

What can doctors do in the meantime? It seems reasonable to offer patients treatment for their symptoms. Not much research has been done on this, however, and medication for symptoms can have side effects. Practitioners also need to be aware that little work has been done in children. Perhaps doctors could consider delayed prescriptions in an attempt to meet demand from patients while maintaining evidence based integrity.<sup>15</sup> Hopefully, increasing numbers of patients will accept that infections of the upper respiratory tract are typically self limiting or, as we often tell patients, “bodies are much cleverer than doctors.”

To be truly evidence based the new answer would be to say to patients that the benefits from antibiotics in acute purulent rhinitis may range from no benefit to a one in 10 chance that they will work. If they are prepared to wait, their purulent rhinitis is likely to get better without them needing to be exposed to antibiotics, and that after 10 days they have a one in six chance of benefit. Future guidelines should reflect this. This advice differs little from the two guidelines above but is perhaps closer to the truth and evidence.

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## Sensory stimulation in dementia

### *An effective option for managing behavioural problems*

Most older people with dementia at some point in their illness develop psychiatric symptoms or behavioural disturbances such as agitation, aggression, depression, delusions, wandering, sleep disturbance, and hallucinations. Collectively, these are termed behavioural and psychological symptoms of dementia.<sup>1</sup> They are frightening for patients and their carers; constitute a major management problem for psychiatrists, general practitioners, and geriatricians; and act as a trigger for admission to institutional care. After excluding treatable causes such as concurrent infections, non-pharmacological approaches such as behavioural management are the recommended first line intervention.<sup>2</sup>

In practice, however, drugs such as neuroleptics and other sedatives are often prescribed in an attempt to control what can be an alarming situation. Although neuroleptics have modest term efficacy in the short term,<sup>3</sup> they are associated with side effects such as sedation, extrapyramidal signs, falls, a detrimental impact on quality of life,<sup>4</sup> and, possibly, accelerated cognitive decline.<sup>5</sup> These side effects are most pronounced in people with severe dementia, exactly the group who have most behavioural and psychological symptoms and for whom no evidence is available from placebo controlled trials of neuroleptics or other psychotropic agents. A wide range of alternative approaches has been tried, including multisensory interventions such as

snoozelan (involving fibreoptic lights and touch) but reports have essentially been qualitative and based on small numbers of patients. Two exceptions are aromatherapy and bright light treatment, which have emerged as promising treatments.

Aromatherapy has a long history and is the fastest growing of all complementary treatments. Three placebo controlled trials have been completed in the last year, and each has reported a significant beneficial effect on agitation compared with placebo, with almost complete compliance and no side effects (table). In addition, as opposed to neuroleptics, which seem to be associated with a detrimental impact on wellbeing, quality of life significantly improved with aromatherapy.<sup>8</sup>

Lemon balm (*Melissa officinalis*) or lavender oil (*Lavendula officinalis*) are the two main agents used and are delivered by either inhalation or skin application.<sup>6-8</sup> Almost all participants in the studies completed the course of treatment. This emphasises the excellent tolerability of aromatherapy, which is in contrast to many of the pharmacological treatments in this group of patients—it is common for 30% or more of the participants to be unable to complete a trial. Explanations for the efficacy of aromatherapy range from subjective psychological to direct biological action. In the studies cited no extended period of massage was used, and a direct chemical effect seems therefore likely.<sup>6,8</sup> Essential oils contain many terpenes, which are rapidly absorbed

Aromatherapy and bright light treatment as interventions for behavioural and psychological symptoms of dementia

Study	Intervention and delivery method	Design	Patient group	Outcome	Other key points
<b>Aromatherapy</b>					
Holmes et al <sup>6</sup>	2% Lavender oil via aromatherapy stream daily	Double blind placebo controlled crossover (alternate days) for 10 days	Severe dementia in NHS continuing care (n=15)	Significant improvement in Philadelphia agitation scale (P=0.02), with 60% of patients having some benefit	No adverse events Compliance: 100%
Smallwood et al <sup>7</sup>	Twice weekly	Two week single blind randomised controlled trial. Aromatherapy+massage v aromatherapy+conversation v massage alone	Inpatients with severe dementia (n=21)	Significant improvement (P<0.056) in motor behaviour (34% reduction with aromatherapy +massage)	—
Ballard et al <sup>8</sup>	Melissa oil (10% by weight combined with base lotion) via cream applied to hands twice daily (200 mg oil)	Double blind placebo controlled trial. Melissa oil v sunflower oil	Severe dementia in NHS continuing care (n=72)	Significant (P<0.0001) improvement in Cohen Mansfield agitation inventory (median improvement of 22 points after active treatment)	No major adverse effects. 97% of people assigned to active treatment completed the trial
<b>Bright light treatment</b>					
Haffmanns et al <sup>9</sup>	Bright light 30 +/-morning (2.5 mg) melatonin or placebo	Double blind placebo controlled crossover trial (n=10; 6 completed)	DSM-IV dementia with motor restless behaviour	Treatment reduced motor restlessness	—
Lyketsos et al <sup>10</sup>	1 hour bright light, morning	Randomised controlled crossover trial (n=15; 8 completed)	Dementia agitation	Treatment increased total sleep time, no change in behaviour	—
Graf et al <sup>11</sup>	Evening bright light v dim light therapy	Randomised bright light or dim light therapy (n=23)	Dementia	Treatment increased mini-mental state examination scores and led to a phase shift in body temperature rhythm	—

through the lungs and cross the blood-brain barrier. In addition, many possess cholinergic activity or act on  $\gamma$  aminobutyric acid receptors.<sup>12 13</sup>

Bright light is effective in the treatment of seasonal affective disorder.<sup>14</sup> The technique involves sitting in front of a light box with the entire visual angle subtended by the light source—the amount of light is important (up to 10 000 lux compared with average office light, which is up to 300 lux). Three controlled trials have been published in the past three years that investigate the effect of bright light on sleep disturbance and behavioural disorders in dementia (table).<sup>9-11</sup> Some benefits were reported for restlessness, but a particular beneficial effect has been found for sleep disturbances. These results are promising.

People with dementia are among the most vulnerable in our society. Symptoms often need to be treated expediently, and drugs, although moderately effective, can be hazardous. Aromatherapy and bright light treatment seem to be safe and effective and may have an important role in managing behavioural problems in people with dementia.

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Astra Zeneca, both of which manufacture products that are used in the management of behavioural disturbances in people with dementia. AB is editor of the *International Journal of Geriatric Psychiatry*, which publishes peer reviewed academic papers in old age psychiatry and occasionally publishes supplements sponsored by pharmaceutical companies.

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