

Supportive design for people with dementia

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Dementia can affect our interpretation and response to sensory stimuli

Memory loss and affected reasoning

- Affects visual and audible interpretation of space
- Comprehension of signs and signals
- Understanding the function/purpose of items
- Communication - verbal and written

Hearing loss and noise sensitivity

- Communication
- Processing information
- Understanding of function of space
- Walking (with purpose) and balance

Exacerbates some of the symptoms of ageing

- Gait, stoop, and spatial awareness
- Limited mobility
- Eyesight
- Body temperature
- Hearing loss

Hallucinations (auditory and visual)



Leading to:

- Confusion
- Anxiety
- Fear
- Wandering
- Frustration
- Aggression
- Increased dependence on care givers
- Withdrawal from activities
- Withdrawal from spaces
- Social isolation
- Loneliness



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Designers often work visually



Whilst being a key design aspect achieving an overtly visually stimulating space can sometimes limit its use by people with dementia

Eyesight



Ageing and dementia

Untreated eyes



Cataracts -



Glaucoma



Macular degeneration

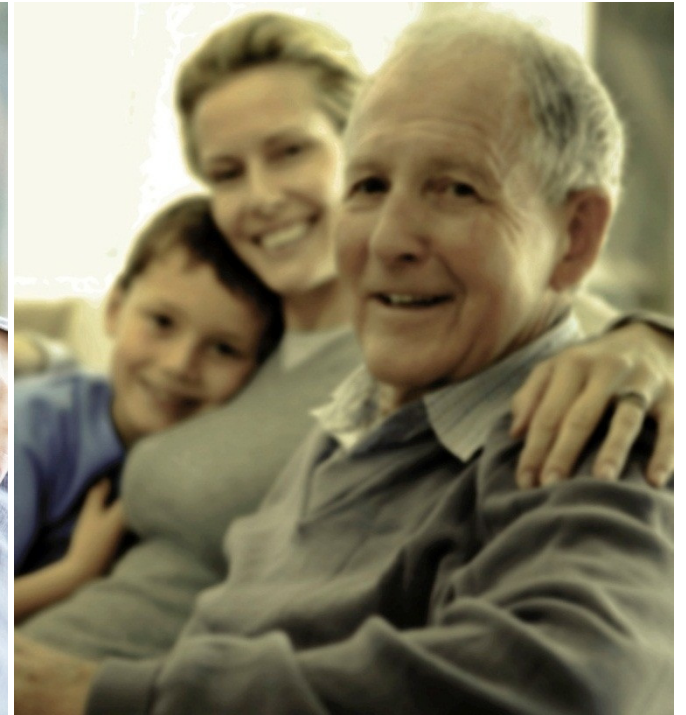


Double vision

Ageing and dementia

eyesight

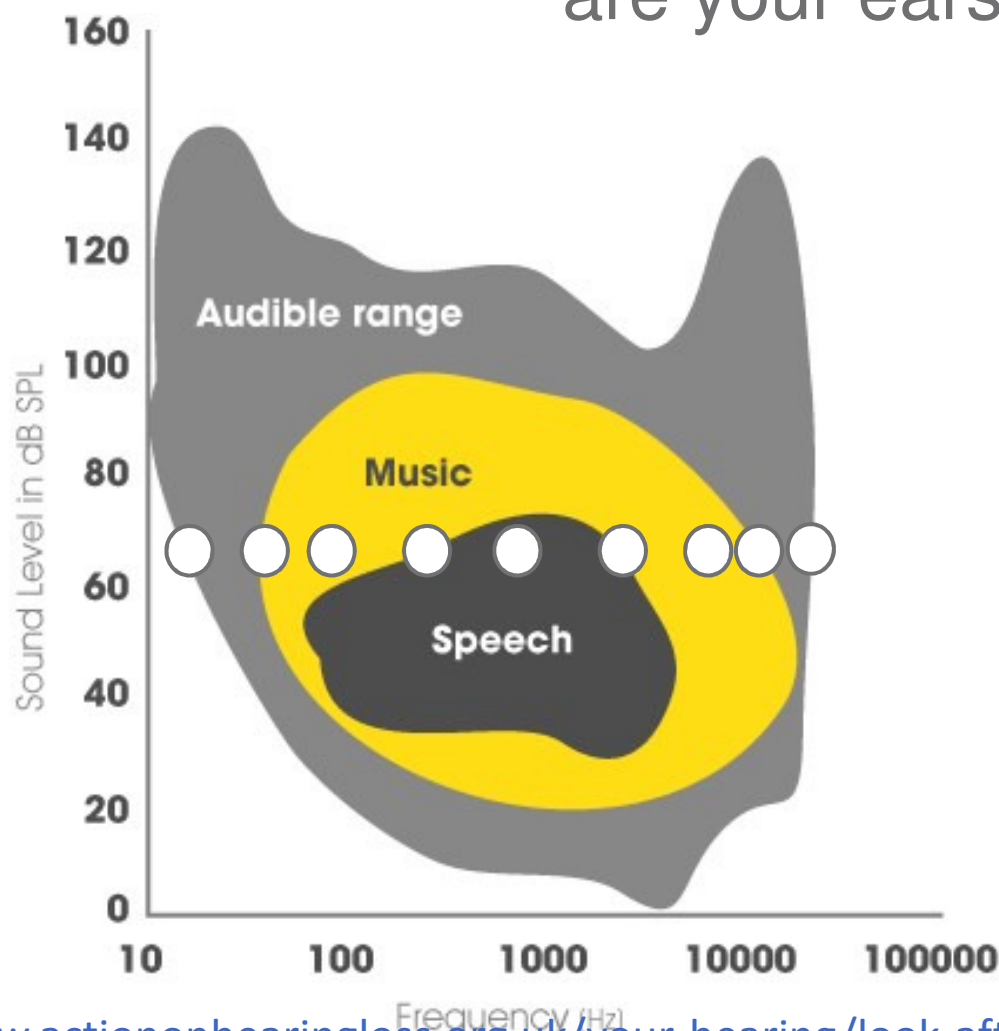
- 4 times as much as is required by a 20 year old by the age of 75
- Lower contrast sensitivity
- Poorer perception of depth and space



Hearing



Your ears start to age from your teens. How old are your ears?



Dementia exacerbates this as do certain other medical conditions and medication

www.actiononhearingloss.org.uk/your-hearing/look-after-your-hearing/check-your-hearing/take-the-check.aspx

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(Flintstones – clip to demonstrate hearing loss)



Mobility



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Proprioception and Vestibular perception

- Proprioception - awareness of body, movement and force
- Vestibular – balance
- Linked to mobility, spatial awareness, perception of depth and falls

More than one impairment

These often link

- People with Alzheimer's often have problems with spatial perception and mobility
- People with hearing loss depend on their eyes more
- Challenges with hearing are sometimes connected to problems with balance
- People with hearing loss are more likely to develop dementia
- Challenges with mobility and an increase in falls is often linked to failing sight
- Some forms of dementia affect your sight and hearing



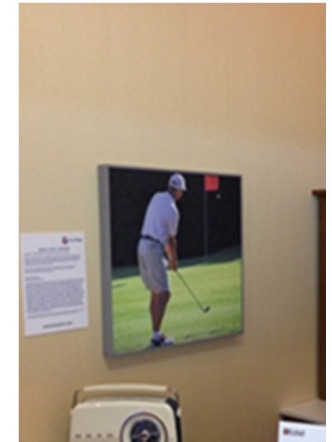
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Some design solutions



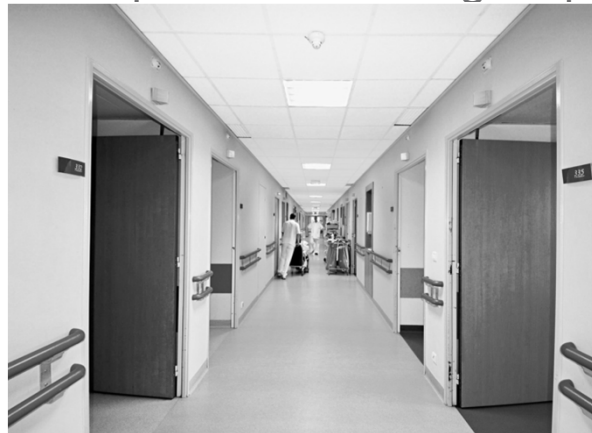
Make a space memorable and easy to use

- Personalisation
- Design to reflect purpose
- Simple with familiar items
- Signage (clear font and visual with minimal text lines)
- Informal wayfinding – colour, theme



Colour and pattern

- Provide visual clues and consistency – toilet doors
- Consider how you use colour and pattern and the impact
- Avoid full height photographic murals
- Frame pictures
- Keep flooring plain (dark?) and consistent
- High LRV difference between floors, walls, doors, surrounds, signs
- Black and white photos can be helpful in assessing a space



Light and layout

Light

- Natural light is best
- High light levels (personalisation)
- Avoid glare – looks as though the space is wet,
- Avoid glass at reception – inhibits lip reading.



Layout

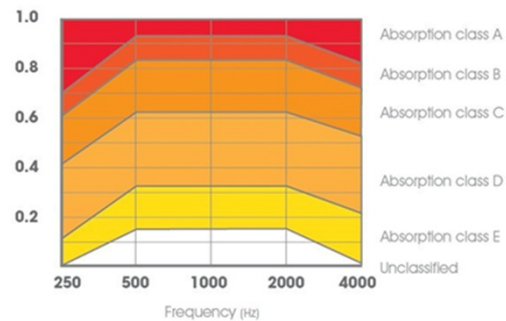
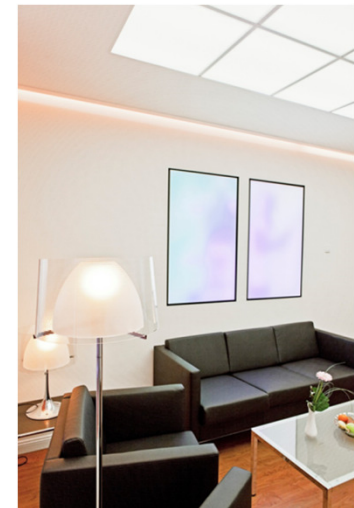
- Reduce Clutter - Increase storage
- Avoid long corridors
- Provide plenty of seating
- Provide plenty of easily visible toilets
- Open plan spaces are often noisy



Room Acoustics

Use sound absorption to:

- Provide a quiet space to aid the processing of information
- Create a calm environment (to aid rest and sleep)
- Reduce background noise levels (noise encourages noise)
- Stop sound travelling along a ward or corridor
- Aid comprehension of speech
- Use sound positively – music, signals, mood



Just listen

<https://www.youtube.com/watch?v=qPkhInEWkjk&feature=youtu.be>

This was just a quick overview of our work on the importance of all our senses in design

- www.ecophon.co.uk
- <http://www.ecophon.com/uk/about-ecophon/newsroom/a-sound-effect-on-people--ecophons-acoustics-podcast/>
- www.acousticbulletin.com
- Ecophon CPD: Design for dementia and elderly care
- Literature review “**Acoustics of environments used by people affected by dementia**”
- Sensory design workshops being held through 2018

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