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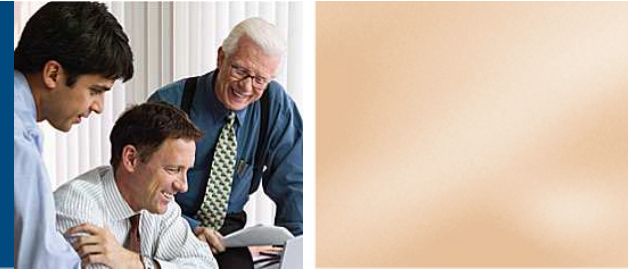
# **Psychosocial treatments of behavior symptoms in dementia: Do they work?**

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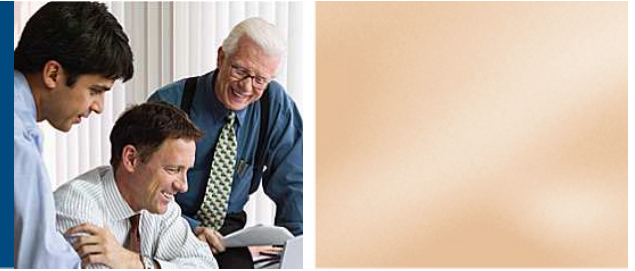


## Behaviour symptoms

- Definition
- Frequency
- Consequences:
  - Carer burden
  - Admission to residential care
- Nursing homes



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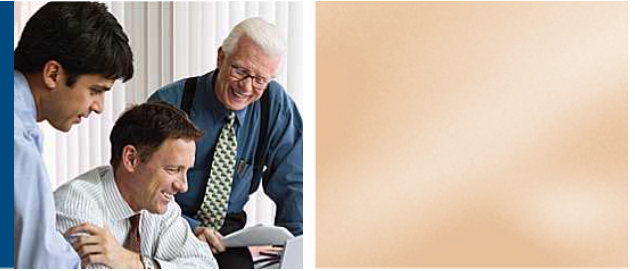


## What causes symptoms?

- Pain, delirium, depression, psychosis
- Brain changes
- Psychological paradigms
  - Learned behaviour
  - Unmet need



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## Medical treatments

### Specific treatments

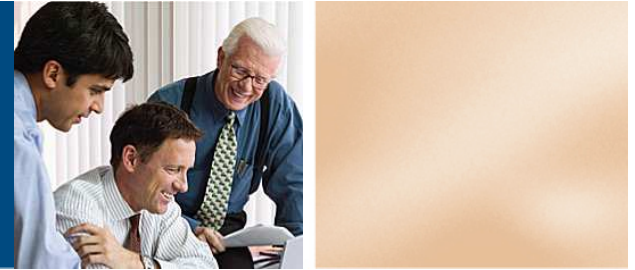
- Pain, delirium, depression, psychosis

### Other pharmacological treatments

- Limited, variable effectiveness
- Side-effects



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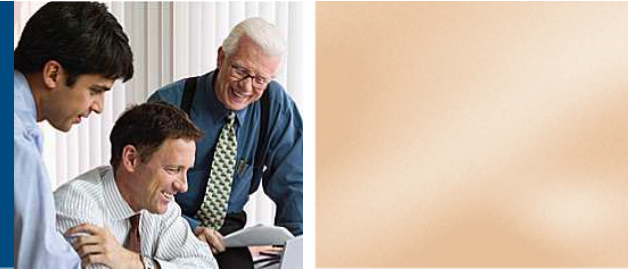


## Psychosocial treatments

- Address root cause
- Safer than medications
- Acceptable to residents, families, staff
- Practicable
- Inexpensive

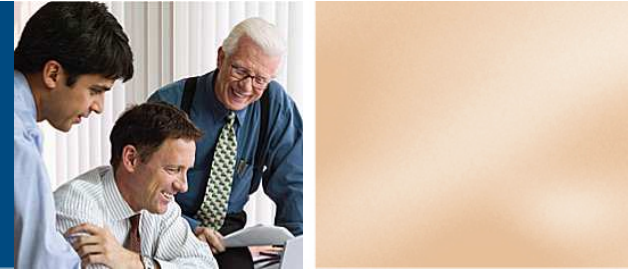


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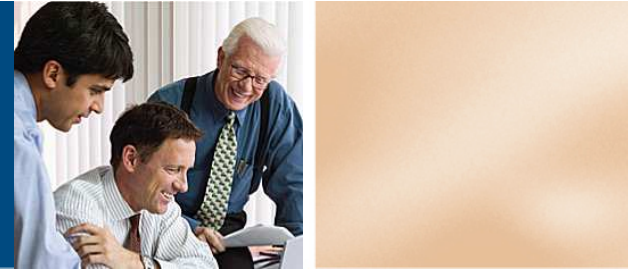
## Psychosocial treatments

- Aroma, exercise, massage, music, person-centred care, pets, recreation, relaxation, reminiscence, sensory enrichment, stimulus modulation, taped family messages, validation
- Do they work? For how long? For whom?
- Is one better treatment better than another?
- Do they work better than an attention control?



## Review results

- 25 trials (15 crossover) with attention control or comparison of one treatment with another
- Music (8), carer education (4), sensory enrichment (3), simulated family presence (3), bathing approaches (2), aromatherapy (2), recreation (1), relaxation training (1), validation (1)
- Treatment significantly better than attention control in only 12 of 25 studies
- Clinical relevance



# Music

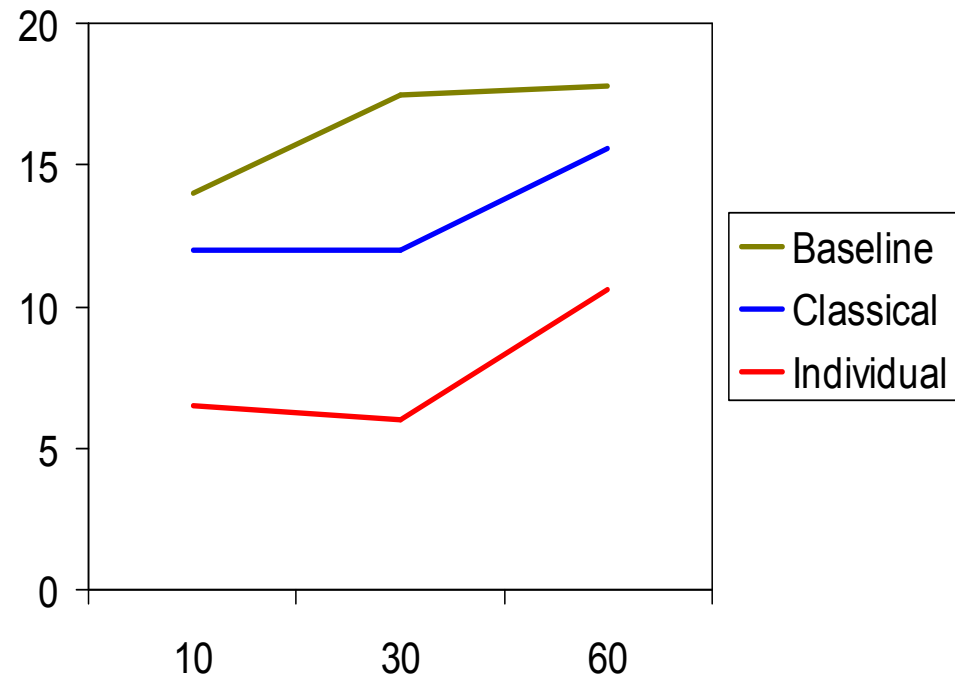
39 agitated NH residents

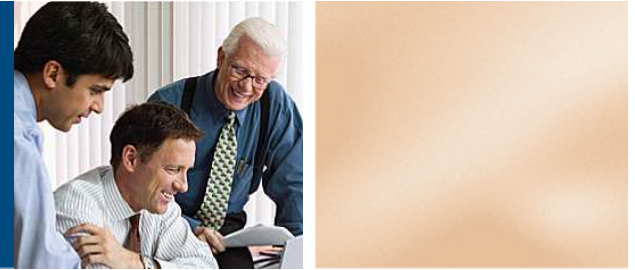
12 wk RM study, classical or individual tapes, 30m twice wk

Behaviours counted

Effect size 1.2

Gerdner (2000)





## Social enrichment

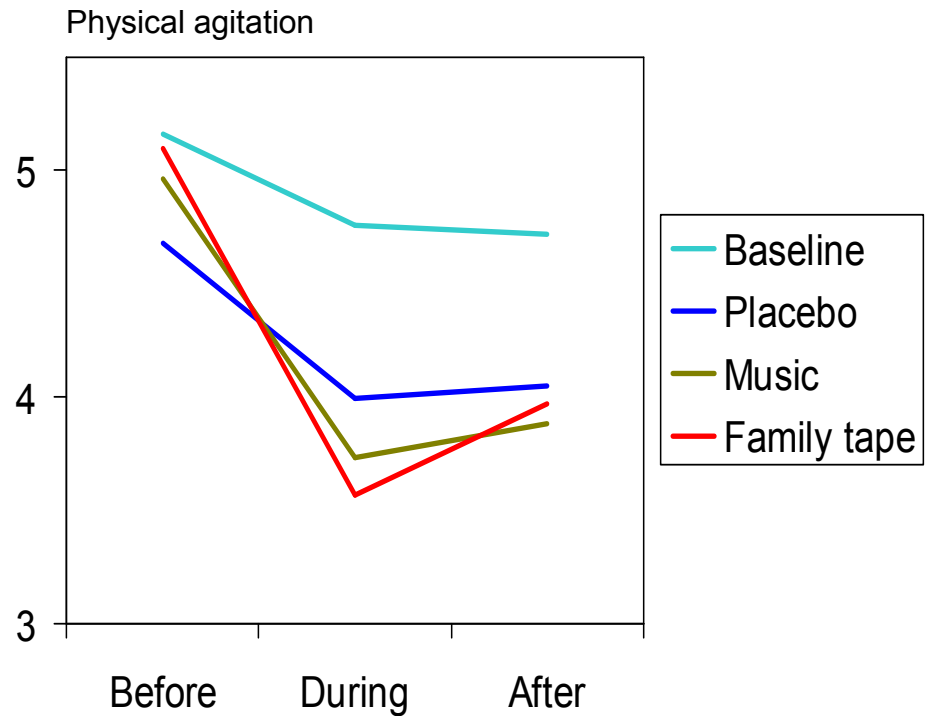
30 agitated NH residents

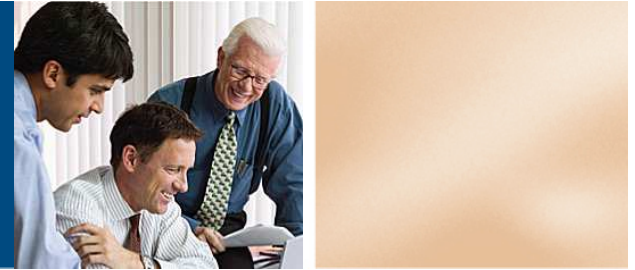
Preferred music  
audiotape, family  
audiotape, placebo

Behaviours counted

All conditions superior to  
baseline. Family tape, but  
not music, superior to  
placebo. Effect size 0.45

Garland et al. (2007)





## Social enrichment

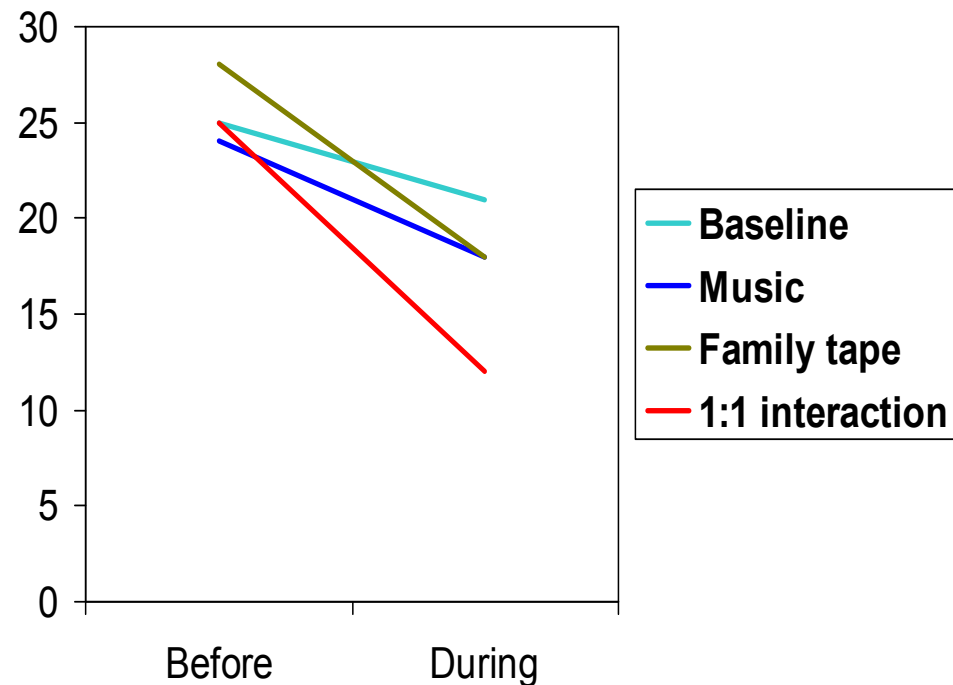
32 verbally disruptive NH residents

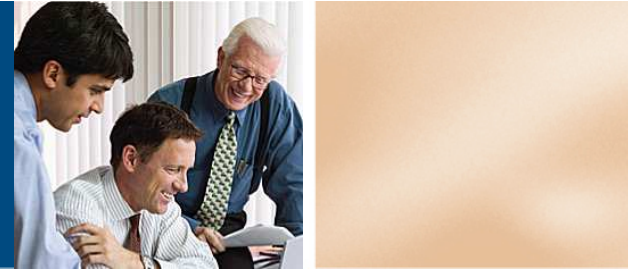
Preferred music audiotape, family videotape, 1:1 interaction

Behaviours counted

All conditions superior to baseline. No difference between conditions

Cohen-Mansfield & Werner (1997)





## Bed baths

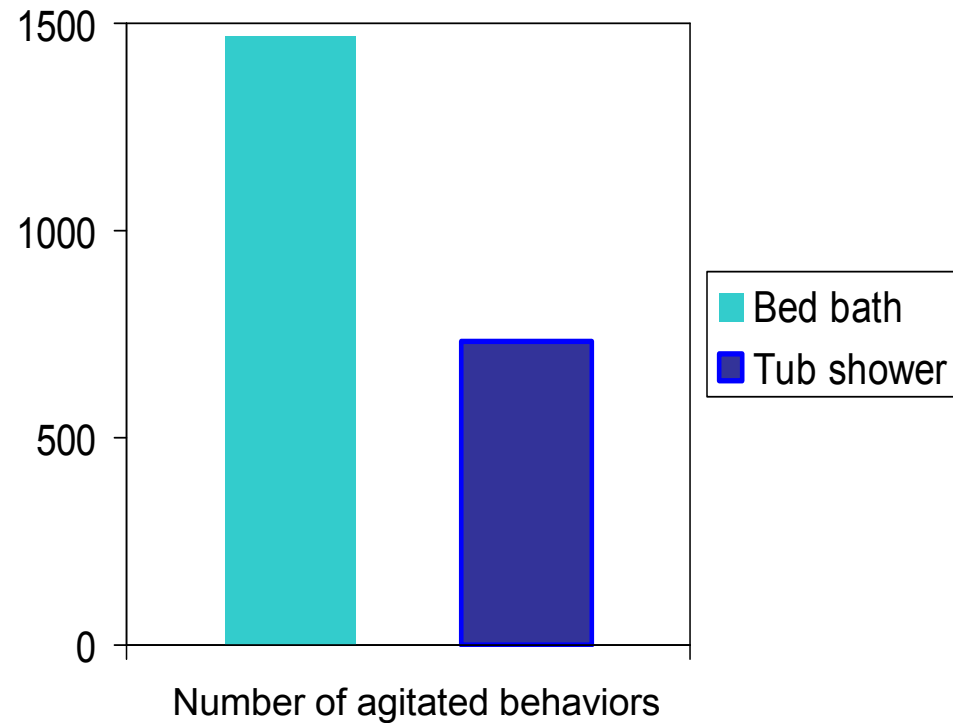
15 NH residents

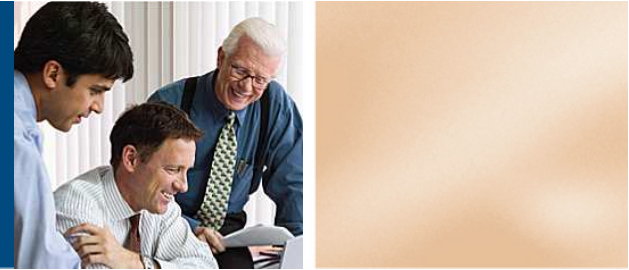
Compared 4 tub baths  
with 4 bed baths with non-  
rinse cleanser

Counted occurrence of 14  
agitated behaviours  
during bath

50% fall in behaviours

Dunn et al (2002)





## Bed baths

69 agitated NH residents

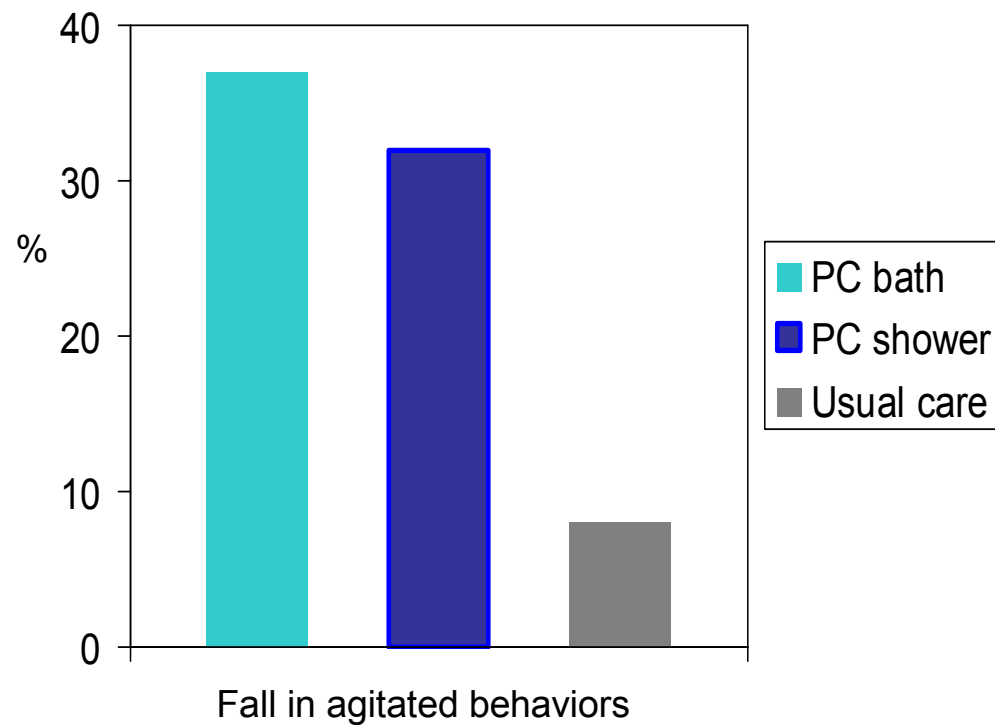
Staff in 10 NHs trained in person-centred care.

12 wk RM study, bed baths vs showers in 10 NHs. 5 “usual care” NHs.

Behaviours videotaped and counted.

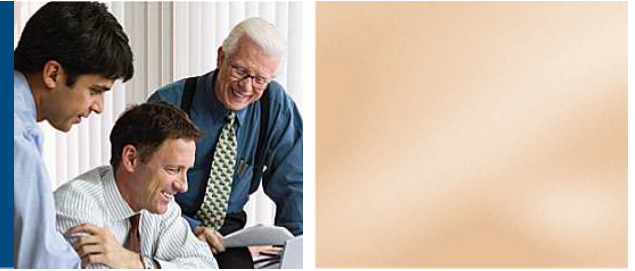
Both conditions superior to usual care.

Sloane et al (2004)



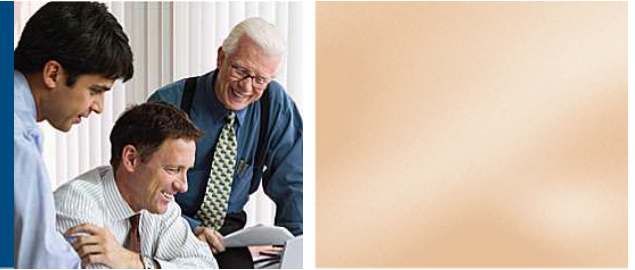


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## One-to-one interaction: a new treatment

- NH residents with frequent, severe behaviours
- Montessori techniques
- Control condition
- Behaviour measures



## Aroma

71 agitated NH residents

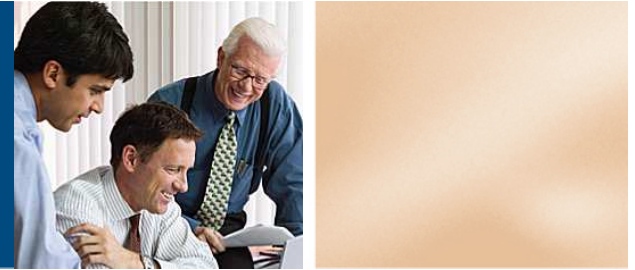
RCT, lemon balm or neutral oil massage, twice daily, 4 wks

Behaviours rated before and after

Effect size 0.7

Ballard et al. (2000)

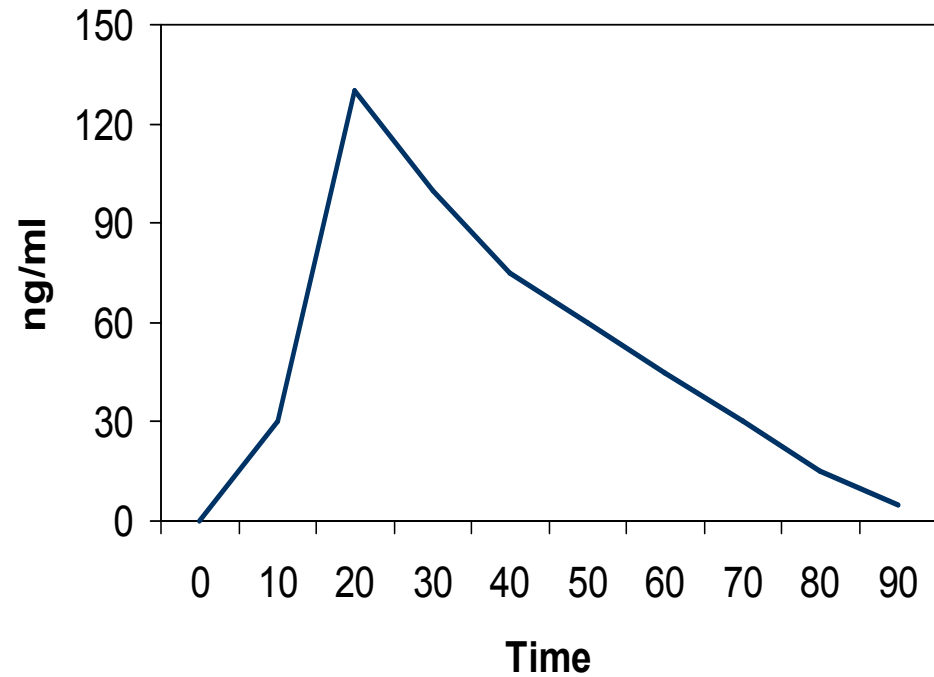


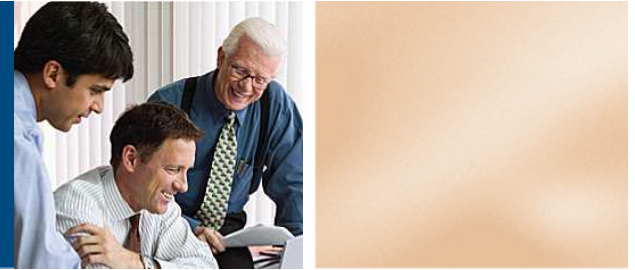


## Lavender absorption

Plasma levels of linalool after 10 minute skin application

Jager et al. (1992)

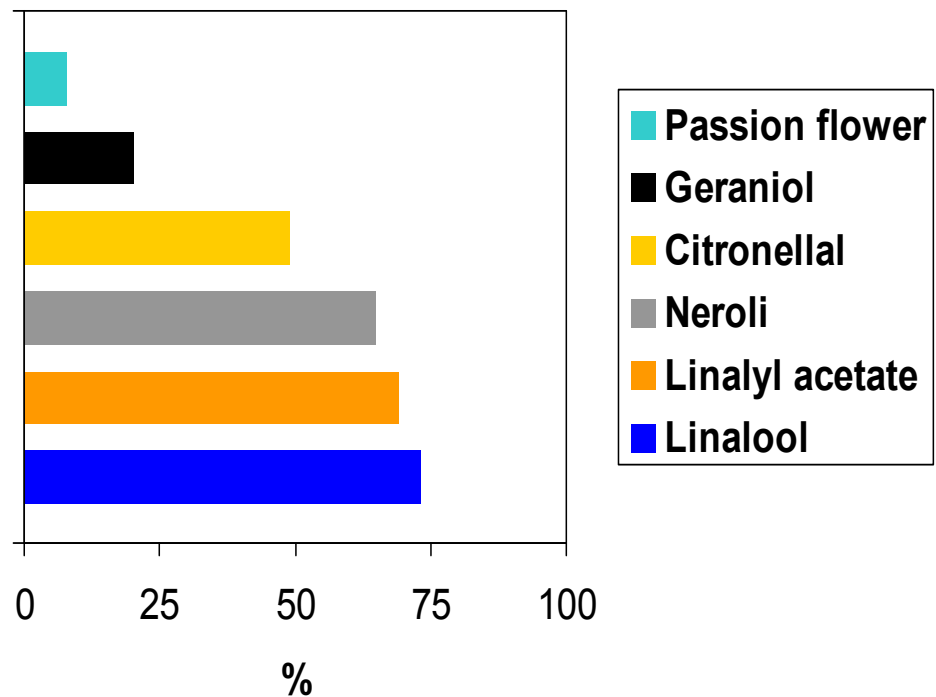


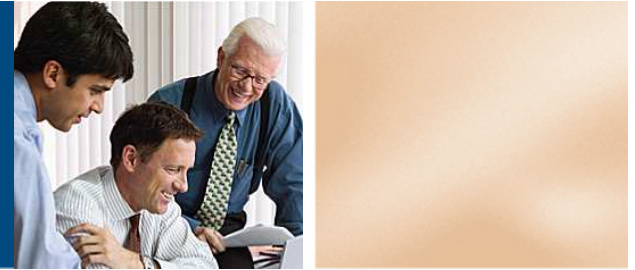


## Lavender: animal study

Reduction in mobility (%) of mice after 1 hour exposure to inhaled compounds

Buchbauer et al. (1993)



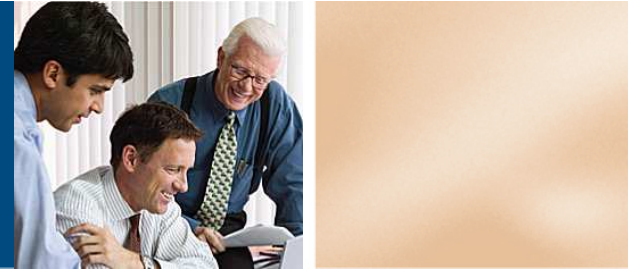


## Aromatic CNS activity

- Lavender and Melissa displace nicotine from human cholinergic receptors (Perry *et al*, 1996).
- Lavender inhibits glutamate binding in rat cortex in a dose-dependent fashion, consistent with its putative sedative and anticonvulsant properties (Elisabetsky *et al*, 1995).
- Melissa inhibits binding to rat forebrain GABA receptor channels (Abuhamdah *et al*, 2007).



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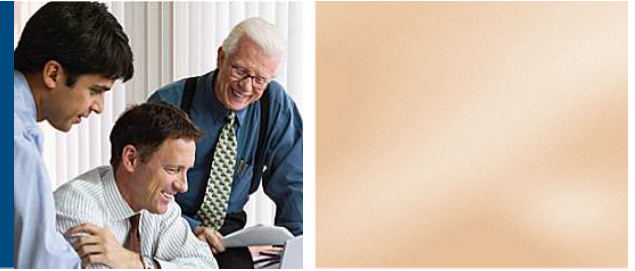


## Lavender study

- NH residents with frequent, severe behaviours
- CNS activity
- Delivery methods
- Blinding
- Behaviour measures



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## Summary

- Aroma, family tape, person-centred bathing, preferred music, muscle relaxation training all more effective than attention control
- Other treatments lack specific effect – does it matter?
- Effect sizes small to moderate
- Limited duration of effect



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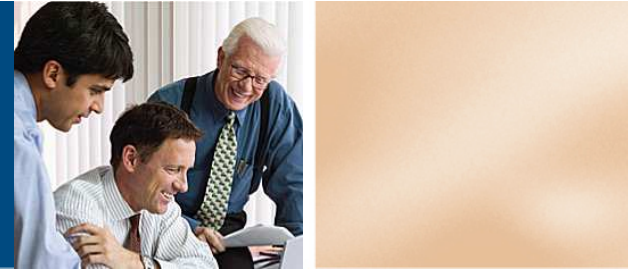


## Dementia CRC review

- Experimental studies (N=118)
- Dementia + behaviour symptom
- Attention control or another treatment
- Reporting, statistics
- Final selection (N=25)



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## Social enrichment: conclusions

- Later studies less positive than earlier ones
- Significant placebo effects
- Benefits non-specific
- Short-acting
- Not entirely innocuous
- Don't translate easily into nursing practice
- Human interaction is a treatment