institut.de)

### **Eichstetten / Baden-Württemberg - a village's intergenerational contract**

An initiative by the mayor of the German town of Eichstetten led to the establishment of the community association *Bürgergemeinschaft Eichstetten e.V.* in 1998. The aim of this association is to promote civic engagement and social participation. The civic association created an assisted living facility in a vacant property (a former inn) in the heart of the village, which is managed by the association itself. To enable elderly people to spend their old age in a familiar environment, the association also organizes care in people's homes in addition to the assisted living option. There is also a residential care group for dementia sufferers in the village centre.

The services offered by the association are not only aimed at the elderly. The centre of the village also houses a daytime café which acts as a meeting point for all ages, while further support is available in the form of advice and support for families and child care for primary school children during the core hours of the working day.

Designed to promote solidarity within the village, the community association currently has 500 members. Though it was initially founded solely as an outlet for civic engagement, the community association has now developed into a social enterprise with 55 employees. These comprise a mix of helpers including qualified personnel, trained local citizens, volunteers and family members.

### **Braunschweig / Lower Saxony – a municipal authority takes on the management of a multi-generational neighbourhood**

The successful creation of a district for young and old is significantly dependent on the willingness of the municipal authorities to provide assistance and to ensure that the necessary prerequisites are in place. The example of Braunschweig reveals the key prerequisites for such success.

By dividing the area into various zones with specific types of buildings and differently designed public spaces, the authorities have created the basic conditions required for the planned neighbourhood for young and old. The residential properties in the form of townhouses are primarily aimed at families seeking a house in the city with its own outdoor space (garden and/or roof terrace). The flats in multi-family houses with elevators are designed to meet the needs of the 50+ generation.

The residents were involved in the planning process from a very early stage. The goal was to tailor the buildings to the inhabitant's needs right down to the last details while also enabling them to respond to changes in their lifestyles and requirements in the long term without having to move to another area (e.g. by offering the possibility to add elevators to urban single-family homes at a later date at a reasonable cost). This policy is supported by a design that ensures easy accessibility for disabled people.

---

## Designing Dementia-friendly Environments

*Dr.-Ing. Gesine Marquardt, Head of the Junior Researcher's Group "Architecture under demographic change" at the Technische Universität Dresden, Germany. [gesine.marquardt@tu-dresden.de](mailto:gesine.marquardt@tu-dresden.de)*

### Introduction

The rising life-expectancy promises a compression of morbidity and the acquisition of several additional years in good health [1]. However, at the same time the risk of developing dementia increases by age. Up to the age of 69, less than one percent of the population is affected. Over the age of 90 however, already thirty-five percent have developed some type of dementia [2]. The medical professions have controversial views on the question whether dementia is an inevitable process at the end of life that only the individual's prior death may prevent. The symptoms of dementia occur slowly over time, affecting memory, orientation, attention, language and problem-solving. As the cognitive decline progresses, the individual's identity disappears and comprehensive supervision and care becomes necessary [3]. In absence of effective medical therapies the individual's quality of life has been focused by researchers of various professional backgrounds, among them architects, striving for the design of therapeutic environments.

### Goals in Dementia-friendly Design

People with dementia are especially subject to their environments. The ecological gerontology explains this relationship through established models such as the person-environment-fit. This model describes the degree to which a person is compatible with their environment, a prerequisite to using one's full potential [4]. The Environmental Docility Hypothesis, however, indicates that people who are subject to restrictions on their health or cognitive ability, such as people with dementia, cannot always adapt the environment to their specific needs [5]. This implies that people with dementia are more dependent on their external environment.

In their early stages, people with dementia may encounter sudden disturbances in their orientation, rendering them unable to return home from a place nearby, such as the grocery store. Environmental information that provide information on where they are and on how to find their way home are very much needed then. In later stages, people with dementia are subject to a much greater loss of understanding places and their meaning. They may feel hungry but do not know where to find food in their home, or where the dining room in a nursing home is. Environmental cues, such as strong color contrasts that increase the visibility of objects, or signage using symbols and letters, are helpful. For example, in the dining room, they must be able to perceive that this is a room where food is available or will be served - otherwise they just may wander on, getting frustrated and restless, maybe even aggressive. Often, the ability to express oneself through language may already be limited. Therefore, the well-being, functionality and behaviour of people with dementia needs to be supported through dementia-friendly design.

## The Home Environment

Healthcare and nursing professionals agree that staying in their individual home environment has positive effects on people with dementia. Within their daily routines they seem to maintain their functionality over a longer period of time, compared to people in long-term care environments [6, 7]. Research has shown that adapting the home environment to physical needs that come with old age is successful for maintaining independence as well as for preventing falls, a great risk to older people's health. Design guidance for a dementia-friendly home environment, such as using signs and labels as cues or door chimes to prevent elopement is scarce, but available [8]. However, most caregivers do not seem to know how to adapt the home. Also, they are very hesitant towards manifesting the presence of dementia in their home by environmental adaptations [9].

But not all aspects of a dementia-friendly design in the home have to be visible. A study using the architectural methodology space syntax showed a relationship between the spatial layout of the home and the successful performance of the resident's activities of daily living [10]. The results imply that enclosed rooms with a clearly legible meaning and function (such as kitchen, hallway, living room) might be better memorized and associated with the spatial layout of the home, resulting in better performance. Floor plan designs that are very open and interconnected might account for difficulties in the spatial representation of people with dementia, increasing the level of dependency on a caregiver. This means, that adapting the home to the needs of people with dementia also encompasses the concentration of spaces and enhancing the cognition of their assigned meaning. Options could include separating the circulation area from the living or dining room by using different flooring, rendering them very distinct from another. Using articulate colours, lighting, and, maybe decorations, might also contribute to a clearer legibility of the meaning and the function of rooms.

However, with the progressing nature of dementia and the increasing severity of symptoms such as sleep disorders, disorientation, and incontinence, for the majority of people with dementia relocation to a nursing home becomes necessary at some point in their lives.

## Nursing Home Environments

According to research studies, prevalence of dementia in nursing homes admissions was found 50% [11], among residents 62% [12]. Therefore, dementia-friendly design should be a goal in all designs for care homes. Evidence of a relationship between the design features of these settings and people with dementia's behavior, cognition, function, well-being, social abilities, orientation, and care outcomes has been well established in several studies [13]. For example, physical features such as a small group size, a residential design, personalization, and privacy have been empirically linked to a higher level of independence, less agitation and aggression, and less psychosis. Thus, a dementia-friendly and therapeutic environment has a non-institutional and familiar appearance, supports autonomy, provides sensory stimulation and promotes social interaction.

Special emphasis in nursing home designs needs to be placed on ways to support the residents' orientation. To maintain their quality of life, their ability to orient themselves within their environment is a prerequisite. Interventions that promote wayfinding can be implemented on two levels: on the level of the environmental cues, which comprise signage, furnishings, lighting, colours, and also on the level of the design of the floor plan's layout [14]. Research studies showed that the spatial layout of the environment is correlated with the residents' wayfinding abilities and vitality. Small units with about ten residents always provide better orientation than larger entities [15]. One study identified the layout of the circulation system as a most determining environmental factor on the resident's wayfinding abilities [16]: in straight circulation systems, residents were able to find their way better than in any layout that featured a shift in direction, such as L-shapes. Numerous shifts in direction, such as continuous paths around an inside courtyard, even further interfered with the resident's wayfinding abilities. These findings are the result of changes in people with dementias' spatial representation. With advancing dementia, retrieving a mental visual image of a place they cannot see, becomes increasingly difficult, if not impossible. Consequently, they become unable to locate this place. Concerning the layout of the circulation system, the importance of direct visual access to all places relevant for the residents becomes evident. However, implementing these findings in larger units would lead to long hallways, which conflicts with recommendations from architectural practice and therapeutic design goals such as creating a homelike, non-institutional appearance. Also, sensory stimulation through

natural light is most important and requires the hallways to intersect with open spaces. Therefore, spatial reference points with a clearly legible assigned meaning and function need to be integrated into the floor plan design. Reference points feature distinctions in form, function, and meaning from other environmental elements in the home. Examples are displays of household articles people with dementia may have used when they were twenty to thirty years old. This period of their life is rooted in the long-term-memory and many items still can be used intuitively. Of special importance in the floor plan design is the provision of a central spatial anchor point, such as a live-in kitchen or the proximity of the living and dining room, which greatly supports the residents' wayfinding abilities.

These findings imply that a therapeutic environment requires the dementia-friendly spatial design of floor plan layouts. The need to combine two contrary goals in design constitutes a challenge for architects: To allow for visual access to all relevant places, and simultaneously to create boundaries to separate spaces one from another in order to render them architecturally legible.

## Conclusions

Environments for people with dementia need to incorporate a dementia-friendly design which provides sensory stimulation, accommodates their specific changes in spatial representation, and which communicates spatial information to them. Numerous studies support a relationship between design features of the spatial environment and behavioral outcomes of people with dementia. However, meta-knowledge of the research evidence needs to be readily available during the design process undertaken by architects. Only this way it will be possible to integrate the evidence stemming from research studies into architectural practice. Further, it is especially important not only to integrate the research evidence into the designs, but also to evaluate buildings and environments that are the result of an evidence-based design process. Concluding, it can be stated that a holistic design approach for dementia-friendly environments which is based on evidence from research needs to be further developed. Simultaneously, the results need continuous evaluation. Particularly with regard to the aging society, advances in this field are necessary.

## References

- [1] Ziegler, U., & Doblhammer, G. (2005). Steigende Lebenserwartung geht mit besserer Gesundheit einher. *Demografische Forschung aus erster Hand*, 2(1).
- [2] Sütterlin, S., Hoßmann, I., Klingholz, R., & Berlin-Institut für Bevölkerung und Entwicklung. (2011). *Demenz-Report: Wie sich die Regionen in Deutschland, Österreich und der Schweiz auf die Alterung der Gesellschaft vorbereiten können*. Berlin-Institut für Bevölkerung und Entwicklung.
- [3] Förstl, H., Burns, A., & Zeffass, R. (2003). Alzheimer-Demenz: Diagnose, Symptome und Verlauf. *Lehrbuch der Gerontopsychiatrie und-psychotherapie*. Thieme Verlag, Stuttgart-New York, 324-345.
- [4] Lawton M.P., Nahemow, L.: Ecology and the aging process. In: Eisdorder C., Lawton M.P. (Eds.) *Psychology of adult development and aging*. Washington: American Psychological Association; 1973.
- [5] Lawton M.P., Simon, B.: The ecology of social relationships in housing for the elderly. *The Gerontologist*. 1968, 8: 108-115
- [6] Van Hoof, J., Kort, H.S.M., van Waarde, H., & Bloom, M.M. (2010). Environmental Interventions and the Design of Homes for Older Adults With Dementia: An Overview. *American Journal of Alzheimer's Disease and Other Dementias*, 25(3), 202-232.
- [7] Wahl, H.W., Fänge, A., Oswald, F., Gitlin, L.N., & Iwarsson, S. (2009). The Home Environment and Disability-Related Outcomes in Aging Individuals: What Is the Empirical Evidence? *The Gerontologist*, (49)3, 355-367.
- [8] Warner, M.L. (2000). *The complete guide to Alzheimer's Proofing Your Home*. West Lafayette, Ind.: Purdue Univ. Press
- [9] Marquardt, G., Johnston, D., Black, B., Morrison, A., Rosenblatt, A., Lyketsos, C., & Samus, Q.M. (2011). A descriptive study of Home Modifications for People with Dementia and barriers to implementation. *Journal of Housing for the Elderly*, 25(3), 258-273.

- [10] Marquardt, G., Johnston, D., Black, B., Morrison, A., Rosenblatt, A., Lyketsos, C., & Samus, Q.M. (2011). Association of the spatial layout of the home and ADL abilities among older adults with dementia. *American Journal of Alzheimer's Disease & Other Dementias*, 26(1), 51-57.
- [11] Magaziner, J., German, P., Zimmerman, S. I., Hebel, J. R., Burton, L., Gruber-Baldini, A. L., Kittner, S. (2000). The prevalence of dementia in a statewide sample of new nursing home admissions aged 65 and older. *The Gerontologist*, 40(6), 663-672.
- [12] Matthews, F. E., & Dening, T. (2002). Prevalence of dementia in institutional care. *The Lancet*, 360(9328), 225-226.
- [13] Marquardt, G., Büter, K. & Motzek, T. (2014). Impact of the Design of the Built Environment on People With Dementia - An Evidence-based Review. Erscheint in: *Health Environments Research and Design Journal* (paper accepted).
- [14] Marquardt, G. (2011). Wayfinding for People With Dementia – A Review of the Role of Architectural Design. *Health Environments Research and Design Journal*, 4(2), 22-41.
- [15] Verbeek, H., Zwakhalen, S. M. G., van Rossum, E., Ambergen, T., Kempen, G. I. J. M., & Hamers, J. P. H. (2010a). Dementia care redesigned: Effects of small-scale living facilities on residents, their family caregivers, and staff. *Journal of the American Medical Directors Association*, 11(9), 662-670.
- [16] Marquardt, G., Schmiege, P. (2009). Dementia-friendly Architecture: Environments that facilitate wayfinding in nursing homes. *American Journal of Alzheimer's Disease & Other Dementias*, (24)4, 333-340.

---

## Living life as usual - De Hogeweyk: unique form of housing for elderly people with dementia

Sanne van de Graaf, Vivium Zorggroep regio Weesp, Hogeweyk en Oversingel, Netherlands.  
[s.vandegraaf@vivium.nl](mailto:s.vandegraaf@vivium.nl)

### De Hogeweyk exceeds expectations

It is quite a difference - from a 'block of concrete' with four floors to De Hogeweyk. The outside of the old building stood in stark contrast with the lifestyle concept that was applied inside. This contrast had to be eliminated and the construction of De Hogeweyk was started for this very reason. The final result is a neighbourhood where life and wellbeing are just as important as care and where the label of 'institution' is no longer applicable.

Jannette Spiering is director of De Hogeweyk. "Ten years ago, we had our first thoughts about dismantling or renovating the old building into a care home that meets contemporary requirements", she explains. "The first plans that we looked at became obsolete because of the fact that our capacities in Weesp became exhausted. At the time, Vivium Zorggroep were building in Huizen and, as a result, sixty residents and sixty staff members moved there. When I was appointed director there was a second plan on the table but it didn't support enough the vision that had, by that time, been implemented. It wasn't on an adequate scale to be able to be exploited responsibly, neither. Conversations about the current neighbourhood began about seven years ago. The basic starting point for the Programme of Requirements was our vision of normal living for elderly dementia sufferers. In addition, we wanted to get away from the traditional 'care home' label. Small-scale was a *must*; the houses had to be just ordinary homes. We also wanted to keep all the facilities that we already had, including a café, restaurant, supermarket and meeting rooms. Finally, there had to be diversity within the houses to suit the lifestyles and it was important to build bungalows in order to encourage the independence of the residents; they had to be able to step out the front door and be outside."

De Hogeweyk is open to anyone, not only to the residents and their families. "We want to be a neighbourhood that is as ordinary as possible", says the facility manager, Eloy van Hal. "We want to attract in particular other people because our residents can no longer leave the neighbourhood. Our facilities are therefore open to people from outside, too." "We do it slightly different to the Ministry of Health, Welfare and Sport", adds Jannette Spiering. "They advocate small-scale projects in residential areas for up to 50 residents. But small-scale alone does not do justice to providing those with dementia with a normal life. Residents cannot go outdoors safely in a neighbourhood with cars driving through it or in an area where they may get lost. These people are incapable of living independently and that is exactly why they have been assessed as requiring nursing home care. The Ministry of Health, Welfare and Sport's approach creates 'golden cages' in ordinary neighbourhoods and that is very different to integration. You deprive the residents of the opportunity to do ordinary things and you cannot assume that the rest of the area will provide voluntary aid. That may work in certain regions or areas but is certainly not the case everywhere. So we say: come to us, instead of the other way around. All of the facilities were installed right at the entrance to De Hogeweyk and this lowers the threshold to use the facilities for the residents and, simultaneously, guarantees their privacy."

### Facts and figures of De Hogeweyk

Start of demolition 1 <sup>st</sup> phase	October 2006
Taken into use 1 <sup>st</sup> phase	April 2008
Demolition 2 <sup>nd</sup> phase	July 2008
Delivery of complex	September 2009
Housing put to use	December 2009
Total surface area of site	15,310 m <sup>2</sup> (of which 7,702 m <sup>2</sup> are uncovered area)
Gross surface area/home	320 m <sup>2</sup> (of which 65 to 95 m <sup>2</sup> are lounge and 16 to 20 m <sup>2</sup> are bedroom)
Total number of residents	152
Total number of houses	23

However, it is not just integration that is 'upside down' but also care and living. Eloy van Hal: "From the resident's perspective, we put the emphasis on living and wellbeing. Most of the environments in which dementia sufferers end up living do not look at all like real homes. Residents are still treated as though they were ill. Our residents, of course, receive the treatment they need but the emphasis lies on normal living. Just look at a hospital: visitors to hospitals do not ask about medicine but want to know whether the food is nice. These are the most important things in terms of day-to-day experience and these are our top priorities."

"It took much staff for quite a while to get used to the development and start of this vision of normal living", says Jannette Spiering. "An extra appeal was made to all staff and carers, in particular, on how one can provide care as 'normal' as possible. No one washes himself with water from a metal bowl at home. And do beds really have to be made by half past eight? At home you might do your shopping and then go and have a cup of coffee. The beds can wait. This requires a different mentality and demands more from our staff than it would be expected in an ordinary nursing home. As soon as people work here, however, and are seized by the vision, they get right behind it. The integral method that is necessary to substantiate the vision at De Hogeweyk is less suitable for a staff with a heavily task-focussed approach or who concentrate more on the technical aspects of caring."

### Vision is always the guiding principle

It is not only the staff but also the management who are required to do things slightly different. Jannette Spiering believes that this different leadership style principally means that the well thought-out vision is recognised and is implemented by everybody. "We have modified the organisational structure at De Hogeweyk. This is an integral concept: living, wellbeing and care are interwoven in such a way that one cannot exist without the other. This is certainly a challenge. It means dealing respectfully with each other's professions because of the fact that each profession may impact on another one. It

is also impossible to develop something without the others." Eloy van Hal agrees; "The vision is the basis of everything you do, it forms the guiding principle. This eliminates many discussions in advance because it either fits into the vision or it doesn't." Jannette Spiering: "This applies inside the walls but also to the link to the outside world. These links must also fit for ordinary living. Everything that can be done in an ordinary neighbourhood must also be possible here. This also leads us to coming up against issues that would, perhaps, be more easily solved in a nursing home or institution. We opted for an outdoor area that was not covered, as this fits our vision. This, however, led to certain discussions, such as those held with the Client Council. They were concerned that the residents would not be adequately protected and asked what would happen if someone forgot to put on his coat. Our vision is the guiding principle at exactly this kind of moment. An elderly person suffering from dementia is not ill. We, as the organisation, have to support this. So, as soon as a member of the staff sees a resident walking around without a coat on a cold or wet day – and that will not happen very often as all of the carers are very aware of this – the employee will go to the resident and bring him back inside to get his coat. And if there is an appointment at the hairdressers on a day when there are 10 cm of snow, you simply change the appointment. We often have to explain why we hold on so strongly to the notion of normal."

The management is over the moon about how De Hogeweyk has developed. Jannette Spiering: "It is even better than I had expected. As far as I am concerned, we could have had another ten or fifteen extra homes. There are always things that you would like to have; more diversity in the facades, a more attractive finish. But there are budgetary limits. The neighbourhood is put to even better use than expected. This is particularly clear due to the enormous feeling of freedom experienced by the residents and visitors. They are free to go and make use of whatever they like, whenever they like. For example, every year we have a couple of festival weeks for the residents in the summer. This year, there were all sorts of activities on the square, including a performance by a brass band. Often, more than 80 residents attended this event and it was extremely congenial." Eloy van Hal: "There was one activity - painting with Friends of Art from Weesp. Residents started painting, became very involved in their work and ended up doing things they hadn't done for years. This environment also helps the visitors and families who come to visit. They do not have to sit stiffly in the rooms but can walk around the neighbourhood and pop out to the shops with a family member or go and sit by the pond. This is hugely beneficial when you consider that nursing home residents in the Netherlands go outside for an average of 96 seconds per day and 60% of them never receive visitors.<sup>1</sup>"

### Recognition and appreciation of lifestyle

People who suffer from dementia lose their grip on life. This is accompanied by restlessness. Admission into a nursing home must, therefore, signify as few changes as possible to the previous life. It must be very similar to what the residents were used to at home. This means small-scale houses that look like 'home'. Life there must also be virtually identical to the resident's previous life. This may concern 'big', important issues such as religion and culture but also the smaller things such as set-up, music, daily schedule and customs.

#### Hogeweyk's seven lifestyles

- 1) **Traditional:** for people whose pride and identity came from carrying out a traditional profession or managing a small business
- 2) **City:** for people who were at the centre of urban life
- 3) **'Het Gooi':** for people who attach importance to correct manners, etiquette and external appearance
- 4) **Cultural:** for people who love art and culture.
- 5) **Christian:** practising your own religion forms an important part of daily life
- 6) **Indian:** life in India is a collective memory and determines the daily routines to a large extent
- 7) **Homely:** caring for the family and household are important, just like a traditional lifestyle

<sup>1</sup> Source: Stichting Alzheimer Nederland (Dutch Alzheimer Association)



Hogewey's lifestyle vision is all about recognising like-mindedness. This vision was verified by the research agency Motivaction, which distinguished between seven streams in society. This led to the seven lifestyles at Hogewey (see frame). "Once we had established the basic principles, we set up one of our offices according to this vision in 1993", explains Yvonne van Amerongen, Quality & Innovation executive. "It soon emerged as a success and we knew, after the very first evaluation, that we didn't want anything else any longer."

All the facets of this vision can be implemented in De Hogeweyk. Residents are able to go outside alone and this not only contributes to their health but also to the feeling of being 'at home'. "De Hogeweyk is a small society", says Yvonne van Amerongen. "With a supermarket, a café, restaurant, theatre and a plethora of associations. Medical care, of course, is always on hand and the houses in this small society are equipped according to lifestyles. The atmosphere in the neighbourhoods also varies so that each resident can feel at home somewhere."

---



## Publications and Resources

**Insulation becomes increasingly urgent in the face of climate change. Polystyrene insulation materials or backings of curtains and upholstery fabrics or coatings of casing plastics will not be allowed to contain the flame retardants HBCD any more.**

In May 2013, the chemical hexabromocyclododecane, HBCD, has been identified as a persistent organic pollutant by the international Stockholm Convention, e.g. a chemical that is difficult to degrade in the environment. This means that in the near future there will be to a global trade and ban on use of this chemical. HBCD is currently still the economically most important flame retardant for insulation material made of polystyrene. The German Federal Environment Agency (UBA) has compiled, why this substance should no longer be used, which are the expected transitional periods that apply in the EU, what alternatives exist and how HBCD-containing insulation materials must be disposed.

[http://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/faq\\_hbcd.pdf](http://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/faq_hbcd.pdf) 

## Literature

In this section we will provide a collection of recent housing and health publications from a variety of backgrounds. Literature published in German or French, respectively, is indicated with the German flag  or the French flag .

If you have suggestions for interesting journals that we should screen for the literature collection, please let us know!

### Table of Topics

Allergies and Respiratory Diseases .....	10
Indoor Air .....	11
Mould and Dampness .....	15
Light and Radiation .....	16
Smoking / Environmental Tobacco Smoke .....	16
Housing and Ageing Society .....	18
Home Safety .....	18
Housing Conditions .....	20
Housing and Mental Health .....	21
Thermal Comfort / Energy .....	21
Urban Planning / Built Environment .....	22
Social Inequality .....	23
Noise .....	24
Miscellaneous .....	25

### Allergies and Respiratory Diseases

[House dust-mite allergen exposure is associated with serum specific IgE but not with respiratory outcomes.](#)

Bakolis I, Heinrich J, Zock JP, Norbäck D, Svanes C, Chen CM, Accordini S, Verlato G, Olivieri M, Jarvis D.

Indoor Air. 2014 Jun 11. doi: 10.1111/ina.12137. [Epub ahead of print]

[Annual average ambient particulate matter exposure estimates, measured home particulate matter, and hair nicotine are associated with respiratory outcomes in adults with asthma.](#)

Balmes JR, Cisternas M, Quinlan PJ, Trupin L, Lurmann FW, Katz PP, Blanc PD.

Environ Res. 2014 Feb;129:1-10.

[Increased ultrafine particles and carbon monoxide concentrations are associated with asthma exacerbation among urban children.](#)

Evans KA, Halterman JS, Hopke PK, Fagnano M, Rich DQ.

Environ Res. 2014 Feb;129:11-9.

[A simulation model of building intervention impacts on indoor environmental quality, pediatric asthma, and costs.](#)

Fabian MP, Adamkiewicz G, Stout NK, Sandel M, Levy JI.

J Allergy Clin Immunol. 2014 Jan;133(1):77-84.

[Meta-analysis of air pollution exposure association with allergic sensitization in European birth cohorts.](#)

Gruzjeva O, Gehring U, Aalberse R, Agius R, Beelen R, Behrendt H, Bellander T, Birk M, de Jongste JC, Fuertes E, Heinrich J, Hoek G, Klümper C, Koppelman G, Korek M, Krämer U, Lindley S, Mölter A, Simpson A, Standl M, van Hage M, von Berg A, Wijga A, Brunekreef B, Pershagen G.

J Allergy Clin Immunol. 2014 Mar;133(3):767-76.e7.

[Do newly built homes affect rhinitis in children? The ISAAC phase III study in Korea.](#)

Hahm MI, Chae Y, Kwon HJ, Kim J, Ahn K, Kim WK, Lee SY, Park YM, Han MY, Lee KJ, Lee HY, Min I.  
Allergy. 2014 Apr;69(4):479-87.

[Application of a novel socioeconomic measure using individual housing data in asthma research: an exploratory study.](#)

Harris MN, Lundien MC, Finnie DM, Williams AR, Beebe TJ, Sloan JA, Yawn BP, Juhn YJ.  
NPJ Prim Care Respir Med. 2014 Jun 26;24:14018.

[Cotinine in children admitted for asthma and readmission.](#)

Howrylak JA, Spanier AJ, Huang B, Peake RW, Kellogg MD, Sauers H, Kahn RS.  
Pediatrics. 2014 Feb;133(2):e355-62.

[The indoor environment and inner-city childhood asthma.](#)

Kanchongkittiphon W, Gaffin JM, Phipatanakul W.  
Asian Pac J Allergy Immunol. 2014 Jun;32(2):103-10.

[Sensitization to cockroach allergens in the urban atopic populations living in Campania district \(southern Italy\). A multicenter study.](#)

Liccardi G, Baldi G, Ciccarelli A, Cutajar M, D'Amato M, Gargano D, Giannattasio D, Leone G, Lo Schiavo M, Madonna F, Montera C, Piccolo A, Pio A, Russo M, Stanziola A, D'Amato G.  
Eur Ann Allergy Clin Immunol. 2014 Jan;46(1):12-6.

[Respiratory allergen from house dust mite is present in human milk and primes for allergic sensitization in a mouse model of asthma.](#)

Macchiaverni P, Rekima A, Turfkruyer M, Mascarell L, Airouche S, Moingeon P, Adel-Patient K, Condino-Neto A, Annesi-Maesano I, Prescott SL, Tulic MK, Verhasselt V.  
Allergy. 2014 Mar;69(3):395-8. doi: 10.1111/all.12332. Epub 2013 Dec 14.

[Environmental exposures and asthma morbidity in children living in urban neighborhoods.](#)

Matsui EC.  
Allergy. 2014 May;69(5):553-8.

[Is being homeless or worried about housing associated with allergies and skin problems?](#)

Shiue I.  
Ann Allergy Asthma Immunol. 2014 Apr;112(4):384-6.

[Prevalence, severity and risk factors of asthma, rhinitis and eczema in a large group of Chinese schoolchildren.](#)

Song N, Mohammed S, Zhang J, Wu J, Fu C, Hao S, Guan J, Yan X.  
J Asthma. 2014 Apr;51(3):232-42.

[Healthy homes: in-home environmental asthma intervention in a diverse urban community.](#)

Turcotte DA, Alker H, Chaves E, Gore R, Woskie S.  
Am J Public Health. 2014 Apr;104(4):665-71.

[Environmental remediation in the treatment of allergy and asthma: latest updates.](#)

Wright LS, Phipatanakul W.  
Curr Allergy Asthma Rep. 2014 Mar;14(3):419. **Review. Free Article.**

## Indoor Air

[Polybrominated diphenyl ethers in UK human milk: implications for infant exposure and relationship to external exposure.](#)

Abdallah MA, Harrad S.  
Environ Int. 2014 Feb;63:130-6.

[Environment and Health in Children Day Care Centres \(ENVIRH\) - Study rationale and protocol.](#)

Araújo-Martins J, Carreiro Martins P, Viegas J, Aelenei D, Cano MM, Teixeira JP, Paixão P, Pupoila AL, Leiria-Pinto P, Pedro C, Rosado-Pinto J, Annesi-Maesano I, Neuparth N.  
Rev Port Pneumol. 2014 Apr 16. pii: S0873-2159(14)00036-1. [Epub ahead of print]

[Personal exposure measurement of students to various microenvironments inside and outside the college campus.](#)

Ashok V, Gupta T, Dubey S, Jat R.  
Environ Monit Assess. 2014 Feb;186(2):735-50.

[Concentrations of polybrominated diphenyl ethers \(PBDEs\) in central air-conditioner filter dust and relevance of non-dietary exposure in occupational indoor environments in Greece.](#)

Besis A, Katsoyiannis A, Botsaropoulou E, Samara C.  
Environ Pollut. 2014 May;188:64-70.

[Source attribution of personal exposure to airborne polycyclic aromatic hydrocarbon mixture using concurrent personal, indoor, and outdoor measurements.](#)

Choi H, Spengler J.  
Environ Int. 2014 Feb;63:173-81.

[Concentrations of polybrominated diphenyl ethers in matched samples of indoor dust and breast milk in New Zealand.](#)

Coakley JD, Harrad SJ, Goosey E, Ali N, Dirtu AC, Van den Eede N, Covaci A, Douwes J, Mannetje A.  
Environ Int. 2013 Sep;59:255-61.

[Association of mechanical ventilation and flue use in heaters with asthma symptoms in Japanese schoolchildren: a cross-sectional study in Sapporo, Japan.](#)

Cong S, Araki A, Ukawa S, Ait Bamai Y, Tajima S, Kana awa A, Yuasa M, Tamakoshi A, Kishi R.  
J Epidemiol. 2014;24(3):230-8. *Free Article.*

[Biomass fuel use and the exposure of children to particulate air pollution in southern Nepal.](#)

Devakumar D, Semple S, Osrin D, Yadav SK, Kurmi OP, Saville NM, Shrestha B, Manandhar DS, Costello A, Ayres JG.  
Environ Int. 2014 May;66:79-87.

[Evaluation of pyrethroid exposures in pregnant women from 10 Caribbean countries.](#)

Dewailly E, Forde M, Robertson L, Kaddar N, Laouan Sidi EA, Côté S, Gaudreau E, Drescher O, Ayotte P.  
Environ Int. 2014 Feb;63:201-6.

[Health risks caused by short term exposure to ultrafine particles generated by residential wood combustion: a case study of Temuco, Chile.](#)

Díaz-Robles LA, Fu JS, Vergara-Fernández A, Etcharren P, Schiappacasse LN, Reed GD, Silva MP.  
Environ Int. 2014 May;66:174-81.

[Residential characteristics and household risk factors and respiratory diseases in Chinese women: the Seven Northeast Cities \(SNEC\) study.](#)

Dong GH, Qian ZM, Wang J, Trevathan E, Ma W, Chen W, Xaverius PK, Buckner-Petty S, Ray A, Liu MM, Wang D, Ren WH, Emo B, Chang JJ.  
Sci Total Environ. 2013 Oct 1;463-464:389-94.

[Health benefits of particle filtration.](#)

Fisk WJ.  
Indoor Air. 2013 Oct;23(5):357-68. *Review.*

[\[The occurrence of plasticisers \(phthalates\) in communal facilities under special consideration of results from LUPE 3\].](#)

Fromme H, Lahrz T, Kraft M, Fembacher L, Burghardt R, Sievering S, Dietrich S, Völkel W.  
Gesundheitswesen. 2013 Nov;75(11):730-4. 

[An exposure-based framework for grouping pollutants for a cumulative risk assessment approach: case study of indoor semi-volatile organic compounds.](#)

Fournier K, Glorennec P, Bonvallot N.  
Environ Res. 2014 Apr;130:20-8.

[Quantitative assessments of indoor air pollution and the risk of childhood acute leukemia in Shanghai.](#)  
Gao Y, Zhang Y, Kamijima M, Sakai K, Khalequzzaman M, Nakajima T, Shi R, Wang X, Chen D, Ji X, Han K, Tian Y.

Environ Pollut. 2014 Apr;187:81-9.

[Chinese standard requirements on indoor environmental quality for assessment of energy-efficient buildings.](#)

Guo-Zhu Li G-Z, Qing-Qin Wang Q-Q, Wang J-L.

Indoor and Built Environment. 2014 Apr;2:194-200.

[Indoor exposure to particulate matter and age at first acute lower respiratory infection in a low-income urban community in Bangladesh.](#)

Gurley ES, Salje H, Homaira N, Ram PK, Haque R, Petri WA Jr, Bresee J, Moss WJ, Luby SP, Breyse P, Azziz-Baumgartner E.

Am J Epidemiol. 2014 Apr 15;179(8):967-73.

[Distribution of polybrominated diphenyl ethers and dust particle size fractions adherent to skin in indoor dust, Pretoria, South Africa.](#)

Kefeni KK, Okonkwo JO.

Environ Sci Pollut Res Int. 2014 Mar;21(6):4376-86.

[Toxicity assessment of air-delivered particle-bound polybrominated diphenyl ethers.](#)

Kim JS, Klösener J, Flor S, Peters TM, Ludewig G, Thorne PS, Robertson LW, Luthe G.

Toxicology. 2014 Mar 20;317:31-9.

[Oxidative potential of smoke from burning wood and mixed biomass fuels.](#)

Kurmi OP, Dunster C, Ayres JG, Kelly FJ.

Free Radic Res. 2013 Oct;47(10):829-35.

[Endotoxin levels in homes and classrooms of Dutch school children and respiratory health.](#)

Jacobs JH, Krop EJ, de Wind S, Spithoven J, Heederik DJ.

Eur Respir J. 2013 Aug;42(2):314-22.

[Risk assessment of inhalation exposure to polycyclic aromatic hydrocarbons in school children.](#)

Jyethi DS, Khillare PS, Sarkar S.

Environ Sci Pollut Res Int. 2014 Jan;21(1):366-78.

[Environmental risk factors and lung diseases in children: from guidelines to health effects.](#)

La Grutta S, Indinnimeo L, di Coste A, Ferrante G, Landi M, Pelosi U, Rusconi F.

Early Hum Dev. 2013 Oct;89 Suppl 3:S59-62.

[Identification of lead sources in residential environments: Sydney Australia.](#)

Laidlaw MA, Zahran S, Pingitore N, Clague J, Devlin G, Taylor MP.

Environ Pollut. 2014 Jan;184:238-46.

[The impact of smoke-free laws on asthma discharges: a multistate analysis.](#)

Landers G.

Am J Public Health. 2014 Feb;104(2):e74-9.

[Childhood exposure to DEHP, DBP and BBP under existing chemical management systems: a comparative study of sources of childhood exposure in Korea and in Denmark.](#)

Lee J, Lee JH, Kim CK, Thomsen M.

Environ Int. 2014 Feb;63:77-91.

[Drying, burning and emission characteristics of beehive charcoal briquettes: an alternative household fuel of Eastern Himalayan Region.](#)

Mandal S, Kumar A, Singh RK, Kundu K.

J Environ Biol. 2014 May;35(3):543-8.

[Remediating buildings damaged by dampness and mould for preventing or reducing respiratory tract symptoms, infections and asthma \(Review\).](#)

Sauni R, Uitti J, Jauhiainen M, Kreiss K, Sigsgaard T, Verbeek JH.

Evid Based Child Health. 2013 May;8(3):944-1000. [Review.](#)

[Novel childhood asthma genes interact with in utero and early-life tobacco smoke exposure.](#)

Scholtens S, Postma DS, Moffatt MF, Panasevich S, Granel R, Henderson AJ, Melén E, Nyberg F, Pershagen G, Jarvis D, Ramasamy A, Wjst M, Svanes C, Bouzigon E, Demenais F, Kauffmann F, Siroux V, von Mutius E, Ege MJ, Braun-Fahrlander C, Genuneit J; GABRIELA study group, Brunekreef B, Smit HA, Wijga AH, Kerkhof M, Curjuric I, Imboden M, Thun GA, Probst-Hensch N, Freidin MB, Bragina Elu, Deev IA, Puzyrev VP, Daley D, Park J, Becker A, Chan-Yeung M, Kozyrskyj AL, Pare P, Marenholz I, Lau S, Keil T, Lee YA, Kabesch M, Wijmenga C, Franke L, Nolte IM, Vonk J, Kumar A, Farrall M, Cookson WO, Strachan DP, Koppelman GH, Boezen HM. *J Allergy Clin Immunol.* 2014 Mar;133(3):885-8. [Free Article.](#)

[Indoor exposure to particulate matter and age at first acute lower respiratory infection in a low-income urban community in Bangladesh.](#)

Gurley ES, Salje H, Homaira N, Ram PK, Haque R, Petri WA Jr, Bresee J, Moss WJ, Luby SP, Breyse P, Azziz-Baumgartner E. *Am J Epidemiol.* 2014 Apr 15;179(8):967-73.

[Implications of different residential lead standards on children's blood lead levels in France: predictions based on a national cross-sectional survey.](#)

Oulhote Y, LeTertre A, Etchevers A, Le Bot B, Lucas JP, Mandin C, Le Strat Y, Lanphear B, Glorenec P. *Int J Hyg Environ Health.* 2013 Nov;216(6):743-50.

[Persistence of socioeconomic differences in adolescents' environmental tobacco smoke exposure in Finland: 1991-2009.](#)

Raisamo SU, Doku DT, Heloma A, Rimpelä AH. *Scand J Public Health.* 2014 Mar;42(2):184-93.

[Novel childhood asthma genes interact with in utero and early-life tobacco smoke exposure.](#)

Scholtens S, Postma DS, Moffatt MF, Panasevich S, Granel R, Henderson AJ, Melén E, Nyberg F, Pershagen G, Jarvis D, Ramasamy A, Wjst M, Svanes C, Bouzigon E, Demenais F, Kauffmann F, Siroux V, von Mutius E, Ege MJ, Braun-Fahrlander C, Genuneit J; GABRIELA study group, Brunekreef B, Smit HA, Wijga AH, Kerkhof M, Curjuric I, Imboden M, Thun GA, Probst-Hensch N, Freidin MB, Bragina Elu, Deev IA, Puzyrev VP, Daley D, Park J, Becker A, Chan-Yeung M, Kozyrskyj AL, Pare P, Marenholz I, Lau S, Keil T, Lee YA, Kabesch M, Wijmenga C, Franke L, Nolte IM, Vonk J, Kumar A, Farrall M, Cookson WO, Strachan DP, Koppelman GH, Boezen HM. *J Allergy Clin Immunol.* 2014 Mar;133(3):885-8. [Free Article.](#)

[100 Unintended consequences of policies to improve the energy efficiency of the UK housing stock.](#)

Shrubsole C, Macmillan A, Davies M, May N. *Indoor and Built Environment.* 2014 May 28;1-13.

[Polybrominated diphenyl ether \(PBDE\) concentrations in plasma of pregnant women from Western Australia.](#)

Stasinska A, Heyworth J, Reid A, Callan A, Odland JO, Trong Duong P, Van Ho Q, Hinwood A. *Sci Total Environ.* 2014 Jun 26;493C:554-561. doi: 10.1016/j.scitotenv.2014.06.001. [Epub ahead of print]

[Acute illness associated with use of pest strips - seven U.S. States and Canada, 2000-2013.](#)

Tsai RJ, Sievert J, Prado J, Buhl K, Stone DL, Forrester M, Higgins S, Mitchell Y, Schwartz A, Calvert GM; Centers for Disease Control and Prevention (CDC). *MMWR Morb Mortal Wkly Rep.* 2014 Jan 17;63(2):42-3.

[Lead, allergen, and pesticide levels in licensed child care centers in the United States.](#)

Viet SM, Rogers J, Marker D, Fraser A, Friedman W, Jacobs D, Zhou J, Tulve N. *J Environ Health.* 2013 Dec;76(5):8-14.

[Exposure assessment and distribution of polychlorinated biphenyls \(PCBs\) contained in indoor and outdoor dusts and the impacts of particle size and bioaccessibility.](#)

Wang W, Huang MJ, Zheng JS, Cheung KC, Wong MH. *Sci Total Environ.* 2013 Oct 1;463-464:1201-9.

[Biomass smoke in Burkina Faso: what is the relationship between particulate matter, carbon monoxide, and kitchen characteristics?](#)

Yamamoto SS, Louis VR, Sié A, Sauerborn R.  
Environ Sci Pollut Res Int. 2014 Feb;21(4):2581-91.

[Lead and other elements in house dust of Japanese residences--source of lead and health risks due to metal exposure.](#)

Yoshinaga J, Yamasaki K, Yonemura A, Ishibashi Y, Kaido T, Mizuno K, Takagi M, Tanaka A.  
Environ Pollut. 2014 Jun;189:223-8.

[Maternal exposure to biomass smoke and carbon monoxide in relation to adverse pregnancy outcome in two high altitude cities of Peru.](#)

Yucra S, Tapia V, Steenland K, Naeher LP, Gonzales GF.  
Environ Res. 2014 Apr;130:29-33.

## Mould and Dampness

[Critical role of smoking and household dampness during childhood for adult phlegm and cough: a research example from a prospective cohort study in Great Britain.](#)

Cable N, Kelly Y, Bartley M, Sato Y, Sacker A.  
BMJ Open. 2014 Apr 19;4(4):e004807. *Free Article.*

[Residential culturable fungi, \(1-3, 1-6\)- \$\beta\$ -d-glucan, and ergosterol concentrations in dust are not associated with asthma, rhinitis, or eczema diagnoses in children.](#)

Choi H, Byrne S, Larsen LS, Sigsgaard T, Thorne PS, Larsson L, Sebastian A, Bornehag CG.  
Indoor Air. 2014 Apr;24(2):158-70. *Free Article.*

[Next-generation DNA sequencing reveals that low fungal diversity in house dust is associated with childhood asthma development.](#)

Dannemiller KC, Mendell MJ, Macher JM, Kumagai K, Bradman A, Holland N, Harley K, Eskenazi B, Peccia J.  
Indoor Air. 2014 Jun;24(3):236-47.

[Extrolites of \*Wallemia sebi\*, a very common fungus in the built environment.](#)

Desroches TC, McMullin DR, Miller JD.  
Indoor Air. 2014 Jan 29. doi: 10.1111/ina.12100. [Epub ahead of print]

[Indoor molds and lung function in healthy adults.](#)

Hernberg S, Sripaiboonkij P, Quansah R, Jaakkola JJ, Jaakkola MS.  
Respir Med. 2014 May;108(5):677-84.

[Home dampness, childhood asthma, hay fever, and airway symptoms in Shanghai, China: associations, dose-response relationships, and lifestyle's influences.](#)

Hu Y, Liu W, Huang C, Zou ZJ, Zhao ZH, Shen L, Sundell J.  
Indoor Air. 2014 Feb 26. doi: 10.1111/ina.12104. [Epub ahead of print]

[Indoor water and dampness and the health effects on children: a review.](#)

Kennedy K, Grimes C.  
Curr Allergy Asthma Rep. 2013 Dec;13(6):672-80. *Review.*

[Commentaries on 'Remediating buildings damaged by dampness and mould for preventing or reducing respiratory tract symptoms, infections and asthma'.](#)

Liira H, Kovesi T.  
Evid Based Child Health. 2013 May;8(3):1001-3.

[Remediating buildings damaged by dampness and mould for preventing or reducing respiratory tract symptoms, infections and asthma \(Review\).](#)

Sauni R, Uitti J, Jauhiainen M, Kreiss K, Sigsgaard T, Verbeek JH.  
Evid Based Child Health. 2013 May;8(3):944-1000. *Review.*

[Modifiable factors governing indoor fungal diversity and risk of asthma.](#)

Sharpe R, Thornton CR, Osborne NJ.  
Clin Exp Allergy. 2014 May;44(5):631-41.

[Assessing the allergenic potential of molds found in water-damaged homes in a mouse model.](#)

Ward MD, Copeland LB, Lehmann J, Doerfler DL, Vesper SJ.  
Inhal Toxicol. 2014 Jul;26(8):474-84.

[Allergenic potential of moulds isolated from buildings.](#)

Żukiewicz-Sobczak W, Sobczak P, Krasowska E, Zwoliński J, Chmielewska-Badora J, Galińska EM.  
Ann Agric Environ Med. 2013;20(3):500-3. [Review](#). [Free Article](#).

## Light and Radiation

[Simultaneous measurements of radon and thoron, and their progeny levels in dwellings on anticlinal structures of Assam, India.](#)

Barooah D, Barman S, Phukan S.  
Environ Monit Assess. 2014 Jun;186(6):3581-94.

[Thoron and Thoron progeny measurements in German clay houses.](#)

Gierl S, Meisenberg O, Feistenauer P, Tschiersch J.  
Radiat Prot Dosimetry. 2014 Apr 17. [Epub ahead of print]

[Dual home screening and tailored environmental feedback to reduce radon and secondhand smoke: an exploratory study.](#)

Hahn EJ, Rayens MK, Kercksmar SE, Adkins SM, Wright AP, Robertson HE, Rinker G.  
J Environ Health. 2014 Jan-Feb;76(6):156-61.

[Radon Water to air transfer measured in a bathroom in an energy-efficient home with a private well.](#)

Harley NH, Chittaporn P, Cook GB, Fisenne IM.  
Radiat Prot Dosimetry. 2014 May 6. [Epub ahead of print]

[Risk-Reduction Strategies to Expand Radon Care Planning with Vulnerable Groups.](#)

Larsson LS.  
Public Health Nurs. 2014 Feb 18. doi: 10.1111/phn.12111. [Epub ahead of print]

[Home energy efficiency and radon related risk of lung cancer: modelling study.](#)

Milner J, Shrubsole C, Das P, Jones B, Ridley I, Chalabi Z, Hamilton I, Armstrong B, Davies M, Wilkinson P.  
BMJ. 2014 Jan 10;348:f7493. [Free Article](#).

[An evaluation of thoron \(and radon\) equilibrium factor close to walls based on long-term measurements in dwellings.](#)

Mishra R, Zunic ZS, Venoso G, Bochicchio F, Stojanovska Z, Carpentieri C, Prajith R, Sapra BK, Mayya YS, Ishikawa T, Omori Y, Veselinovic N, Tollefsen T, Ujić P, Bossew P.  
Radiat Prot Dosimetry. 2014 Apr 17. [Epub ahead of print]

[Mechanisms and sources of radon entry in buildings constructed with modern technologies.](#)

Zhukovsky MV, Vasilyev AV.  
Radiat Prot Dosimetry. 2014 Apr 11. [Epub ahead of print]

## Smoking / Environmental Tobacco Smoke

[Laboratory and clinical acute effects of active and passive indoor group water-pipe \(narghile\) smoking.](#)

Bentur L, Hellou E, Goldbart A, Pillar G, Monovich E, Salameh M, Scherb I, Bentur Y.  
Chest. 2014 Apr;145(4):803-9.

[\[Smoking outdoors. Is it necessary to protect those who are outside?\].](#)

Boëls N.  
Perspect Infirm. 2014 May-Jun;11(3):12.



[UK proposes ban on smoking in cars carrying children.](#)

Chanchlani N.

CMAJ. 2014 Apr 1;186(6):E187.

[Association of passive smoking with cognitive impairment in nonsmoking older adults: a systematic literature review and a new study of Chinese cohort.](#)

Chen R, Hu Z, Orton S, Chen RL, Wei L.

J Geriatr Psychiatry Neurol. 2013 Dec;26(4):199-208. **Review.**

[E-cigarettes affect cells.](#)

Cressey D.

Nature. 2014 Apr 10;508(7495):159.

[Thirdhand smoke beliefs of parents.](#)

Drehmer JE, Ossip DJ, Nabi-Burza E, Rigotti NA, Hipple B, Woo H, Chang Y, Winickoff JP.

Pediatrics. 2014 Apr;133(4):e850-6.

[Low-level environmental tobacco smoke exposure and inflammatory biomarkers in children with asthma.](#)

Gill R, Krishnan S, Dozor AJ.

J Asthma. 2014 May;51(4):355-9.

[Promoting smoke-free homes: a novel behavioral intervention using real-time audio-visual feedback on airborne particle levels.](#)

Klepeis NE, Hughes SC, Edwards RD, Allen T, Johnson M, Chowdhury Z, Smith KR, Boman-Davis M, Bellettiere J, Hovell MF.

PLoS One. 2013 Aug 23;8(8):e73251.

[Vote to ban smoking in cars with children is hailed as victory for child health.](#)

Kmietowicz Z.

BMJ. 2014 Feb 11;348:g1508.

[Smoking ban in cars will benefit disadvantaged children most.](#)

Lavery AA, Millett C.

BMJ. 2014 Feb 25;348:g1720.

[Protecting children from taking up smoking: parents' views on what would help.](#)

Marck K, Glover M, Kira A, McCool J, Scragg R, Nosa V, Bullen C.

Health Promot J Austr. 2014 Apr;25(1):59-64.

[Smokefree outdoor areas in New Zealand: how far have we come?](#)

Marsh L, Robertson LA, Kimber H, Witt M.

N Z Med J. 2014 Feb 14;127(1389):51-66.

[Impact of active and passive smoking as risk factors for asthma and COPD in women presenting to primary care in Syria: first report by the WHO-GARD survey group.](#)

Mohammad Y, Shaaban R, Al-Zahab BA, Khaltaev N, Bousquet J, Dubaybo B.

Int J Chron Obstruct Pulmon Dis. 2013;8:473-82.

[More questions than answers surrounding e-cigarette debate.](#)

Nelson N.

J Natl Cancer Inst. 2014 Apr;106(4):dju101.

[Charcoal burning as a source of polyaromatic hydrocarbons in waterpipe smoking.](#)

Nguyen T, Hlangothi D, Martinez RA 3rd, Jacob D, Anthony K, Nance H, Saleh MA.

J Environ Sci Health B. 2013;48(12):1097-102.

[The effects of parental smoking on anthropometric parameters, peak expiratory flow rate and physical condition in school children.](#)

Pavić I, Jurica SA, Pavić P, Bogović JC, Krmek M, Dodig S.

Coll Antropol. 2014 Mar;38(1):189-94.

[Environmental tobacco smoke exposure at home and smoking prevalence in the general Portuguese population--the INAsma study.](#)

Pereira AM, Morais-Almeida M, Sá e Sousa A, Jacinto T, Azevedo LF, Robalo Cordeiro C, Bugalho de Almeida A, Fonseca JA.

Rev Port Pneumol. 2013 May-Jun;19(3):114-24. **Free Article.**

[Wipe sampling for nicotine as a marker of thirdhand tobacco smoke contamination on surfaces in homes, cars, and hotels.](#)

Quintana PJ, Matt GE, Chatfield D, Zakarian JM, Fortmann AL, Hoh E.

Nicotine Tob Res. 2013 Sep;15(9):1555-63.

[Comparison between particulate matter and ultrafine particle emission by electronic and normal cigarettes in real-life conditions.](#)

Ruprecht AA, De Marco C, Pozzi P, Munarini E, Mazza R, Angellotti G, Turla F, Boffi R.

Tumori. 2014 Jan-Feb;100(1):e24-7.

[Levels and risks of particulate-bound PAHs in indoor air influenced by tobacco smoke: a field measurement.](#)

Slezakova K, Castro D, Delerue-Matos C, Morais S, Pereira Mdo C.

Environ Sci Pollut Res Int. 2014 Mar;21(6):4492-501.

[Maternal second-hand smoke exposure in pregnancy is associated with childhood asthma development.](#)

Simons E, To T, Moineddin R, Stieb D, Dell SD.

J Allergy Clin Immunol Pract. 2014 Mar-Apr;2(2):201-7.

## **Housing and Ageing Society**

[The Residential Choices of Ethnic Elders in Affordable Housing: Changing Intergenerational Relationships and the Pursuit of Residential Independence.](#)

Shin J-h.

Journal of Housing For the Elderly 2014 Jun9;28(2):221-242.

[Service-Enriched Housing: The Staying at Home Program.](#)

Castle N, Resnick N.

J Appl Gerontol. 2014 Jul 9. pii: 0733464814540049. [Epub ahead of print]

[Who Pays for Seniors Housing and Care Communities? Evidence from the Residents Financial Survey.](#)

Coe NB, Yanyuan Wu A.

Journal of Housing For the Elderly 2014 Jun9;28(2):165-181.

[Home and health in the third age - methodological background and descriptive findings.](#)

Kylén M, Ekström H, Haak M, Elmståhl S, Iwarsson S.

Int J Environ Res Public Health. 2014 Jul 11;11(7):7060-80. **Free Article.**

[Utilitarian Walking, Neighborhood Environment, and Risk of Outdoor Falls Among Older Adults.](#)

Li W, Procter-Gray E, Lipsitz LA, Leveille SG, Hackman H, Biondolillo M, Hannan MT.

Am J Public Health. 2014 Jul 17:e1-e8. [Epub ahead of print]

[The continued success of registered nurse care coordination in a state evaluation of aging in place in senior housing.](#)

Rantz M, Popejoy LL, Galambos C, Phillips LJ, Lane KR, Marek KD, Hicks L, Musterman K, Back J, Miller SJ, Ge B.

Nurs Outlook. 2014 Feb 22. pii: S0029-6554(14)00048-7. [Epub ahead of print]

## **Home Safety**

[Incidence and causes of home accidents in the West Bank and Gaza Strip, Palestine.](#)

Al-Khatib IA.

East Mediterr Health J. 2014 Jan 9;19 Suppl 3:S138-46.

[Emergency Department Visits With Facial Fractures Among Children and Adolescents: An Analysis of Profile and Predictors of Causes of Injuries.](#)

Allareddy V, Itty A, Maiorini E, Lee MK, Rampa S, Allareddy V, Nalliah RP.  
J Oral Maxillofac Surg. 2014 Mar 30. pii: S0278-2391(14)00328-0. [Epub ahead of print]

[Falling Clothes Irons Rarely Cause Burns.](#)

Allasio D, Shanti C.  
J Burn Care Res. 2014 Jan 28. [Epub ahead of print]

[Effectiveness of the cigarette ignition propensity standard in preventing unintentional residential fires in Massachusetts.](#)

Alpert HR, Christiani DC, Orav EJ, Dockery DW, Connolly GN.  
Am J Public Health. 2014 Apr;104(4):e56-61.

[\[Accidents and injuries in the EU. Results of the EuroSafe Reports\].](#)

Bauer R, Steiner M, Kissler R, Macey SM, Thayer D.  
Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz. 2014 Jun;57(6):673-80.

[Use of sanitizing products: safety practices and risk situations.](#)

da Silva AA, Passos RS, Simeoni LA, Neves Fde A, de Carvalho E.  
J Pediatr (Rio J). 2014 Mar-Apr;90(2):149-54.

[\[Injury prevention in young children\].](#)

Ellsäßer G, Trost-Brinkhues G, Albrecht M.  
Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz. 2014 Jun;57(6):681-6. 

[A seven-year study on head injuries in infants, Iran---the changing pattern.](#)

Fakharian E, Mohammadzadeh M, Behdad S, Babamohammadi A, Mirzadeh AS, Mohammadzadeh J.  
Chin J Traumatol. 2014 Jun 1;17(3):153-6. **Free Article.**

[Epidemiological risk analysis of home injuries in Italy \(1999-2006\).](#)

Ferrante P, Marinaccio A, Iavicoli S.  
Int J Environ Res Public Health. 2014 Apr 22;11(4):4402-16. **Free Article.**

[Incidence, characteristics and risk factors for household and neighbourhood injury among young children in semiurban Ghana: a population-based household survey.](#)

Gyedu A, Nakua EK, Otupiri E, Mock C, Donkor P, Ebel B.  
Inj Prev. 2014 Jun 9. [Epub ahead of print]


[Global childhood unintentional injury study: multisite surveillance data.](#)

He S, Lunnen JC, Puvanachandra P, Amar-Singh, Zia N, Hyder AA.  
Am J Public Health. 2014 Mar;104(3):e79-84.

[Patterns of burns and scalds in children.](#)

Kemp AM, Jones S, Lawson Z, Maguire SA.  
Arch Dis Child. 2014 Apr;99(4):316-21.

[\[Trampoline-related injuries in children\].](#)

Königshausen M, Gothner M, Kruppa C, Dudda M, Godry H, Schildhauer TA, Seybold D.  
Sportverletz Sportschaden. 2014 Jun;28(2):69-74. 

[Keeping children safe at home: protocol for a matched case-control study of modifiable risk factors for poisoning.](#)

Majsak-Newman G, Benford P, Ablewhite J, Clacy R, Coffey F, Cooper N, Coupland C, Hayes M, Kay B, McColl E, Reading R, Sutton A, Stewart J, Watson MC, Kendrick D.  
Inj Prev. 2014 Apr 7. [Epub ahead of print]


[Accidents due to falls from roof slabs.](#)

Rudelli BA, Silva MV, Akkari M, Santili C.  
Sao Paulo Med J. 2013;131(3):153-7. **Free Article.**

[An epidemiologic profile of pediatric concussions: identifying urban and rural differences.](#)

Stewart TC, Gilliland J, Fraser DD.  
J Trauma Acute Care Surg. 2014 Mar;76(3):736-42.

[\[Unintentional injuries among children and adolescents in Germany. Data sources and results\].](#)

Varnaccia G, Saß AC, Rommel A.  
Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz. 2014 Jun;57(6):613-20. 

[A retrospective study on traumatic dental and soft-tissue injuries in preschool children in Zagreb, Croatia.](#)

Vuletić M, Škaričić J, Batinjan G, Trampuš Z, Čuković Bagić I, Jurić H.  
Bosn J Basic Med Sci. 2014 Feb;14(1):12-5.

## Housing Conditions

[Classification of residential areas according to physical vulnerability to natural hazards: a case study of Çanakkale, Turkey.](#)

Başaran-Uysal A, Sezen F, Ozden S, Karaca O.  
Disasters. 2014 Jan;38(1):202-26.

[Hygiene, atopy and wheeze-eczema-rhinitis symptoms in schoolchildren from urban and rural Ecuador.](#)

Cooper PJ, Vaca M, Rodriguez A, Chico ME, Santos DN, Rodrigues LC, Barreto ML.  
Thorax. 2014 Mar;69(3):232-9.

[Recommendations for implementing an Arkansas state-wide healthy homes program.](#)

Ferguson A, Saffell A.  
J Ark Med Soc. 2014 Mar;110(10):211-3.

[Improving health, safety and energy efficiency in New Zealand through measuring and applying basic housing standards.](#)

Gillespie-Bennett J, Keall M, Howden-Chapman P, Baker MG.  
N Z Med J. 2013 Aug 2;126(1379):74-85.

[Health and housing outcomes from green renovation of low-income housing in Washington, DC.](#)

Jacobs DE, Breyse J, Dixon SL, Aceti S, Kaweckic C, James M, Wilson J.  
J Environ Health. 2014 Mar;76(7):8-16; quiz 60.

[Provision of private, piped water and sewerage connections and directly observed handwashing of mothers in a peri-urban community of Lima, Peru.](#)

Oswald WE, Hunter GC, Kramer MR, Leontsini E, Cabrera L, Lescano AG, Gilman RH.  
Trop Med Int Health. 2014 Apr;19(4):388-97.

[DDTs in mothers' milk, placenta and hair, and health risk assessment for infants at two coastal and inland cities in China.](#)

Man YB, Chan JK, Wang HS, Wu SC, Wong MH.  
Environ Int. 2014 Apr;65:73-82.

[Exotic pets: is there a problem?](#)

Mills G.  
Vet Rec. 2013 Dec 7;173(22):537-8.

[Household emergency preparedness by housing type from a community assessment for public health emergency response \(CASPER\), Michigan.](#)

Murti M, Bayleyegn T, Stanbury M, Flanders WD, Yard E, Nyaku M, Wolkin A.  
Disaster Med Public Health Prep. 2014 Feb;8(1):12-9.

[Primary Prevention of Lead Poisoning: Protecting Children From Unsafe Housing.](#)

Rogers ML, Lucht JA, Sylvaria AJ, Cigna J, Vanderslice R, Vivier PM.  
Am J Public Health. 2014 Jun 12:e1-e6. [Epub ahead of print]

[Metal and nutrient dynamics on an aged intensive green roof.](#)

Speak AF, Rothwell JJ, Lindley SJ, Smith CL.  
Environ Pollut. 2014 Jan;184:33-43.

## Housing and Mental Health

[Impact of housing improvement and the socio-physical environment on the mental health of children's carers: a cohort study in Australian Aboriginal communities.](#)

Baillie RS, Stevens M, McDonald EL.  
BMC Public Health. 2014 May 19;14:472. *Free Article.*

[\[The life and health status of homeless persons - results of a Münster survey. Many have chronic psychiatric and physical disorders\]. !\[\]\(d38d40db5bb31e2db2f3490804bde37d\_img.jpg\)](#)

Beckmann S.  
Pflege Z. 2014 Mar;67(3):156-60.

[The impact of housing displacement on the mental health of low-income parents after Hurricane Katrina.](#)

Fussell E, Lowe SR.  
Soc Sci Med. 2014 Jul;113:137-44.

[Individual and area-level socioeconomic status and their association with depression amongst community-dwelling elderly in Singapore.](#)

Wee LE, Yong YZ, Chng MW, Chew SH, Cheng L, Chua QH, Yek JJ, Lau LJ, Anand P, Hoe JT, Shen HM, Koh GC.  
Aging Ment Health. 2014 Jul;18(5):628-41.

[Patterns and predictors of attrition in a trial of a housing intervention for homeless people with mental illness.](#)

Veldhuizen S, Adair CE, Methot C, Kopp BC, O'Campo P, Bourque J, Streiner DL, Goering PN.  
Soc Psychiatry Psychiatr Epidemiol. 2014 Jun 12. [Epub ahead of print]

## Thermal Comfort / Energy

[Good houses reduce winter pressures.](#)

Chaplin A.  
Health Serv J. 2014 Jan 10;124(6381):20.

[Effect of fee-for-service air-conditioning management in balancing thermal comfort and energy usage.](#)

Chen CP, Hwang RL, Shih WM.  
Int J Biometeorol. 2014 Feb 9. [Epub ahead of print]

[Occupant comfort and health in green and conventional university buildings.](#)

Hedge A, Miller L, Dorsey JA.  
Work. 2014 May 14. [Epub ahead of print]

[Heat Stress is Associated with Reduced Health Status in Pulmonary Arterial Hypertension: A Prospective Study Cohort.](#)

Jehn M, Gebhardt A, Liebers U, Kiran B, Scherer D, Endlicher W, Witt C.  
Lung. 2014 May 11. [Epub ahead of print]

[Innovative method and equipment for personalized ventilation.](#)

Kalmár F.  
Indoor Air. 2014 Jun 13. [Epub ahead of print]

[Relationships between cold-temperature indices and all causes and cardiopulmonary morbidity and mortality in a subtropical island.](#)

Lin YK, Wang YC, Lin PL, Li MH, Ho TJ.  
Sci Total Environ. 2013 Sep 1;461-462:627-35.

[An approach to evaluate the intra-urban thermal variability in summer using an urban indicator.](#)

Massetti L, Petralli M, Brandani G, Orlandini S.

Environ Pollut. 2014 May 17. pii: S0269-7491(14)00167-5. [Epub ahead of print]

[Thermal comfort of various building layouts with a proposed discomfort index range for tropical climate.](#)

Md Din MF, Lee YY, Ponraj M, Ossen DR, Iwao K, Chelliapan S.

J Therm Biol. 2014 Apr;41:6-15.

[Effect of climate change on outdoor thermal comfort in humid climates.](#)

Orosa JA, Costa AM, Rodríguez-Fernández A, Roshan G.

J Environ Health Sci Eng. 2014 Feb 11;12(1):46.

[Modelling the effects of low indoor temperatures on the lung function of children with asthma.](#)

Pierse N, Arnold R, Keall M, Howden-Chapman P, Crane J, Cunningham M; Heating Housing and Health Study Group.

J Epidemiol Community Health. 2013 Nov 1;67(11):918-25.

[Measuring the human body's microclimate using a thermal manikin.](#)

Voelker C, Maempel S, Kornadt O.

Indoor Air. 2014 Mar 25. [Epub ahead of print]

[Submicrometer particles and their effects on the association between air temperature and mortality in Brisbane, Australia.](#)

Wang L, Tong S, Toloo GS, Yu W.

Environ Res. 2014 Jan;128:70-7.

[Cutting household ventilation to improve energy efficiency.](#)

Woodward A.

BMJ. 2014 Jan 10;348:f7713.

[The influence of weather on health-related help-seeking behavior of senior citizens in Hong Kong.](#)

Wong HT, Chiu MY, Wu CS, Lee TC; Senior Citizen Home Safety Association.

Int J Biometeorol. 2014 Apr 24. [Epub ahead of print]

[CFD simulation research on residential indoor air quality.](#)

Yang L, Ye M, He BJ.

Sci Total Environ. 2014 Feb 15;472:1137-44.

## Urban Planning / Built Environment

[Modelling of human exposure to air pollution in the urban environment: a GPS-based approach.](#)

Dias D, Tchepel O.

Environ Sci Pollut Res Int. 2014 Mar;21(5):3558-71.

[Urban green spaces' effectiveness as a psychological buffer for the negative health impact of noise pollution: A systematic review.](#)

Dzhambov AM, Dimitrova DD.

Noise Health. 2014 May-Jun;16(70):157-65. **Review.**

[How adolescents perceive their communities: a qualitative study that explores the relationship between health and the physical environment.](#)

Mmari K, Lantos H, Brahmhatt H, Delany-Moretlwe S, Lou C, Acharya R, Sangowawa A.

BMC Public Health. 2014 Apr 12;14:349. **Free Article.**

[Health impact assessment of increasing public transport and cycling use in Barcelona: a morbidity and burden of disease approach.](#)

Rojas-Rueda D, de Nazelle A, Teixidó O, Nieuwenhuijsen MJ.

Prev Med. 2013 Nov;57(5):573-9.

[Air pollution from livestock farms, and asthma, allergic rhinitis and COPD among neighbouring residents.](#)

Smit LA, Hooiveld M, van der Sman-de Beer F, Opstal-van Winden AW, Beekhuizen J, Wouters IM, Yzermans CJ, Heederik D.  
Occup Environ Med. 2014 Feb;71(2):134-40.

[Health effects of the London bicycle sharing system: health impact modelling study.](#)

Woodcock J, Tainio M, Cheshire J, O'Brien O, Goodman A.  
BMJ. 2014 Feb 13;348:g425.

## **Social Inequality**

[The link between ethnicity, social disadvantage and mental health problems in a school-based multi-ethnic sample of children in the Netherlands.](#)

Adriaanse M, Veling W, Doreleijers T, van Domburgh L.  
Eur Child Adolesc Psychiatry. 2014 Jun 14. [Epub ahead of print]

[Role of financial and social hardships in asthma racial disparities.](#)

Beck AF, Huang B, Simmons JM, Moncrief T, Sauers HS, Chen C, Ryan PH, Newman NC, Kahn RS.  
Pediatrics. 2014 Mar;133(3):431-9.

[Social exclusion, deprivation and child health: a spatial analysis of ambulatory care sensitive conditions in children aged 0-4 years in Victoria, Australia.](#)

Butler DC, Thurecht L, Brown L, Konings P.  
Soc Sci Med. 2013 Oct;94:9-16.

[Prenatal dog-keeping practices vary by race: speculations on implications for disparities in childhood health and disease.](#)

Ezell JM, Cassidy-Bushrow AE, Havstad S, Joseph CL, Wegienka G, Jones K, Ownby DR, Johnson CC.  
Ethn Dis. 2014 Winter;24(1):104-9.

[The impact of redistributing power to disadvantaged families in Hungary.](#)

Kósa K, Coons B, Molnár A.  
Health Promot Int. 2013 Aug 22. [Epub ahead of print]

[The influence of deprivation on suicide mortality in urban and rural Queensland: an ecological analysis.](#)

Law CK, Snider AM, De Leo D.  
Soc Psychiatry Psychiatr Epidemiol. 2014 Jun 12. [Epub ahead of print]

[Investing in health: is social housing value for money? A cost-utility analysis.](#)

Lawson KD, Kearns A, Petticrew M, Fenwick EA.  
J Epidemiol Community Health. 2013 Oct;67(10):829-34.

[Home asthma triggers: barriers to asthma control in Chicago Puerto Rican children.](#)

Martin MA, Thomas AM, Mosnaim G, Greve M, Swider SM, Rothschild SK.  
J Health Care Poor Underserved. 2013 May;24(2):813-27.

[Socioeconomic and behavioural risk factors for adverse winter health and social outcomes in economically developed countries: a systematic review of quantitative observational studies.](#)

Tanner LM, Moffatt S, Milne EM, Mills SD, White M.  
J Epidemiol Community Health. 2013 Dec 1;67(12):1061-7. **Review.**

[Surveillance of social and geographic inequalities in housing-related issues: the case of the Eastern Townships, Quebec \(Canada\).](#)

Roy M, G n reux M, Laverdi re E, Vanasse A.  
Int J Environ Res Public Health. 2014 May 6;11(5):4825-44.

[Prioritizing the Determinants of Social-health Inequality in Iran: A Multiple Attribute Decision Making Application.](#)

Zaboli R, Tourani S, Seyedin SH, Oliaie Manesh A.  
Iran Red Crescent Med J. 2014 Apr;16(4):e12607. *Free Article.*

## Noise

[Road traffic noise and hypertension - Accounting for the location of rooms.](#)

Babisch W, Wölke G, Heinrich J, Straff W.  
Environ Res. 2014 Jun 18. [Epub ahead of print]

[Auditory and non-auditory effects of noise on health.](#)

Basner M, Babisch W, Davis A, Brink M, Clark C, Janssen S, Stansfeld S.  
Lancet. 2014 Apr 12;383(9925):1325-32. *Review.*

[Road traffic noise frequency and prevalent hypertension in Taichung, Taiwan: A cross-sectional study.](#)

Chang TY, Beelen R, Li SF, Chen TI, Lin YJ, Bao BY, Liu CS.  
Environ Health. 2014 May 16;13(1):37.

[Neighborhood noise pollution as a determinant of displaced aggression: a pilot study.](#)

Dzhambov A, Dimitrova D.  
Noise Health. 2014 Mar-Apr;16(69):95-101. *Free Article.*

[Is the din really harmless? Long-term effects of non-traumatic noise on the adult auditory system.](#)

Gourévitch B, Edeline JM, Occelli F, Eggermont JJ.  
Nat Rev Neurosci. 2014 Jun 20;15(7):483-91.

[Effect of external classroom noise on schoolchildren's reading and mathematics performance: correlation of noise levels and gender.](#)

Papanikolaou M, Skenteris N, Piperakis SM.  
Int J Adolesc Med Health. 2014 May 8. [Epub ahead of print]

[Evaluation of annoyance from the wind turbine noise: A pilot study.](#)

Pawlaczyk-Łuszczńska M<sup>1</sup>, Dudarewicz A, Zaborowski K, Zamojska-Daniszewska M, Waszkowska M.  
Int J Occup Med Environ Health. 2014 Jun;27(3):364-88.

[Possible psychological mechanisms for "wind turbine syndrome". On the windmills of your mind.](#)

Rubin GJ, Burns M, Wessely S.  
Noise Health. 2014 Mar-Apr;16(69):116-22.

[Combined effects of road traffic noise and ambient air pollution in relation to risk for stroke?](#)

Sørensen M, Lühdorf P, Ketzel M, Andersen ZJ, Tjønneland A, Overvad K, Raaschou-Nielsen O.  
Environ Res. 2014 Jun 3;133C:49-55.

[Road traffic noise, sleep and mental health.](#)

Sygn K, Aasvang GM, Aamodt G, Oftedal B, Krog NH.  
Environ Res. 2014 May;131:17-24.

[Cardiovascular health, traffic-related air pollution and noise: are associations mutually confounded? A systematic review.](#)

Tétreault LF, Perron S, Smargiassi A.  
Int J Public Health. 2013 Oct;58(5):649-66.



## Miscellaneous

### [Effects of long-term exposure to air pollution on natural-cause mortality: an analysis of 22 European cohorts within the multicentre ESCAPE project.](#)

Beelen R, Raaschou-Nielsen O, Stafoggia M, Andersen ZJ, Weinmayr G, Hoffmann B, Wolf K, Samoli E, Fischer P, Nieuwenhuijsen M, Vineis P, Xun WW, Katsouyanni K, Dimakopoulou K, Oudin A, Forsberg B, Modig L, Havulinna AS, Lanki T, Turunen A, Oftedal B, Nystad W, Nafstad P, De Faire U, Pedersen NL, Östenson CG, Fratiglioni L, Penell J, Korek M, Pershagen G, Eriksen KT, Overvad K, Ellermann T, Eeftens M, Peeters PH, Meliefste K, Wang M, Bueno-de-Mesquita B, Sugiri D, Krämer U, Heinrich J, de Hoogh K, Key T, Peters A, Hampel R, Concin H, Nagel G, Ineichen A, Schaffner E, Probst-Hensch N, Künzli N, Schindler C, Schikowski T, Adam M, Phuleria H, Vilier A, Clavel-Chapelon F, Declercq C, Grioni S, Krogh V, Tsai MY, Ricceri F, Sacerdote C, Galassi C, Migliore E, Ranzi A, Cesaroni G, Badaloni C, Forastiere F, Tamayo I, Amiano P, Dorronsoro M, Katsoulis M, Trichopoulou A, Brunekreef B, Hoek G.  
Lancet. 2014 Mar 1;383(9919):785-95.

### [Prolonged exposure to low levels of aluminum leads to changes associated with brain aging and neurodegeneration.](#)

Bondy SC.

Toxicology. 2014 Jan 6;315:1-7.

### [Air pollution and mortality in Europe.](#)

Langrish JP, Mills NL.

Lancet. 2014 Mar 1;383(9919):758-60.

### [Long-term exposure to elemental constituents of particulate matter and cardiovascular mortality in 19 European cohorts: results from the ESCAPE and TRANSPHORM projects.](#)

Wang M, Beelen R, Stafoggia M, Raaschou-Nielsen O, Andersen ZJ, Hoffmann B, Fischer P, Houthuijs D, Nieuwenhuijsen M, Weinmayr G, Vineis P, Xun WW, Dimakopoulou K, Samoli E, Laatikainen T, Lanki T, Turunen AW, Oftedal B, Schwarze P, Aamodt G, Penell J, De Faire U, Korek M, Leander K, Pershagen G, Pedersen NL, Östenson CG, Fratiglioni L, Eriksen KT, Sørensen M, Tjønneland A, Bueno-de-Mesquita B, Eeftens M, Bots ML, Meliefste K, Krämer U, Heinrich J, Sugiri D, Key T, de Hoogh K, Wolf K, Peters A, Cyrus J, Jaensch A, Concin H, Nagel G, Tsai MY, Phuleria H, Ineichen A, Künzli N, Probst-Hensch N, Schaffner E, Vilier A, Clavel-Chapelon F, Declercq C, Ricceri F, Sacerdote C, Marcon A, Galassi C, Migliore E, Ranzi A, Cesaroni G, Badaloni C, Forastiere F, Katsoulis M, Trichopoulou A, Keuken M, Jedynska A, Kooter IM, Kukkonen J, Sokhi RS, Brunekreef B, Katsouyanni K, Hoek G.

Environ Int. 2014 May;66:97-106.

---

## Events Announcement

### **7<sup>th</sup> GHUP Annual Meeting**

7. GHUP Jahrestagung 2014

July 26-27, 2014

Cologne, Germany

Further Information: [GHUP - Jahrestagung](#)

### **26<sup>th</sup> Conference of the International Society for Environmental Epidemiology ISEE**

August 24-28, 2014

Seattle / Washington, USA

Further Information: [ISEE - International Society for Environmental Epidemiology](#)

### **9<sup>th</sup> Conference of the German Society for Epidemiology (DGEpi) e.V.**

September 17-20, 2014

Ulm, Germany

Further Information: [German Society for Epidemiology - DGEpi](#)

**35<sup>th</sup> AIVC Conference - Air Infiltration and Ventilation**

September 24-25, 2014

Poznan, Poland

Further Information: [AIVC](#)**8<sup>th</sup> Conference on moulds 2014** 

8. Schimmelpilzkonferenz 2014

September 25-26, 2014

Nuremberg, Germany

Further Information: [Conference on moulds 2014](#)**9<sup>th</sup> German Conference on Allergies** 

9. Deutscher Allergiekongress

October 2-4, 2014

Wiesbaden, Germany

Further Information: [Allergiekongress](#)**Microbiology and Infection 2014**4<sup>th</sup> Joint Conference of the German Society for Hygiene and Microbiology (DGHM) and the Association for General and Applied Microbiology (VAAM)

October 5-8, 2014

Dresden, Germany

Further Information: [dghm-vaam-kongress.de](#)**24<sup>th</sup> Conference of the International Society of Exposure Science ISES**

October 12-16, 2014

Cincinnati / Ohio, USA

Further Information: [International Society of Exposure Science \(ISES\)](#)**Word Building Congress 2014**

October 28-30, 2014

Barcelona, Spain

Further Information: [World Building Congress 2014](#)**BAU 2015 - World's Leading Trade Fair for Architecture, Materials and Systems**

January 19-24, 2015

Munich, Germany

Further Information: [BAU – World's Leading Trade Fair for Architecture, Materials, Systems](#)**ICAPC 2015 - International Conference on Air Pollution and Control**

February 23-24, 2014

Paris, France

Further Information: [ICAPC Paris 2015: International Conference on Air Pollution and Control](#)**ASHARE 2015 Annual Conference**

June 27- July 1, 2015

Atlanta, USA

Further Information: [Indoor Environment Connections](#)**13<sup>th</sup> World Allergy Congress 2015**

October 14-17, 2015

Seoul, Korea

Further Information: [World Allergy Congress](#)

**9<sup>th</sup> National Housing Conference**

October 28-30, 2015

Perth, Australia

Further Information: [NHC - National Housing Conference](#)**2015 Greenbuild International Conference and Expo**

November 18-22, 2014

Washington D.C., USA

Further Information: [2015 Greenbuild International Conference and Expo](#)

---

**Message Board**

In this section we will inform you about activities and projects related to housing and health that are being carried out by WHO or the WHO CC. This may relate to ongoing activities and projects, as well as invitations to participate in data collections or case study projects.

**WHO work on indoor and built environments****Combined or multiple exposure to health stressors in indoor built environments**

Millions of citizens within the WHO European Region spend approximately 90% of their time indoors: in their homes (2/3 of this time), workplaces, schools, and public spaces. Despite undeniable improvements in the quality of indoor environments in the last twenty years, a range of health risks still exists, such as indoor air pollution, injury risks, noise, humidity, mould growth, inadequate indoor temperature, lack of hygiene and sanitation equipment, and crowding. Many of these risks are either directly or indirectly related to the quality of the building. Furthermore, problems with building quality disproportionately affect vulnerable population groups in terms of socioeconomic status or class age. Despite the scientific progress in understanding the connection between indoor environments and health, evidence is often restricted to categorical studies targeting specific health risks and/or outcomes; much less evidence is available regarding the combined or multiple exposure to risk factors. This report aims to explore and shed light on the links between different exposure stressors and modifiers people confront in residential dwellings, day care centers, schools and kindergartens. It summarizes a systematic review of literature and project reports presenting evidence on multiple or combined risk exposure in indoor environments, covering the range of health risks encountered.

For the full report, please see:

[http://www.euro.who.int/\\_data/assets/pdf\\_file/0020/248600/Combined-or-multiple-exposure-to-health-stressors-in-indoor-built-environments.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0020/248600/Combined-or-multiple-exposure-to-health-stressors-in-indoor-built-environments.pdf?ua=1)

**Making the European Region free of asbestos-related diseases**

Asbestos is one of the most severe and widespread environmental health hazards in the WHO European Region, and is responsible for half of fatal cancers linked to exposure at work. To discuss activities to put an end to asbestos-related diseases, representatives from 16 Member States in the WHO European Region and experts in occupational health and cancer registries met in Bonn, Germany, on 10–11 June 2014.

They evaluated progress made since the 2010 Parma Declaration and emphasized the need for WHO support to develop national programmes on asbestos elimination. The Parma Declaration commits governments in the European Region to take action on a range of environmental issues affecting health. This includes commitments to act on the identified risks of exposure to carcinogens, including asbestos, and to develop national programmes for the elimination of asbestos-related diseases by 2015, in collaboration with WHO and the International Labour Organization (ILO).

For further information and background reports, please see:

<http://www.euro.who.int/en/health-topics/environment-and-health/Housing-and-health/news/news/2014/06/making-the-european-region-free-of-asbestos-related-diseases>

### **Under preparation: WHO Guidelines on housing and health**

WHO is currently, with support of the WHO Regional Office for Europe, developing Guidelines on Housing and Health. These will provide suitable scientific evidence and recommendations for protecting human health from exposure selected range of housing risks, covering thermal comfort related to cold and heat, crowding, energy access, home safety, accessible housing design, and linkage with active transport options. Other sections will address and summarize additional risks, which partially are already covered by existing WHO Guidelines with relevance to housing. The process for guideline development has been initiated in 2013 and the guidelines expected to be finalized in 2015.

### **Clean household energy can save people's lives – new data available**

Millions of women in rural India spend several hours every day cooking meals on smoky ovens or open fires within their homes. Because cooking chores most often fall to women, they and the young children around them are the first victims of smoke-related acute and chronic respiratory and cardiovascular illnesses. According to WHO estimates, in 2012 there were close to 1.7 million premature deaths attributed to household air pollution from cooking in the South East Asia region with India shouldering the biggest burden. Most of these premature deaths were due to noncommunicable diseases such as heart disease, stroke, chronic obstructive pulmonary disease and lung cancer. Indoor air pollution is also responsible for a significant number of acute respiratory illnesses in young children.

For further information, please see <http://www.who.int/features/2014/clean-household-energy/en/>

### **World Toilet Day**

In a bid to make sanitation for all a global development priority, the United Nations General Assembly designated 19 November as World Toilet Day, urging changes in both behaviour and policy on related issues. The [resolution recognizes](#) the role that civil society and nongovernmental organizations play. It also calls on countries to approach sanitation in a much broader context, including hygiene promotion, the provision of basic sanitation services, and sewerage and wastewater treatment, and reuse in the context of integrated water management. WHO is taking a leadership role in the post-2015 development agenda and also strengthening its activities in wastewater and excreta management and reuse. Read [more on the call to action](#), and the latest publication on [Water safety in distribution systems](#).

**Imprint****Publisher**

Landesgesundheitsamt Baden-Württemberg  
im Regierungspräsidium Stuttgart  
Baden-Württemberg State Health Office

WHO Collaborating Centre for Housing and Health  
Head: Prof. Dr. Günter Schmolz  
Nordbahnhofstrasse 135  
70191 Stuttgart

phone +49 (0)711· 904 35000

fax +49 (0)711· 904 35105

[who.cc@rps.bwl.de](mailto:who.cc@rps.bwl.de)

[www.whocc-housing-and-health.de](http://www.whocc-housing-and-health.de)

The work of the WHO CC on housing and health is funded by *Bundesministerium für Gesundheit (BMG)*, Germany.

**Editors:**

Dr. Bernhard Link, Dr. Annette Rebmann

Dr. Guido Fischer, Dr. Snezana Jovanovic, Stefan Kluge,