

## References: Sensory Changes

### **REF ID: 6333**

#### **Level II: Individual experimental study**

##### **Topic 4.3: Management-Medication**

**Allain, H., Tessier, C., BentueFerrer, D., Tarral, A., Le Breton, S., & Gandon, J. M. et al. (2003). Effects of risperidone on psychometric and cognitive functions in healthy elderly volunteers. *Psychopharmacology*, 165(4), 419-429.**

#### **Journal; Peer Reviewed Journal**

Assessed the effects of a single dose of risperidone on psychomotor performances and cognitive functions compared to a placebo and to a positive control, lorazepam 1 mg, in 12 healthy elderly subjects. This study was a randomized, double-blind, four-way crossover clinical trial involving four 8-hrs long treatment periods. The pharmacodynamic assessment criteria included a battery of psychomotor tests, a subjective evaluation and an electroencephalogram. Safety was evaluated by clinical laboratory tests, electrocardiogram and recording of adverse events. Concentrations of risperidone, 9-hydroxy-risperidone and lorazepam were determined before and 2 hrs after dosing. Risperidone demonstrated minor impairment on motor activity, postural stability, and information processing. Contentedness subjective evaluation was decreased with risperidone 0.5 mg, 6 hrs after dosing. No significant difference was observed on EEG frequencies and no sedative activity was detected with risperidone. Well-known detrimental effects of lorazepam on psychomotor performances were observed and sedative effects were confirmed by the EEG findings. The results demonstrated that low doses of risperidone, but not low doses of lorazepam, did not disturb the cognitive functions in the elderly. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

### **REF ID: 6312**

#### **Level IV: Non-experimental study**

##### **Topic 6: Comprehensive**

**Alcock, N., McGarry, J., & Elkan, R. (2002). Management of pain in older people within the nursing home: A preliminary study. *Health and Social Care in the Community*, 10(6), 464-471.**

#### **Journal Article, Research, Tables/Charts**

The provision of continuing care for older people has largely shifted from the hospital setting to the community, and nursing homes increasingly provide support for older people, many of whom exhibit multiple pathology and complex health and social care needs. However, the quality of pain management within this setting has been identified as an issue of concern. It has been estimated that approximately two-thirds of people aged 65 years and over experience chronic pain, and that the prevalence of chronic pain in nursing home residents is between 45% and 80%. However, there exist a number of barriers to the identification and management of chronic pain among older people resident in nursing homes, including sensory impairments in older people themselves and educational deficits among professionals. Such barriers need to be overcome if pain management is to be improved. The present study involved administering a pre-piloted postal questionnaire to the managers of 121 nursing homes within a geographically defined area. Sixty-eight (56%) were completed and returned. The questionnaire broadly covered the following: prevalence of chronic pain and use of interventions; assessment and management strategies; education and training; and communication barriers. Overall, 37% of nursing home residents were identified as experiencing chronic non-malignant pain (pain lasting longer than 3 months not caused by cancer) and 2% were reported as experiencing chronic malignant pain (pain lasting for more than 3 months caused by cancer). Paracetamol was identified as the most 'often' used analgesia for both pain modalities. Sixty-nine per cent of nursing homes did not have a written policy regarding pain management and 75% did not use a standardised pain assessment tool. Forty-four per cent of nursing homes provided education or training sessions for qualified staff and 34% provided this for care assistants. Forty per cent of qualified staff and 85% of care assistants had no specialist knowledge regarding the management of pain in older people. The present study confirms the need for the

development of effective pain management strategies underpinned by appropriate training and education in order to meet the particular needs of older people.

**REF ID: 6241**

**Level II: Individual experimental study**

**Topic 4.2: Management-Behavior Therapy**

**Andersson, G., Porsaeus, D., Wiklund, M., Kaldo, V., & Larsen, H. C. (2005). Treatment of tinnitus in the elderly: A controlled trial of cognitive behavior therapy. *International Journal of Audiology*, 44(11), 671-675.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

The aim of the study was to investigate the effects of cognitive behavioral therapy (CBT) in elderly people with tinnitus (<65 years). Thirty-seven patients were called in for a structured interview. Following exclusion, twenty-three participated in the trial. All participants underwent medical ear, nose, and throat (ENT) examination, audiometry, and tinnitus matchings. A randomized controlled design with a waiting list control group was used. A CBT treatment package was delivered in six weekly two hour group sessions. Outcome was measured using validated self-report inventories and daily diary ratings of annoyance, loudness and sleep quality for one week pre-treatment, post-treatment. A three month follow-up was included at which time all participants had received treatment, but in a shorter format for the control group. Results showed statistically significant reductions of tinnitus-related distress. Thus, CBT was better than no treatment, but the particular aspects of CBT that contributed to the effects can not be established. In conclusion, the findings give some support for the use of group CBT for elderly people with tinnitus.

**REF ID: 6313**

**Level V:**

**Topic 6: Comprehensive**

**Ardery, G., Herr, K. A., Titler, M. G., Sorofman, & Schmitt, M. B. (2003). Assessing and managing acute pain in older adults: A research base to guide practice. *MEDSURG Nursing*, 12(1), 7-19.**

**Journal Article, CEU, Exam Questions, Review, Tables/Charts**

Older adults experiencing acute pain are often underassessed and undertreated. This review summarizes recommendations from an evidence-based practice guideline on acute pain management in older adults. Key areas highlighted are pain assessment and monitoring, patient education, pharmacologic management, and nonpharmacologic management.

**REF ID: 6224**

**Level I: Systematic Reviews**

**Topic 3: Assessment**

**Bagai, A., Thavendiranathan, P., & Detsky, A. S. (2006). The rational clinical examination. does this patient have hearing impairment? *JAMA: Journal of the American Medical Association*, 295(4), 416-28, 448.**

**Journal Article, Algorithm, Case Study, CEU, Questionnaire/Scale, Research, Systematic Review, Tables/Charts**

CONTEXT: Hearing impairment is prevalent among the elderly population but commonly underdiagnosed. OBJECTIVE: To review the accuracy and precision of bedside clinical maneuvers for diagnosing hearing impairment. DATA SOURCES: MEDLINE and EMBASE databases (1966 to April 2005) were searched for English-language articles related to screening for hearing impairment. STUDY SELECTION: Original studies on the accuracy or precision of screening questions and tests were included. Articles that used unaccepted reference standards or contained insufficient data were excluded. Medical Subject Headings or keywords used in the search included hearing loss, hearing handicap, hearing tests, tuning fork, deafness, physical examination, sensitivity, specificity, audiometry, tuning fork tests, Rinne, Weber, audioscope, Hearing Handicap Inventory for the Elderly-Screening version, whispered voice test, sensorineural, and conductive. DATA EXTRACTION: One author screened all potential articles and 2 authors independently abstracted data. Differences were resolved by

consensus. Each included study (n = 24) was assigned a methodological grade. DATA SYNTHESIS: A yes response when asking individuals whether they have hearing impairment has a summary likelihood ratio (LR) of 2.5 (95% confidence interval [CI], 1.7-3.6); a no response has an LR of 0.13 (95% CI, 0.09-0.19). A score of 8 or greater on the screening version of the Hearing Handicap Inventory for the Elderly (HHIE-S) has an LR of 3.8 (95% CI, 3.0-4.8); a score less than 8 has an LR of 0.38 (95% CI, 0.29-0.51). An abnormal Weber tuning fork test response has an LR of 1.6 (95% CI, 1.0-2.3); a normal response has an LR of 0.70 (95% CI, 0.48-1.0). An abnormal Rinne tuning fork test response has LRs ranging from 2.7 to 62; a normal response has LRs from 0.01 to 0.85. Inability to perceive a whispered voice has an LR of 6.1 (95% CI, 4.5-8.4); normal perception has an LR of 0.03 (95% CI, 0-0.24). Not passing the audioscope test has an LR of 2.4 (95% CI, 1.4-4.1); passing has an LR of 0.07 (95% CI, 0.03-0.17). CONCLUSIONS: Elderly individuals who acknowledge they have hearing impairment require audiometry, while those who reply no should be screened with the whispered-voice test. Individuals who perceive the whispered voice require no further testing, while those unable to perceive the voice require audiometry. The Weber and Rinne tests should not be used for general screening. PMID: 16434632 [PubMed - indexed for MEDLINE]

**REF ID: 6256**

**Level II: Individual experimental study**

**Topic 4.2: Management-Behavior Therapy**

**Baker, R., Holloway, J., Holtkamp, C. C. M., Larsson, A., Hartman, L. C., & Pearce, R. et al. (2003). Effects of multi-sensory stimulation for people with dementia. *Journal of Advanced Nursing*, 43(5), 465-477.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

BACKGROUND: Over recent years multi-sensory stimulation (MSS) has become an increasingly popular approach to care and is used in several centres throughout Europe. This popularity could be explained by the limited alternatives available to staff and a widely held belief that MSS is a friendly and highly humane approach. A randomized controlled trial was therefore essential to evaluate the effectiveness and extent of the benefits of MSS. AIM: To assess whether MSS is more effective in changing the behaviour, mood and cognition of older adults with dementia than a control of activity (playing card games, looking at photographs, doing quizzes, etc.). METHODS: A total of 136 patients from three countries [United Kingdom (UK), the Netherlands and Sweden] were randomized to MSS or activity groups. Patients participated in eight 30-minute sessions over 4 weeks. Ratings of behaviour and mood were taken before, during and after sessions to investigate immediate effects. Pre-, mid-, post-trial and follow-up assessments were taken to investigate any generalization of effects to cognition and behaviour and mood at home/on the ward or at the day hospital. RESULTS: There were limited short-term improvements for both the MSS and activity groups immediately after sessions, and limited short-term improvements between the groups during sessions. There were no significant differences between the groups when assessing change in behaviour, mood or cognition at home/on the ward or at the day hospital. In the UK, however, behaviour at the day hospital for both groups remained stable during the trial but deteriorated once the sessions had stopped, and active/disturbed behaviour at home improved but likewise deteriorated once sessions had stopped. CONCLUSIONS: Overall, MSS was found to be no more effective than an activity in changing the behaviour, mood or cognition of patients with dementia in the short- or long-term.

**REF ID: 6332**

**Level V:**

**Topic 3: Assessment**

**Bartolo, A., Cubelli, R., Sala, S. D., & Drei, S. (2003). Pantomimes are special gestures which rely on working memory. *Brain and Cognition*, 53(3), 483-494.**

**Journal; Peer Reviewed Journal**

The case of a patient is reported who presented consistently with overt deficits in producing pantomimes in the absence of any other deficits in producing meaningful gestures. This pattern of spared and impaired abilities is difficult to reconcile with the current layout of cognitive models for praxis. This

patient also showed clear impairment in a dual-task paradigm, a test taxing the coordination aspect of working memory, though performed normally in a series of other neuropsychological measures assessing language, visuo-spatial functions, reasoning function, and executive function. A specific working memory impairment associated with a deficit of pantomiming in the absence of any other disorders in the production of meaningful gestures suggested a way to modify the model to account for the data. Pantomimes are a particular category of gestures, meaningful, yet novel. We posit that by their very nature they call for the intervention of a mechanism to integrate and synthesise perceptual inputs together with information made available from the action semantics (knowledge about objects and functions) and the output lexicon (stored procedural programmes). This processing stage conceived as a temporary workspace where gesture information is actively manipulated, would generate... (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 6328**

**Level II: Individual experimental study**

**Topic 4.4: Management-Products**

**Bentler, R. A., Tubbs, J. L., Egge, J. L., Flamme, G. A., & Dittberner, A. B. (2004). Evaluation of an adaptive directional system in a DSP hearing aid. *American Journal of Audiology*, 13(1), 73-79. Clinical Trial. Journal Article. Randomized Controlled Trial**

The effectiveness of an adaptive directional microphone design, as implemented in the Phonak Claro behind-the-ear hearing aid, is evaluated. Participants were fit bilaterally and tested in 2 environments, an anechoic chamber and a moderately reverberant classroom, with the microphones in the fixed (cardioid) setting and the adaptive setting. Five speakers were placed between 110 degrees and 250 degrees azimuth around the listener. Speech-weighted noise was presented from those speakers at an overall level (OAL) of 65 dB (A). Noise was increased by 8 dB from 1 speaker at a time, using 2-s modulation and random assignment, while the output from the other speakers was reduced to maintain the constant OAL. Results of 2 speech perception tasks used as outcome measures indicated that the adaptive system was not able to follow the dominant noise source in the presence of lower level noise sources. Self-report measures obtained after blinded home trials were consistent with laboratory findings that the participants did not perceive this adaptive microphone design to be more effective than the default fixed-microphone option.

**REF ID: 6258**

**Level II: Individual experimental study**

**Topic 3: Assessment**

**Blake, H., McKinney, M., Treece, K., Lee, E., & Lincoln, N. B. (2002). An evaluation of screening measures for cognitive impairment after stroke. *Age and Ageing*, 31(6), 451-456. Journal Article, Clinical Trial, Research, Tables/Charts**

**OBJECTIVES:**to assess the sensitivity and specificity of a screening battery for detecting cognitive impairment after stroke. **DESIGN:**a randomized controlled trial. **METHODS:**stroke patients were recruited from hospitals in three centres. Patients were screened for cognitive impairment on the Mini-Mental State Examination, the Sheffield Screening Test for Acquired Language Disorders and Raven's Coloured Progressive Matrices and received a further battery of assessments of cognitive function. Sensitivity and specificity values were calculated for the three screening measures for overall conclusions regarding cognitive impairment reached from a comprehensive assessment. Receiver Operating Characteristic Curves were plotted. **CONCLUSION:**the Mini-Mental State Examination was not a useful screen for memory problems or overall cognitive impairment after stroke. The Sheffield Screening Test for Acquired Language Disorders was an appropriate screen for language problems. The Raven's Coloured Progressive Matrices was appropriate as a screen for perceptual problems and visual inattention but not for executive deficits.

**REF ID: 6341**

**Level V:**

**Topic 1: Risks**

**Bonnnesen, J. L., & Burgess, E. O. (2004). Senior moments: The acceptability of an ageist phrase.**

*Journal of Aging Studies, 18(2), 123-142.*

**Journal; Peer Reviewed Journal**

Purpose: This study examines instances of the phrase senior moment in newspapers to identify definitions of the phrase and determine how the phrase operates in discourse. Design and methods: A search on Lexis-Nexus Academic Universe revealed 136 newspaper articles using senior moment 181 times between 1991 and 2000. These articles and instances of the phrase were examined through quantitative and qualitative content analysis. Definitions from the articles were coded into six categories. Qualitative analysis explored how the phrase was used as an expressed attribution. Results: First appearing in 1997, senior moment became more common in 1998, 1999, and 2000. Although senior moments are most frequently defined as brief memory lapses, the phrase also refers to severe cognitive impairment and functional incompetence. Occasionally the phrase highlights a positive event related to an older adult. Attributional themes included two self-directed attributions (excuses and concessions) and three other-directed attributions (condemnations, apprehensions, and dismissals). Implications: These results indicate that senior moment is an ageist attribution. The increasing popularity of the phrase suggests that negative stereotypes of older adults remain socially acceptable. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 6310**

**Level I: Systematic Reviews**

**Topic 1: Risks**

**Brown, A., & Draper, P. (2003). Accommodative speech and terms of endearment: Elements of a language mode often experienced by older adults. *Journal of Advanced Nursing, 41(1), 15-21.***

**Journal Article, Research, Systematic Review**

AIM: To discuss the use of patronizing patterns of speech and modified forms of address in conversations between nurses and other health workers, and older people. RATIONALE: The impetus for this paper was the publication of the National Service Framework for Older People, which draws attention to the prevalence of age discrimination and the need to provide individualized care. APPROACH: The literature between 1990 and 2001 was reviewed in a systematic way. Certain key, older texts were also identified. Twenty-four publications were found, which examine the ways in which nurses and other health workers modify their speech when conversing with older people, discuss what older people think about this practice, or otherwise contribute to this issue. RESULTS: The paper uses speech accommodation theory to explain how the language addressed to older people is sometimes modified. The practice of over-accommodation is also described. This happens when older people are addressed in a simplified vocabulary with a high-pitched tone of voice and slow speech. The extent of over-accommodation is discussed, and its impact on older people is considered in terms of fostered dependence and lowered self-esteem. CONCLUSION: The findings of the review in the context of current policy related to older people and implications for nursing education are discussed.

**REF ID: 6314**

**Level V:**

**Topic 6: Comprehensive**

**Cavalieri, T. A. (2002). Pain management in the elderly. *JAOA: The Journal of the American Osteopathic Association, 102(9), 481-5, 515-6.***

**Journal Article, CEU, Exam Questions, Review, Tables/Charts**

Pain in the elderly is often unrecognized and undertreated. Ineffective pain management can have a significant impact on the quality of life of older adults, leading to depression, social isolation, and a loss of function. Proper assessment of older adults requires the physician to regularly ask about the presence of pain and be skillful in assessment strategies to evaluate the frequency and intensity of pain. Assessment of pain in older adults with dementia and communication disorders is especially challenging. Effective pain management in elderly patients should include both pharmacologic and nonpharmacologic strategies. Pharmacologic strategies call for administration of nonopioid analgesics, opioid analgesics, and adjuvant medication. Polypharmacy, drug-drug and drug-disease interactions, age-associated changes in drug metabolism, and the high frequency of adverse drug reactions need to be

carefully considered in using medications in this population. Nonpharmacologic approaches such as cognitivebehavioral therapy, education, osteopathic manipulative treatment, and exercise should be applied in addition to pharmacologic therapy. Using a team approach and incorporating principles of pain management can effectively provide good analgesia for older adults.

**REF ID: 6242**

**Level II: Individual experimental study**

**Topic 4.3: Management-Medication**

**Chibnall, J. T., Tait, R. C., Harman, B., & Luebbert, R. A. (2005). Effect of acetaminophen on behavior, well-being, and psychotropic medication use in nursing home residents with moderate-to-severe dementia. *Journal of the American Geriatrics Society*, 53(11), 1921-1929.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

Objectives: To evaluate the effect of regularly scheduled administration of analgesic medication on behavior, emotional well-being, and use of as-needed psychotropic medications in nursing home residents with moderate-to-severe dementia. Design: Randomized, double-blind, placebo-controlled, crossover trial. Setting: Nursing-home based. Participants: Twenty-five nursing home residents with moderate-to-severe dementia. Intervention: Participants received 4 weeks of acetaminophen (3,000 mg/d) and 4 weeks of placebo. Measurements: Behavior and emotional well-being were assessed using Dementia Care Mapping, an observational method that quantifies time spent in behaviors across 26 domains (e.g., social interaction, unattended distress) and assesses emotional state while behaviors are being observed. Agitation was measured using the Cohen-Mansfield Agitation Inventory. As-needed psychotropic medication use was aggregated from medication logs. Results: Participants spent more time in social interaction, engaged with media, talking to themselves, engaged in work-like activity, and experiencing unattended distress when they received acetaminophen than they did when they received placebo. Participants also spent less time in their rooms, less time removed from the nursing home unit, and less time performing personal care activities when they received acetaminophen. There were no effects on agitation, emotional well-being, or as-needed psychotropic medication use. Conclusion: Untreated pain inhibits activity in nursing home residents with moderate-to-severe dementia. Pain treatment in this group may facilitate engagement with the environment.

**REF ID: 6323**

**QM: Quality Measures**

**Topic 5: Evaluation/Follow-up**

**Chodosh, J., Ferrell, Shekelle, P. G., & Wenger, N. S. (2001). Quality indicators for pain management in vulnerable elders. *Annals of Internal Medicine*, 135(8 part 2), 731-735.**

**Journal Article**

abstract not available

**REF ID: 6344**

**Level V:**

**Topic 4.6: Management-Other**

**Coffman, D. D. (2002). Music and quality of life in older adults. *Psychomusicology*, 18(1-2), 76-88.**

**Journal; Peer Reviewed Journal**

This article briefly reviews some basic issues of adult development and measures used in assessing quality of life as a background for reviewing music studies with healthy older adults. Research shows that music activities (both music listening and music making) can influence older adults' perceptions about the quality of their lives. Some research has examined the effects of music listening on biological markers of health and subjective perceptions of well-being. Other studies on the psychological and social benefits associated with music making activities have demonstrated that participants often place considerable value on these "nonmusical" benefits of music activity. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 6329**

**Level VI: Opinion**

**Topic 6: Comprehensive**

**Coker, E. (2004). After a stroke, women described changes that created a sense of bodily strangeness. *Evidence-Based Nursing*, 7(3), 92.**

**Journal Article, Abstract, Commentary**

critique of Original Study: Kvigne K, Kirkevold M. Living with bodily strangeness: women's experiences of their changing and unpredictable body following a stroke. *QUAL HEALTH RES* 2003 Nov; 13(9): 1291-310 (research) [CINAHL Accession Number: 2004048013];

What are women's experiences of their bodies after a stroke? DESIGN Giorgi's phenomenology. SETTING Hospitals and homes in rural eastern Norway. PATIENTS 25 women (age range 37-78 y) who had been admitted to hospital with a first stroke, were able to participate in in-depth interviews, and had no other serious disorders. 20 women completed the study. METHODS Women were interviewed 3 times: in hospital within 6 weeks of stroke, and at 6 months and 1 year after returning home. Conversational interviews that lasted about 1.5 hours focused on everyday life before stroke, thoughts and experiences related to the stroke event, experiences of bodily changes, experiences with healthcare professionals, and thoughts and wishes about the future. Interviews were tape recorded, transcribed, read to get a sense of the whole, and re-read to extract meaning units. Finally, themes and subthemes were generated. MAIN FINDINGS Women's descriptions of their bodily experiences after stroke wove together the past, the present, and the future. Stroke related changes created a sense of bodily strangeness expressed by 3 themes: the unpredictable body, the demanding body, and the extended body. The most fundamental change was that women's bodies became unpredictable, as evidenced by being non-spontaneous and requiring consciously thinking about and instructing their bodies in every action. Women also described their bodies as vulnerable and defenceless, disposed to complications and additional problems, or affected by normally innocuous situations, which led to despair, exhaustion, and interrupted rehabilitation goals. Many women felt that their bodies were unreliable and betraying them in performing normal functions. The demanding body was time consuming in that it took longer to do activities and required training, therapy, and exercise to make it function. Women also described the limiting effect of their bodies on their activities, particularly because of extreme fatigue. They described their dependence on relatives, healthcare professionals, friends, and assistive devices, which reduced their freedom and flexibility. Women felt conspicuous because of their wheelchairs or walkers, facial or limb paralysis, or lapses in memory when engaged in conversation. The extended body encompassed all the helpers who, through assisting, became extensions of the women's bodies. Despite positive feelings toward helpers, women perceived help from unfamiliar people to be a strain. CONCLUSIONS Women's experiences of their bodies after stroke were characterised as the unpredictable body, the demanding body, and the extended body. The changes experienced were profound, disturbing, and unintelligible but also included a trend toward becoming familiar with, and adapting to, the changed body.

**REF ID: 1379**

**Level I: Systematic Reviews**

**Topic 1: Risks**

**Cole, M. G., & Dendukuri, N. (2003). Risk factors for depression among elderly community subjects: A systematic review and meta-analysis. *American Journal of Psychiatry*, 160(6), 1147-1156.**

**Journal Article, Research, Systematic Review, Tables/Charts**

OBJECTIVE: The goal of this study was to determine risk factors for depression among elderly community subjects. METHOD: MEDLINE and PsycINFO were searched for potentially relevant articles published from January 1966 to June 2001 and from January 1967 to June 2001, respectively. The bibliographies of relevant articles were searched for additional references. Twenty studies met the following six inclusion criteria: original research reported in an English or French publication, study group of community residents, age of subjects 50 years or more, prospective study design, examination of at least one risk factor, and use of an acceptable definition of depression. The validity of studies was assessed according to the four primary criteria for risk factor studies described by the Evidence-Based Medicine Working Group. Information about group size at baseline and follow-up, age, proportion of

men, depression criteria, exclusion criteria at baseline, length of follow-up, number of incident cases of depression, and risk factors was abstracted from each report. RESULTS: Follow-up of the inception cohort was incomplete in most studies. In the qualitative meta-analysis, risk factors identified by both univariate and multivariate techniques in at least two studies each were disability, new medical illness, poor health status, prior depression, poor self-perceived health, and bereavement. In the quantitative meta-analysis, bereavement, sleep disturbance, disability, prior depression, and female gender were significant risk factors. CONCLUSIONS: Despite the methodologic limitations of the studies and this meta-analysis, bereavement, sleep disturbance, disability, prior depression, and female gender appear to be important risk factors for depression among elderly community subjects.

**REF ID: 6315**

**Level IV: Non-experimental study**

**Topic 1: Risks; Topic 3: Assessment**

**Conlin, K. K., & Schumann, L. (2002). Research. literacy in the health care system: A study on open heart surgery patients. *Journal of the American Academy of Nurse Practitioners, 14(1), 38-42.***

**Journal Article, Research, Tables/Charts**

PURPOSE: To determine if patients recovering from open heart surgery were able to read and understand written discharge instructions and further to analyze the level of difficulty of standard discharge instructions and consent forms for open heart surgery. DATA SOURCES: After screening for visual acuity and efficiency, literacy was assessed with the Rapid Estimate of Adult Literacy in Medicine test (REALM) and comprehension was tested by a post-test of five questions based on the discharge instructions. Flesch-Kincaid scores were calculated on four sets of standard written discharge instructions and consent forms. CONCLUSIONS: Results from the study indicated that the REALM test was more accurate than the reported grade level and that reading skills are needed to understand and comprehend information needed for post-operative care. The study further substantiated that health care facilities are not providing written instructional material that is within the reading level of the patient. IMPLICATIONS FOR PRACTICE: Illiteracy can have a major impact in the health care system. Low reading skills can disempower and can prove to be costly for patients who are requiring health care services. Further investigation is needed on the impact of patients' reading skills on the health care system.

**REF ID: 6349**

**Level V:**

**Topic 3: Assessment**

**Connolly, J. F., D'Arcy, R. C. N., Newman, R. L., & Kemps, R. (2000). The application of cognitive event-related brain potentials (ERPs) in language-impaired individuals: Review and case studies. *International Journal of Psychophysiology, 38(1), 55-70.***

**Journal; Peer Reviewed Journal**

Reviews event-related potential (ERP)-based assessment measures for the neuropsychological assessment of dyslexia and language impairments secondary to stroke, particularly the innovative assessment methods program for those who cannot be evaluated by traditional methods. A common consequence of neurological insults is impaired communication abilities. Computer adaptations of the Peabody Picture Vocabulary Test--Revised (L. M. Dunn and L. M. Dunn, 1981), the Psycholinguistic Assessments of Language Processing in Aphasia (J. Kay et al, 1992), the Token Test (F. Boller and L. A. Vignolo, 1966), and the psycholinguistic N400 paradigm all show that ERPs reliably can be used to evaluate an individual's reading and speech comprehension abilities, independent of behavioral and speech production impediments. The cases of a male college student, a high-functioning individual with profound dyslexia, a female (aged 53 yrs), a female (aged 60 yrs), and a male (aged 71 yrs) all show the value of using ERPs in assessment of a variety of Ss. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6240**

**Level II: Individual experimental study**

**Topic 4.4: Management-Products**

**Drennan, W. R., Gatehouse, S., Howell, P., Van Tasell, D., & Lund, S. (2005). Localization and speech-identification ability of hearing-impaired listeners using phase-preserving amplification. *Ear and Hearing, 26(5), 461-472.***

**Journal Article, Clinical Trial, Research, Tables/Charts**

**OBJECTIVE:** The purpose of these experiments was to determine the ability of hearing-impaired listeners to localize and to identify speech in noise using phase-preserving and non-phase-preserving amplification. **DESIGN:** These abilities were measured 4 times over each of two 16-week periods, using a randomized, single-blinded, within-subject crossover design. Listeners were fitted bilaterally, using the National Acoustic Laboratories linear frequency-gain characteristic with a digital hearing aid programmed in one of two ways: (1) with a linear-phase filter and (2) with filters designed to compensate for the magnitude and phase anomalies caused by the hearing aid fitting, thus preserving interaural phase. Listeners identified a word and its location in background noise with a speech-shaped spectrum. **RESULTS:** Immediately after fitting, both hearing aid programs reduced the listeners' ability to localize the speech in noise. The phase-preserving processing had a less detrimental effect on localization ability immediately after fitting. After 3 weeks, performance improved such that, for localization in noise, there was no detrimental effect of amplification and no difference between the two processing strategies. Over 16 weeks, speech understanding in noise improved. Speech understanding for phase-preserving processing was slightly and significantly better than linear-phase processing at 16 weeks. **CONCLUSIONS:** Localization ability using phase-preserving amplification does not differ from localization ability using traditional non-phase-preserving amplification after just 3 weeks of use. Listeners quickly acclimated to altered spatial cues. Phase-preserving amplification provided a 2.3% advantage for speech intelligibility in noise after 16 weeks.

**REF ID: 6336**

**Level III: Quasi-experimental study**

**Topic 4.5: Management-Surgery**

**Drouot, X., Nguyen, J., Peschanski, M., & Lefaucheur, J. (2002). The antalgic efficacy of chronic motor cortex stimulation is related to sensory changes in the painful zone. *Brain: A Journal of Neurology, 125(7), 1660-1664.***

**Journal; Peer Reviewed Journal**

Epidural motor cortex stimulation (MCS) could achieve good pain control in patients with drug-resistant chronic neurogenic pain. In the search for parameters associated with the favorable outcome of this surgical procedure, quantitative sensory testing was performed in a series of 31 patients (aged 25-78 yrs) treated by MCS for chronic pain. Non-nociceptive and nociceptive sensory thresholds were measured in the painful area and its contralateral homologous zone with the stimulator in "off" and in "on" position. All 13 patients who exhibited normal or quite normal non-nociceptive thermal thresholds within the painful area benefited from MCS. Of the remaining 18 patients with altered thermal sensory thresholds, 8 patients nevertheless experienced good pain control by MCS. In these 8 "good responders," sensory thresholds were improved by switching "on" MCS. In contrast, the last 10 patients showed abnormal thermal thresholds that were not modified by switching "on" MCS, and did not respond clinically to MCS. Therefore, "good responders" to MCS could be identified by the absence of alteration of non-nociceptive sensory modalities within the painful area, or by abnormal sensory thresholds that could be improved by MCS. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6330**

**Level VI: Opinion**

**Topic 4.1: Management-General**

**Forbes, D. (2004). Multisensory stimulation was not better than usual activities for changing cognition, behaviour, and mood in dementia. *Evidence-Based Nursing, 7(2), 55.***

**Journal Article, Abstract, Commentary**

critique of REF ID 6256 Original Study: Baker R, Holloway J, Holtkamp CCM, Larsson A, Hartman LC, Pearce R, et al. Effects of multi-sensory stimulation for people with dementia. J ADV NURS 2003 Sep; 43(5): 465-77 (research) [CINAHL Accession Number: 2004013859];

In older adults with dementia, does individualised multisensory stimulation. (MSS) improve behaviour, mood, and cognition more than a control activity (eg, playing cards, looking at photographs, or doing quizzes)? METHODS Design: randomised controlled trial. Allocation: (concealed)\*. Blinding: unblinded. Follow up period: 8 weeks. Setting: a day hospital in the UK and psychogeriatric wards in the Netherlands and Sweden. Patients: 136 patients (mean age 82 y) who had Alzheimer's disease, vascular dementia, or mixed dementia; no major psychiatric comorbid conditions; moderate to severe cognitive impairment (Mini-Mental State Examination [MMSE] score 0-17); and were not confined to bed. Interventions: eight 30 minute sessions of either MSS (n=65) or activity (n=71) twice a week for 4 weeks. Sessions occurred one on one with the same key worker (nurse, occupational therapist, or psychology assistant) whenever possible. MSS was matched to the patient's needs and interests and included light and sound effects and materials for touching and smelling. The comparison activity sessions consisted of playing cards, doing quizzes, and looking at photographs with no clear aim or focus to the task. No intentional special MSS experiences were introduced. Outcomes: behaviour and mood during and after sessions (Interact rating form); cognition (MMSE) and behaviour at home or on the ward (Behaviour Rating Scale) after 8 sessions in 4 weeks; behaviour on the ward (Behaviour Observation Scale for Intra-mural Psycho-geriatrics) and at day hospital (Rehabilitation Evaluation Hall and Baker scale) at 8 weeks; and mood at home or on the ward (Behaviour and Mood Disturbance Scale) after 8 sessions and at 1 month after sessions. Patient follow up: 93%. \*Information provided by author. MAIN RESULTS Analysis was by intention to treat. Treatment groups did not differ for changes in behaviour and mood after sessions. During sessions, the MSS group recalled more memories than the activity group, whereas the activity group touched objects more appropriately and were more attentive to the activities or objects; after accounting for baseline MMSE scores, the difference in recalling memories disappeared. At follow up, cognition (MMSE score difference -0.3, 95% CI -1.4 to 0.7), behaviour, or mood scores did not differ between group. CONCLUSION In people with dementia, one on one multisensory stimulation was no better than activity (eg, playing cards, looking at photographs, or doing quizzes) for changing behaviour, mood, or cognition.

**REF ID: 6354**

**Level V:**

**Topic 4.6: Management-Other**

**Francis, D. R., Riddoch, M. J., & Humphreys, G. W. (2001). Cognitive rehabilitation of word meaning deafness. *Aphasiology*, 15(8), 749-766.**

**Journal; Peer Reviewed Journal**

Theoretical accounts of pure word meaning deafness are rare; accounts of its rehabilitation are virtually non-existent. The effects of two therapies in a male patient with pure word meaning deafness are contrasted. One therapy required only implicit auditory access from the patient (silent reading comprehension exercises). The second required explicit auditory access (auditory comprehension exercises), and thus appeared to be more suited to the exact locus of the patient's impairment. Improvement was observed after both types of therapy. However, improvement on implicit access therapy was influenced by the use of a compensatory strategy developed by the patient. In contrast, improvement on explicit access therapy was more durable, and appeared to be due to a direct effect on the audition-semantics link, rather than to compensation. It is concluded that pure word meaning deafness is amenable to treatment, and that cognitive models can be useful in designing such therapy studies. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6316**

**Level V:**

**Topic 4.1: Management-General**

**Frank, D. I. (2003). Elderly clients' perceptions of communication with their health care provider and its relation to health deviation self care behaviors. *Self-Care, Dependent-Care, and Nursing*, 11(2), 15-30.**

**Journal Article, Research, Tables/Charts**

The purpose of this research was to explore independent elderly clients perceptions of their communication with their Health Care Provider (HCP) as it relates to their health deviation self care behaviors. Twenty-eight elderly individuals participated in focus groups to share their perceptions. These qualitative data were analyzed using the procedures outlined by Stewart and Shamdasani to identify the consistent themes and patterns as well as the diversity of experience. Themes identified were consistent with the elderly desiring to have meaningful interactions with their HCP to be able to do self care, and to be a co-participant in their care. Implications for Nurse Health Care Providers to improve the interpersonal technologies within the regulatory nursing system to promote effective health deviation self care behavior are discussed.

**REF ID: 6339**

**Level V:**

**Topic 3: Assessment**

**Gallacher, J. (2004). Hearing, cognitive impairment and aging: A critical review. *Reviews in Clinical Gerontology, 14*(3), 199-209.**

**Journal; Peer Reviewed Journal**

This narrative review of hearing, cognitive impairment and aging considers studies reported in English that have used objective assessment or manipulation of hearing and cognitive performance in participants aged 50 years and above. For the present purpose, hearing is defined as the detection and interpretation of auditory stimuli, and cognitive impairment is defined as implicit or explicit decline in cognitive function. The epidemiology of hearing and cognitive function is based on evidence utilizing the range of classic epidemiological designs. These include epidemiologic paradigm-based studies (case-controlled, cross-sectional, longitudinal and intervention studies), and laboratory paradigm-based studies (correlational studies, group comparisons, experimental studies). It is concluded that the case for basing understanding of changes in audition and cognition with age firmly in the biological arena is difficult to refute. It is likely, therefore, that there would be great benefit in expanding the current coalition of epidemiological, clinical and cognitive psychological interests to include those with a specifically neurological focus. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 5454**

**Level I: Systematic Reviews; OM: Quality Measures**

**Topic 3: Assessment ;Topic 5: Evaluation/Follow-up**

**Gordon, D. B., Pellino, T. A., Miaskowski, C., McNeill, J. A., Paice, J. A., & Laferriere, D. et al. (2002). A 10-year review of quality improvement monitoring in pain management:**

**Recommendations for standardized outcome measures. *Pain Management Nursing, 3*(4), 116-130. Journal Article, Research, Systematic Review, Tables/Charts**

Quality measurement in health care is complex and in a constant state of evolution. Different approaches are necessary depending on the purpose of the measurement (e.g., accountability, research, improvement). Recent changes in health care accreditation standards are driving increased attention to measurement of the quality of pain management for improvement purposes. The purpose of this article is to determine what indicators are being used for pain quality improvement, compare results across studies, and provide specific recommendations to simplify and standardize future measurement of quality for hospital-based pain management initiatives. Pain management quality improvement monitoring experience and data from 1992 to 2001 were analyzed from 20 studies performed at eight large hospitals in the United States. Hospitals included: the University of Wisconsin Hospital and Clinics, Madison; Texas Medical Center, Houston; McAllen Medical Center, McAllen, TX; San Francisco General Hospital, San Francisco; Rush-Presbyterian-St. Luke's Medical Center and Northwestern Memorial Hospital, Chicago, IL; Memorial Sloan Kettering Cancer Center, New York; and Kaiser Sunnyside Medical Center of Kaiser Permanente Northwest, Clackamas, OR. Analyses of data led to consensus on six quality indicators for hospital-based pain management. These indicators include: the intensity of pain is documented with a numeric or descriptive rating scale; pain intensity is documented at frequent intervals; pain is treated by a route other than intramuscular; pain is treated with regularly administered analgesics, and when possible, a multimodal approach is used; pain is prevented

and controlled to a degree that facilitates function and quality of life; and patients are adequately informed and knowledgeable about pain management. Although there are no perfect measures of quality, longitudinal data support the validity of a core set of indicators that could be used to obtain benchmark data for quality improvement in pain management in the hospital setting. Copyright 2002 by the American Society of Pain Management Nurses

**REF ID: 6317**

**Level VI: Opinion**

**Topic 4.1: Management-General**

**Graf, C. (2006). Functional decline in hospitalized older adults: It's often a consequence of hospitalization, but it doesn't have to be. *American Journal of Nursing*, 106(1), 58-68, 2.**

**Journal Article, CEU, Exam Questions, Pictorial, Review, Tables/Charts**

One recent study found that nearly one-third of hospitalized older adults showed a decline at discharge in the ability to perform activities of daily living. Such decline leads to increased risk of illness and death, often irreversibly diminishing autonomy. But this need not be an inevitable consequence of hospitalization.

**REF ID: 6250**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Hansson, E. E., Mansson, N., & Hakansson, A. (2004). Effects of specific rehabilitation for dizziness among patients in primary health care. A randomized controlled trial. *Clinical Rehabilitation*, 18(5), 558-565.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

OBJECTIVE: To investigate whether specific rehabilitation for patients with dizziness has any effect on clinical balance measures and/or the apprehension of dizziness measured with a visual analogue scale (VAS). DESIGN: Randomized controlled trial. SUBJECTS: Forty-two patients, 50 years or older with dizziness of central or age-related origin, identified in primary health care. METHOD: The patients were randomized to either an intervention or a control group. The intervention included balance training and vestibular rehabilitation in group sessions twice a week for six weeks. All patients were assessed at baseline, after six weeks and after three months with five different balance measures and visual analogue scale. RESULTS: Statistically significant differences were found between the two groups comparing results at baseline and after six weeks regarding standing one leg eyes closed (SOLEC) on right foot ( $p=0.011$ ). Results of SOLEC right foot after three months differed significantly between the groups ( $p=0.033$ ) as did SOLEC left foot ( $p=0.035$ ). No difference between the groups were found in the Romberg test, figure of eight, walking heel to toe, 'stops walking when talking', standing one leg eyes open or estimating the experience of dizziness measured with visual analogue scale.

CONCLUSIONS: Balance training and vestibular rehabilitation improved the ability to stand on one leg with eyes closed in persons with dizziness aged 50 years or over.

**REF ID: 6259**

**Level II: Individual experimental study**

**Topic 4.4: Management-Products**

**Haskell, G. B., Noffsinger, D., Larson, V. D., Williams, D. W., Dobie, R. A., & Rogers, J. L. (2002). Subjective measures of hearing aid benefit in the NIDCD/VA clinical trial. *Ear and Hearing*, 23(4), 301-307.**

**Journal Article, Clinical Trial, Questionnaire/Scale, Research, Tables/Charts**

OBJECTIVE: Subjective measures of performance were assessed on three different hearing aid circuits as part of a large clinical trial. These measurements included the Profile of Hearing Aid Performance and a subjective ranking of individual preference. DESIGN: A multi-center, double-masked clinical trial of hearing aids was conducted at eight VA Medical Centers. Three hearing aid circuits, a linear peak-clipper, a linear compression limiter and a wide dynamic range compressor, were investigated. The experimental design was a three-period, three-treatment crossover design. Subjects ( $N = 360$ ) were stratified by site and randomized to one of six sequences for the hearing aid circuits. All fittings were

binaural and involved a 3-mo trial with each of the three circuits. All subjective measures were administered for unaided and aided conditions at the end of each trial period. RESULTS: While all of the circuits resulted in improved scores on the aided versus the unaided PHAP, there were few conditions in which one circuit outperformed the others. An exception was the aversiveness of sound subscale where the peak clipper frequently scored worse than either the compression limiter or the wide dynamic range compressor. In the subjective ranking scale the compression limiter received more first place rankings than the other two circuits, especially for one subgroup of patients with moderate flat hearing loss. CONCLUSIONS: All circuits were perceived as beneficial by these subjects in most situations. The peak clipper scored worse on aversiveness of sound than did the other two circuits for most subjects, while the compression limiter seemed to have a slight advantage in subjective rankings. Most subjects perceived considerable aided benefit in situations involving background noise and reverberation, situations where hearing aid benefit is often questioned.

**REF ID: 6348**

**Level V:**

**Topic 6: Comprehensive**

**Heine, C., & Browning, C. J. (2002). Communication and psychosocial consequences of sensory loss in older adults: Overview and rehabilitation directions. *Disability and Rehabilitation: An International Multidisciplinary Journal*, 24(15), 763-773.**

**Journal; Peer Reviewed Journal**

Dual sensory loss is becoming a more common condition seen by clinicians and previous research has shown that 6% of non-institutionalized older adults had a dual sensory impairment, whilst 70% of severely vision impaired older adults also demonstrated a significant hearing loss. Decreased vision and/or hearing acuity interferes with reception of the spoken message and hence people with sensory loss frequently experience communication breakdown. Many personal, situational and environmental triggers are also responsible for communication breakdown. Limited ability to improve communication performance frequently results in poor psychosocial functioning. Older adults with sensory loss often experience difficulty adjusting to their sensory loss. Depression, anxiety, lethargy and social dissatisfaction are often reported. Sensory loss, decreased communication performance and psychosocial functioning impacts on one's quality of life and feelings of well-being. Rehabilitation services for older adults with age-related sensory loss need to accommodate these difficulties. Improved staff education and rehabilitation programmes providing clients and carers with strategies to overcome communication breakdown is required. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6350**

**Level IV: Non-experimental study**

**Topic 4.4: Management-Products**

**Hol, M. K. S., Snik, A. F. M., Mylanus, E. A. M., & Cremers, C. W. R. J. (2005). Does the bone-anchored hearing aid have a complementary effect on audiological and subjective outcomes in patients with unilateral conductive hearing loss? [references]. *Audiology & Neuro-Otology*, 10(3), 159-168.**

**Journal; Peer Reviewed Journal**

Objectives: To study the effect of a bone-anchored hearing aid (BAHA) in patients with unilateral conductive hearing loss. Study Design: Prospective evaluation on 18 subjects. Methods: Aided and unaided binaural hearing was assessed in the sound field using a sound localization test and a speech recognition in noise test with spatially separated sound and noise sources. The patients also filled out a disability-specific questionnaire. Patients: 13 out of the 18 subjects had normal hearing on one side and acquired conductive hearing loss in the other ear. The remaining 5 patients had a unilateral airborne gap and mild symmetrical sensorineural hearing loss. Results: Sound localization with the BAHA improved significantly. Speech recognition in noise with spatially separated speech and noise sources also improved with the BAHA. Fitting a BAHA to patients with unilateral conductive hearing loss had a complementary effect on hearing. Questionnaire results showed that the BAHA was of obvious benefit in daily life. Conclusions: The BAHA proved to be a beneficial means to optimize binaural hearing in

patients with severe (40-60 dB) unilateral conductive hearing loss according to audiometric data and patient outcome measures. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 6353**

**Level V:**

**Topic 4.6: Management-Other**

**Hopper, T., Holland, A., & Rewega, M. (2002). Conversational coaching: Treatment outcomes and future directions. *Aphasiology, 16*(7), 745-761.**

**Journal; Peer Reviewed Journal**

Conversational coaching involves teaching communication strategies to individuals with aphasia and their spouses. Strategies are chosen by the couple and are taught and practised in the context of a conversation. This study assessed the effects of conversational coaching to determine variables for consideration in future efficacy research of this treatment technique. Two couples (aged 76 and 70 and 41 and 39 yrs) participated in a single-subject experimental design across Ss. During baseline sessions, the aphasic Ss watched a videotaped story about a real-life event and then attempted to share the content of that story with their spouses. During treatment sessions, the same procedure was used, but the clinician intervened and coached both Ss in the use of selected verbal and non-verbal strategies to improve the quality of the conversation. The primary dependent measure in the study was the number of main concepts successfully communicated during conversations. Positive outcomes, including Ss' perceptions of treatment effects, support further experimental study of this technique. Strategy selection, stimuli for conversational topics, and procedural specificity of the intervention were variables identified as necessitating further research in a controlled experiment design. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6335**

**Level IV:**

**Topic 4.4: Management-Products**

**Humes, L. E., Wilson, D. L., Barlow, N. N., & Garner, C. (2002). Changing in hearing-aid benefit following 1 or 2 years of hearing-aid use by older adults. *Journal of Speech, Language, and Hearing Research, 45*(4), 772-782.**

**Journal; Peer Reviewed Journal**

Studied the benefits of hearing-aid (HA) use by 134 60-89 yr old elderly HA wearers during the 1st year of usage. Benefit measures were obtained after 1 mo, 6 mo, and 1 yr of HA use. Follow-up measures of HA benefit were performed on 49 of these HA wearers after 2 yrs of use. All wearers were fit binaurally with identical in-the-ear hearing aids that used linear Class-D amplifiers with output-limiting compression. Benefit measures included objective tests of speech recognition, the subjective self-report scales of the Hearing Aid Performance Inventory and the Hearing Handicap Inventory for the Elderly. Results show that although group means changed only slightly over time for all of the benefit measures, there were significant differences for some of the benefit measures, especially among the subjective, self-report measures. In almost all of the cases exhibiting significant changes, performance was significantly worse at both the 6-mo and 1-yr post-fit interval compared to 1-mo post-fit. In general, individual data from the 1-yr data set were consistent with the trends in the group data described. Regarding changes in benefit following 2 yrs of HA use, minimal changes were observed. In all, there was little evidence for acclimatization of HA benefit in group or individual data. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6262**

**Level II: Individual experimental study**

**Topic 4.5: Management-Surgery; Topic 4.2: Management-Behavior Therapy**

**Johansson, M., Akerlund, D., Larsen, H. C., & Andersson, G. (2001). Randomized controlled trial of vestibular rehabilitation combined with cognitive-behavioral therapy for dizziness in older people. *Otolaryngology-Head and Neck Surgery, 125*(3), 151-156.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

**OBJECTIVE:** To evaluate the effectiveness of vestibular rehabilitation combined with cognitive behavioral therapy in the treatment of dizziness in older people. **STUDY DESIGN AND SETTING:** A randomized controlled design was used with patients recruited via an advertisement. Nine patients completed treatment and 10 served as waiting-list controls. The intervention lasted 7 weeks with 5 weekly group sessions and consisted of vestibular exercises. Cognitive behavioral therapy components were added to promote relaxation, reduce anxiety, and avoidance of feared situations and movements. **RESULTS:** Statistically significant improvements on walking time, 2 dizziness provocative movements, and on the Dizziness Handicap Inventory, but no effects on the Romberg or anxiety and depression. Of the treated patients, 89% reached statistical significant improvement on the total inventory score. **CONCLUSION:** Cognitive behavioral therapy combined with vestibular rehabilitation decreases dizziness in older people. **SIGNIFICANCE:** These findings indicate that cognitive behavioral therapy can be combined with vestibular rehabilitation in the treatment of dizziness. PMID: 11555746 [PubMed - indexed for MEDLINE]

**REF ID: 6234**

**Level I: Systematic Reviews**

**Topic 4.6: Management-Other**

**Komagata, S., & Newton, R. (2003). The effectiveness of tai chi on improving balance in older adults: An evidence-based review. *Journal of Geriatric Physical Therapy*, 26(2), 9-16.**

**Journal Article, Algorithm, Research, Systematic Review, Tables/Charts**

**Purpose:** This paper provides a systematic critical review of the effectiveness of Tai Chi for balance improvement and fall reduction, and determines the effectiveness of the Quality Index (QI) as a critical review system. **Methods:** Eleven of 30 articles on Tai Chi met the criteria for systematic review. Both the QI and Methodological Rigor (MR) scores were used to evaluate the methodological quality. **Results:** Our review revealed moderate evidence of the effectiveness of Tai Chi on balance improvement. D-indices, calculated to determine the relative effect of the intervention on balance measurements, showed moderate negative correlations with the QI ( $r = -0.52$ ) and minimal negative correlations with the MR score ( $r = 0.28$ ). **Conclusion:** Tai Chi is effective for balance improvement but not effective for reduction of falls. This review is unique in demonstrating the feasibility of using the methodological QI designed for both randomized and nonrandomized studies.

**REF ID: 6245**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Kramer, S. E., Allessie, G. H. M., Dondorp, A. W., Zekveld, A. A., & Kapteyn, T. S. (2005). A home education program for older adults with hearing impairment and their significant others: A randomized trial evaluating short- and long-term effects. *International Journal of Audiology*, 44(5), 255-264.**

**Journal Article, Clinical Trial, Questionnaire/Scale, Research, Tables/Charts**

This paper addresses the development and effectiveness of a home education program. The program, designed for hearing-impaired elders and their significant others (SO), deals with communication strategies and speech reading. Participants were randomly assigned to a training group (hearing aid fitting+home education program) or a control group (hearing aid fitting). The training group included 24 hearing-impaired subjects and 24 SO's. Controls were 24 affected individuals and 22 SO's. Questionnaires addressing emotional response, communication strategies and the IOI-HA, IOI-AI and IOI-SO were used. A repeated measures analysis of variance was applied to test group differences between pre, post, and 6-months follow-up measures. Increased awareness of benefits of speech reading and improved interaction with the SO were observed in the training group only ( $p < 0.05$ ). No group difference on 'emotional response' was found. IOI-AI and IOI-SO demonstrated favorable attitudes towards the program. Follow-up measures showed improved quality of life and satisfaction in the training group, while a decrease was observed among the controls ( $p < 0.05$ ). Some effects differed between first-time and experienced hearing aid users. Addition of services to amplification and involvement of the SO are relevant in aural rehabilitation.

**REF ID: 6231**

**Level I: Systematic Reviews**

**Topic 6: Comprehensive**

**Lee, A. G., & Coleman, A. L. (2004). Research agenda-setting program for geriatric ophthalmology. *Journal of the American Geriatrics Society*, 52(3), 453-458.**

**Journal Article, Research, Systematic Review**

The healthcare needs of an aging population of "baby boomers" (persons born between 1946 and 1964) will disproportionately affect ophthalmology. To meet this emerging need, the American Geriatrics Society and the John A. Hartford Foundation developed a research agenda-setting process for geriatric ophthalmology. A systematic literature search was performed using Medline from the years 1990 to 2000. The literature review (168 papers) was performed to determine the current state of information regarding selected issues in geriatric ophthalmology. A needs assessment for each of the identified topics was performed, gaps in the existing knowledge base were identified, and key questions for future research were proposed. A research agenda-setting process for geriatric ophthalmology might provide a structural framework for future research efforts in the field.

**REF ID: 6254**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Lee, Jang, J., Jang, H., & Moon, S. (2003). Effects of qi-therapy on blood pressure, pain and psychological symptoms in the elderly: A randomized controlled pilot trial. *Complementary Therapies in Medicine*, 11(3), 159-164.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

Recently, we reported that Qi-therapy may be beneficial in reducing negative psychological symptoms and increasing melatonin levels, neutrophil function and natural killer cell cytotoxicity in young subjects. However, there is little scientific evidence of its efficacy in elderly subjects. Therefore, this study was designed to investigate the effects of Qi-therapy on anxiety, depression, fatigue, pain and blood pressure in elderly subjects. Ninety-four elderly subjects were randomly assigned to either Qi-therapy (n=47) or mimic therapy (n=47) groups. Both groups received a 10-min intervention period once using similar procedures. The Qi-therapy group exhibited greater reduction in anxiety, depression, fatigue, pain level and blood pressure compared to the placebo group; the difference in anxiety was significant (P=0.014). These results suggest that even a brief application of Qi-therapy may exert a positive psychological and physiological effect. However, further research is necessary in order to fully understand the long-term impact of Qi-therapy on psychological health and the cardiovascular system. Copyright (C) 2003 by Elsevier Science (USA).

**REF ID: 6337**

**Level III: Quasi-experimental study ??**

**Topic 3: Assessment**

**Leffler, A., Kosek, E., Lerndal, T., Nordmark, B., & Hansson, P. (2002). Somatosensory perception and function of diffuse noxious inhibitory controls (DNIC) in patients suffering from rheumatoid arthritis. *European Journal of Pain*, 6(2), 161-176.**

**Journal; Peer Reviewed Journal**

Investigated the influence of ongoing pain from an inflammatory nociceptive pain with 2 different disease durations on somatosensory functions and the effect of heterotopic noxious conditioning stimulation (HNCS) on diffuse noxious inhibitory controls (DNIC)-related mechanisms. Subjects (Ss) were 11 patients with rheumatoid arthritis of a short duration (5 yrs) (RA5), and 21 healthy controls. Patients were 20-68 yrs old. Pressure pain sensitivity, low threshold mechanoreceptive function, and thermal sensitivity, including thermal pain, were assessed over a painful and inflamed joint as well as in a pain-free area (the right thigh before HNCS) and repeated at the thigh during and following HNCS. Results show that, over an inflamed joint, allodynia to pressure was found in both RA groups, with additional sensory abnormalities in RA5. In a non-painful area, allodynia to pressure was found in RA5, suggesting altered central processing of somatosensory functions in RA5 patients. The response to

HNCS was similar in both RA groups and controls, indicating preserved function of DNIC-related mechanisms. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6244**

**Level II: Individual experimental study**

**Topic 2: Prevention**

**Lord, S. R., Tiedemann, A., Chapman, K., Munro, B., Murray, S. M., & Sherrington, C. (2005). The effect of an individualized fall prevention program on fall risk and falls in older people: A randomized, controlled trial. *Journal of the American Geriatrics Society*, 53(8), 1296-1304.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

**OBJECTIVES:** To determine whether an individualized falls prevention program comprising exercise, visual, and counseling interventions can reduce physiological falls risk and falls in older people. **DESIGN:** Randomized, controlled trial of 12 months' duration. **SETTING:** Falls Clinic, Royal North Shore Hospital, Sydney, Australia. **PARTICIPANTS:** Six hundred twenty people aged 75 and older recruited from a health insurance company membership database. **Interventions:** Participants in the extensive intervention group (EIG) received individualized interventions comprising exercise and strategies for maximizing vision and sensation; the minimal intervention group (MIG) received brief advice; and the control group (CG) received no intervention. **MEASUREMENTS:** Accidental falls, vision, postural sway, coordinated stability, reaction time, lower limb muscle strength, sit-to-stand performance, and physiological profile assessment (PPA) falls risk scores. **RESULTS:** At the 6-month follow-up, PPA falls risk scores were significantly lower in the EIG than in the CG. EIG subjects assigned to the extensive exercise intervention group showed significant improvements in tests of knee flexion strength and sit-to-stand times but no improvements in balance. EIG subjects assigned to the extensive visual intervention group showed significant improvements in tests of visual acuity and contrast sensitivity. The rate of falls and injurious falls within the trial period were similar in the three groups. **CONCLUSION:** The individualized intervention program reduced some falls risk factors but did not prevent falls. The lack of an effect on falls may reflect insufficient targeting of the intervention to an at-risk group.

**REF ID: 6342**

**Level V:**

**Topic 3: Assessment**

**Marien, P., Paghera, B., Deyn, P. P., & Vignolo, L. A. (2004). Adult crossed aphasia in dextrals revisited. *Cortex*, 40(1), 41-74.**

**Journal; Peer Reviewed Journal**

The clinical study of crossed aphasia in dextrals (CAD) may shed light on the discreteness and modularity of several cognitive functions, such as language, gestures and visual spatial abilities, with respect to hemispheric lateralisation. Since 1975 over 180 cases have been described, employing, however, different criteria of assessment and classification. The purpose of this paper is to review them and to propose a set of diagnostic criteria that may be useful to single out a series of reliable CAD cases on which research can be safely carried out. A detailed analysis of such series is dealt with in terms I of a number of characteristics concerning both the language disorder and the associated nonverbal cognitive impairments. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 6257**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Mazer, B. L., Sofer, S., KornerBitensky, N., Gelinas, I., Hanley, J., & WoodDauphinee, S. (2003). Effectiveness of a visual attention retraining program on the driving performance of clients with stroke. *Archives of Physical Medicine and Rehabilitation*, 84(4), 541-550.**

**Journal Article, Clinical Trial, Pictorial, Research, Tables/Charts**

**OBJECTIVE:** To compare the effectiveness of a visual attention retraining program using the Useful Field of View (UFOV) with a traditional visuoperception treatment program on the driving performance

of clients with stroke. DESIGN: Randomized controlled trial. SETTING: Rehabilitation hospital located in Quebec, Canada. PARTICIPANTS: Ninety-seven individuals referred for driving evaluation after a stroke. INTERVENTIONS: Participants were randomized to receive 20 sessions of either UFOV training of visual processing speed, divided attention, and selective attention or traditional computerized visuoperception retraining. MAIN OUTCOME MEASURES: Subjects were evaluated with an on-road driving evaluation, visuoperception tests, and the Test of Everyday Attention. An occupational therapist unaware of group assignment conducted all evaluations. RESULTS: Eighty-four participants completed the outcome evaluation. There were no significant differences between groups on any of the outcome measures. There was, however, almost a 2-fold increase (52.4% vs 28.6%) in the rate of success on the on-road driving evaluation after UFOV training for subjects with right-sided lesions. CONCLUSIONS: Rehabilitation that targets visual attention skills was not significantly more beneficial than traditional perceptual training in improving the outcome of an on-road driving evaluation. However, results suggest a potential improvement for subjects with right-sided lesions, indicating that training must target specific skills. Copyright (C) 2003 by the American Congress of Rehabilitation Medicine and the American Academy of Physical Medicine and Rehabilitation

**REF ID: 6236**

**Level I: Systematic Reviews**

**Topic 3: Assessment**

**McCullagh, L. (2002). Spotlight on research: Pain measurement in the elderly. *ORL-Head and Neck Nursing, 20(3), 17-18.***

**Journal Article, Commentary, Research, Systematic Review**

abstract not available

**REF ID: 6264**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**McDonald, D. D., Freeland, M., Thomas, G., & Moore, J. (2001). Testing a preoperative pain management intervention for elders. *Research in Nursing & Health, 24(5), 402-409.***

**Journal Article, Clinical Trial, Research, Tables/Charts**

OBJECTIVE: The purpose of this study was preoperatively to teach basic pain management information and communication skills to elders and to test the effect of this intervention on their postoperative pain. DESIGN: Double-blind randomized with repeated measures. SETTING: Hospital. POPULATION: The sample consisted of elders scheduled for either an elective single total hip replacement or revision or for a single total knee replacement or revision. Ages ranged from 65 to 83 years. Eight men and 23 women comprised the group. INTERVENTIONS: Postoperative pain was measured by the McGill Pain Questionnaire Short Form (MPQ-SF). Basic pain management and pain communication skills were taught preoperatively. The elders in the control group viewed a slide show describing use of the 0-10 and Wong-Baker pain-intensity scales. Elders in the communication group viewed the 0-10 and Wong-Baker pain-intensity scales' slides, the basic pain management slides, and the pain communication slides, in that order. Postoperative pain was measured on the evening of surgery on postop day 1, and on postop day 2. MAIN OUTCOME MEASURE(S): Preliminary analyses supported the effectiveness of the random assignment to groups for all but the time between the treatment and surgery. No significant differences were found between the pain communication and control groups for age, gender, race, education level, type of joint replacement, experience with previous joint replacement surgery, home visits, attendance at the hospital's preoperative joint replacement class, or length of time between class and surgery. Elders taught basic pain management and pain communication skills prior to their joint replacement surgery reported more sensory pain but less pain from the affective dimension on the evening of surgery and less pain from the sensory dimension on the first postoperative day than did control group elders. RESULTS/CONCLUSIONS: Results from the current study suggest that teaching older adults basic pain management and pain communication skills might reduce pain. Greater pain relief may be possible when both patients and health care providers are well equipped with the pain management knowledge and communication skills. [CINAHL abstract]

**REF ID: 6237**

**Level I: Systematic Reviews**

**Topic 6: Comprehensive**

**Miller, L. L., & Talerico, K. A. (2002). Pain in older adults. *Annual Review of Nursing Research*, 20, 63-88.**

**Journal Article, Research, Systematic Review, Tables/Charts**

**REF ID: 6338**

**Level V:**

**Topic 3: Assessment**

**Mohan, R., & Bhugra, D. (2005). Literature update: A critical review. *Sexual and Relationship Therapy*, 20(1), 115-122.**

**Journal; Peer Reviewed Journal**

Sexual pleasure has often erroneously been seen as the prerogative of the young and the sexual needs of the older individuals have often been ignored in literature and in clinical research. It is evident that this is changing with increased longevity and better health status of an increasing population of older individuals. In this review we discuss some of the recent work on the sexuality and sexual dysfunctions of older individuals. In addition the relationship between attributional style and sexual dysfunction is explored. Attributions are related to the possible explanations of such experiences and attitudes. We also discuss the role of self-esteem and body image on sexual dysfunction. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 6311**

**Level I: Systematic Reviews**

**Topic 1: Risks**

**Morales, L. S., Lara, M., Kington, R. S., Valdez, R. O., & Escarce, J. J. (2002). Socioeconomic, cultural, and behavioral factors affecting hispanic health outcomes. *Journal of Health Care for the Poor and Underserved*, 13(4), 477-503.**

**Journal Article, Research, Systematic Review, Tables/Charts**

Evidence suggests that social and economic factors are important determinants of health. Yet, despite higher poverty rates, less education, and worse access to health care, health outcomes of many Hispanics living in the United States today are equal to, or better than, those of non-Hispanic whites. This paradox is described in the literature as the epidemiological paradox or Hispanic health paradox. In this paper, the authors selectively review data and research supporting the existence of the epidemiological paradox. They find substantial support for the existence of the epidemiological paradox, particularly among Mexican Americans. Census undercounts of Hispanics, misclassification of Hispanic deaths, and emigration of Hispanics do not fully account for the epidemiological paradox. Identifying protective factors underlying the epidemiological paradox, while improving access to care and the economic conditions among Hispanics, are important research and policy implications of this review.

**REF ID: 6253**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Morioka, S., & Yagi, F. (2003). Effects of perceptual learning exercises on standing balance using a hardness discrimination task in hemiplegic patients following stroke: A randomized controlled pilot trial. *Clinical Rehabilitation*, 17(6), 600-607.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

**OBJECTIVE:** To investigate the effect of perceptual learning exercises for hardness discrimination by the soles on standing balance in stroke patients with hemiplegia. **SUBJECTS:** Twenty-eight subjects were randomly assigned to an experimental or a control group and participated in a rehabilitation programme. **INTERVENTION:** The experimental group received perceptual learning exercises on hardness discrimination using three different levels of hardness of a rubber sponge for 10 days. **MAIN MEASURES:** Length, enveloped area and rectangular area of the parameter of postural sway were

measured by a stabilometer on entry into the study and after 10 days. RESULTS: Twenty-six subjects completed the study. Data indicate that more parameters indicating postural sway were significantly decreased in the experimental group than in the control group. Also, there was a significant difference between the groups in change scores (pre-exercise minus post-exercise) of length and enveloped area. CONCLUSION: The plantar perception exercise used as a method in this study is considered to be effective as a supplemental exercise for standing balance. The possibility of clinical application using the hardness discrimination task with rubber as a balance exercise is therefore suggested.

**REF ID: 6248**

**Level II: Individual experimental study**

**Topic 4.3: Management-Medication**

**Nageris, B. I., Ulanovski, D., & Attias, J. (2004). Magnesium treatment for sudden hearing loss. *Annals of Otology, Rhinology and Laryngology*, 113(8), 672-675.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

Magnesium treatment has been repeatedly shown to reduce the incidence of both temporary and permanent noise-induced hearing loss. We hypothesized that it might also improve the permanent threshold shift in patients with acute-onset hearing loss. In a prospective, randomized, double-blind, placebo-controlled trial, 28 patients with idiopathic sudden sensorineural hearing loss were treated with either steroids and oral magnesium (study group) or steroids and a placebo (control group). Compared to the controls, the magnesium-treated group had a significantly higher proportion of patients with improved hearing (>10 dB hearing level) across all frequencies tested, and a significantly greater mean improvement in all frequencies. Analysis of the individual data confirmed that more patients treated with magnesium experienced hearing improvement, and at a larger magnitude, than control subjects. Magnesium is a relatively safe and convenient adjunct to steroid treatment for enhancing the improvement in hearing, especially in the low-tone range, in patients with sudden sensorineural hearing loss.

**REF ID: 6260**

**Level III: Quasi-experimental study**

**Topic 4.4: Management-Products**

**Noffsinger, D., Haskell, G. B., Larson, V. D., Williams, D. W., Wilson, E., & Plunkett, S. et al. (2002). Quality rating test of hearing aid benefit in the NIDCDC/VA clinical trial. *Ear and Hearing*, 23(4), 291-300.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

OBJECTIVE: As part of a large clinical trial that compared three hearing aid circuits using several evaluation methods, judgments about quality of listening experiences were sought from all subjects. Three dimensions were examined: loudness, noise interference and overall liking (quality). DESIGN: Eight Audiology units in VA Medical Centers participated. Three hearing aid circuits were compared: linear peak clipper, compression limiter, and wide dynamic range compressor. The experimental design was a three-period, three-treatment crossover design. Baseline measures were made using a battery of tests in unaided conditions. Subjects (N = 360) were then stratified by participating site and randomized to one of six sequences of the three hearing aid circuits. Each circuit was fit binaurally and all subjects used each of the three circuits for 3 mo. All outcome measures were administered in unaided and aided conditions after each 3-mo period. The study used a double-blind strategy, i.e., neither the audiologist giving the tests nor the subject knew which circuit was being used. A different audiologist programmed the devices. RESULTS: For loudness judgments, soft and loud presentations of speech in quiet and in babble competition were judged more comfortable via the wide dynamic range circuit. The noise interference tasks and overall liking of the listening experience showed few significant differences across circuits. All circuits made the listening experience more comfortably loud for soft and conversation-level speech. CONCLUSIONS: Differences across circuits in terms of the overall quality of the listening experience and how noise interference was rated were small. Only isolated conditions, usually favoring the WDRC circuit, reached significance levels. The loudness dimension results were clearer. The WDRC circuit made sounds at either the loud or soft extreme more comfortable. When

subjects were grouped by amount and configuration of hearing loss, the advantages for the WDRC and to a lesser extent the linear compression-limited circuit were clearest among subjects with mild hearing losses with a >10 dB/octave high-frequency drop, and those with moderate, relatively flat hearing losses.

**REF ID: 6255**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Nour, K., Desrosiers, J., Gauthier, P., & Carbonneau, H. (2002). Impact of a home leisure educational program for older adults who have had a stroke (home leisure educational program). *Therapeutic Recreation Journal*, 36(1), 48-64.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

Leisure education seems to be an important step for older adults who have difficulty adjusting psychologically after a stroke. A randomized clinical trial design tested this hypothesis. The participants were assigned to two groups, an experimental leisure educational group and a placebo "friendly visit" group, and received 10 individual sessions at home after discharge from rehabilitation. Baseline assessments were carried out upon admission to the study and upon discharge (i.e., first session at home, and the second assessment 10 weeks later). The participants receiving the home leisure educational program performed significantly better on physical and total quality of life measures than the placebo participants.

**REF ID: 6249**

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Palmer, R. F., Katerndahl, D., & MorganKidd, J. (2004). A randomized trial of the effects of remote intercessory prayer: Interactions with personal beliefs on problem-specific outcomes and functional status. *Journal of Alternative and Complementary Medicine*, 10(3), 438-448.**

**Journal Article, Clinical Trial, Equations & Formulas, Research, Tables/Charts**

**OBJECTIVES:** Investigate the relevance of interpersonal belief factors as modifiers of the effectiveness of intercessory prayer. **DESIGN:** Randomized clinical trial. **SETTING/LOCATION:** Community-dwelling adults recruited from seven local church groups. **SUBJECTS:** Eighty-six (86) male and female participants 18-88 years of age were randomly assigned to either treatment (n = 45) or control groups (n = 41). **INTERVENTIONS:** Several volunteers committed to daily prayer for participants in the intervention group. Intercessory prayer commenced for 1 month and were directed toward a life concern or problem disclosed by the participant at baseline. Participants were unaware of being prayed for. **Outcomes measures:** Degree to which their problem had been resolved and the current level of concern they had about a specific life problem they described at baseline. Four component scores from the Medical Outcomes Study SF-20 were also used. **RESULTS:** No direct intervention effect on the primary outcomes was found. A marginally significant reduction in the amount of pain was observed in the intervention group compared to controls. The amount of concern for baseline problems at follow-up was significantly lower in the intervention group when stratified by subject's baseline degree of belief that their problem could be resolved. Prayer intervention appeared to effectively reduce the subject's level of concern only if the subject initially believed that the problem could be resolved. Those in the intervention group who did not believe in a possible resolution to their problem did not differ from controls. Better physical functioning was observed in the intervention group among those with a higher belief in prayer and surprisingly, better mental health scores were observed in the control group with lower belief in prayer scores. **CONCLUSIONS:** The results of the current study underscore the role of interpersonal belief in prayer efficacy and are consistent with the literature showing the relevance of belief in health and well-being in general. The relevance of interpersonal belief factors of the participants is recommended in future investigations. Copyright Mary Ann Liebert, Inc.

**REF ID: 6325**

**QM: Quality Measures**

**Topic 5: Evaluation/Follow-up**

**Patla, A. E., Frank, J. S., & Winter, D. A. (1992). Balance control in the elderly: Implications for clinical assessment and rehabilitation. *Canadian Journal of Public Health*, 83(suppl 2), S29-33.**

**Journal Article, Proceedings, Research, Tables/Charts**

Deterioration of balance control system with age results in a higher incidence of falls. To assess the performance of the balance control system we need to select appropriate body posture and/or motion, decide on the type and level of perturbation and study the response using selected measures. The guidelines we should use to determine the task, perturbation and measures is the focus of this article. Our work on the elderly is used to provide support for the various criteria put forward. The tasks evaluated for stability should include specific postures and movements which are part of the normal repertoire and challenge the balance control system. Variety of perturbations are necessary to get insights into the working of the system. The level of perturbation that can be handled should be specified. The response measures should be able to identify deterioration in the system performance, provide diagnostic information and insights into how the system has adapted to the age-related changes. These guidelines are critical if balance tests are to be used for clinical assessment and rehabilitation.

**REF ID: 5566**

**Level I: Systematic Reviews**

**Topic 6: Comprehensive**

**Payette, H., & Shatenstein, B. (2005). Determinants of healthy eating in community-dwelling elderly people. *Canadian Journal of Public Health*, 96(Supplement 3), S27-31.**

**Journal Article, Research, Systematic Review**

Among seniors, food choice and related activities are affected by health status, biological changes wrought by aging and functional abilities, which are mediated in the larger arena by familial, social and economic factors. Determinants of healthy eating stem from individual and collective factors. Individual components include age, sex, education, physiological and health issues, psychological attributes, lifestyle practices, and knowledge, attitudes, beliefs and behaviours, in addition to other universal dietary determinants such as income, social status and culture. Collective determinants of healthy eating, such as accessible food labels, an appropriate food shopping environment, the marketing of the "healthy eating" message, adequate social support and provision of effective, community-based meal delivery services have the potential to mediate dietary habits and thus foster healthy eating. However, there is a startling paucity of research in this area, and this is particularly so in Canada. Using search and inclusion criteria and key search strings to guide the research, this article outlines the state of knowledge and research gaps in the area of determinants of healthy eating among Canadian seniors. In conclusion, dietary self-management persists in well, independent seniors without financial constraints, whatever their living arrangements, whereas nutritional risk is high among those in poor health and lacking in resources. Further study is necessary to clarify contributors to healthy eating in order to permit the development and evaluation of programs and services designed to encourage and facilitate healthy eating in older Canadians.

**REF ID: 6343**

**Level V:**

**Topic 3: Assessment**

**Peretz, I., Gagnon, L., Hebert, S., & Macoir, J. (2004). Singing in the brain: Insights from cognitive neuropsychology. *Music Perception*, 21(3), 373-390.**

**Journal; Peer Reviewed Journal**

Singing abilities are rarely examined despite the fact that their study represents one of the richest sources of information regarding how music is processed in the brain. In particular, the analysis of singing performance in brain-damaged patients provides key information regarding the autonomy of music processing relative to language processing. Here, we review the relevant literature, mostly on the perception and memory of text and tunes in songs, and we illustrate how lyrics can be distinguished from melody in singing, in the case of brain damage. We report a new case, G.D., who has a severe speech disorder, marked by phonemic errors and stuttering, without a concomitant musical production disorder. G.D. was found to produce as few intelligible words in speaking as in singing familiar songs.

Singing "la, la, la" was intact and hence could not account for the speech deficit observed in singing. The results indicate that verbal production, be it sung or spoken, is mediated by the same (impaired) language output system and that this speech route is distinct from the (spared) melodic route. In sum, we provide here further evidence that the autonomy of music and language processing extends to production tasks. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 5226**

**Level I: Systematic Reviews**

**Topic 3: Assessment**

**Pia, L., NeppiModona, M., Ricci, R., & Berti, A. (2004). The anatomy of anosognosia for hemiplegia: A meta-analysis. *Cortex*, 40(2), 367-377.**

**Journal Article, Research, Systematic Review, Tables/Charts**

Anosognosia for hemiplegia is the denial of the contralesional motor deficits that may follow brain damage. Although this disturbance has been reported in the neurological literature since the beginning of the last century, only few longitudinal studies have addressed the issue of the anatomical substrate of the disorder. Here we present a comprehensive review of the literature on anosognosia for hemiplegia from 1938 to 2001, taking into account some of its clinical, epidemiological and anatomical aspects. In particular, an attempt has been made to identify the intra-hemispheric lesion locations most frequently associated to the denial behaviour. Our review shows that anosognosia for hemiplegia most frequently occurs in association to unilateral right-sided or bilateral lesions of different brain areas (cortical and/or subcortical). It seems to be equally frequent when the damage is confined to frontal, parietal or temporal cortical structures, and may also emerge as a consequence of subcortical lesions. Interestingly, the probability of occurrence of anosognosia is highest when the lesion involves parietal and frontal structures in combination, if compared to other combinations of lesioned areas. This pattern of lesions suggests the existence of a complex cortico-subcortical circuit underlying awareness of motor acts that, if damaged, can give raise to the anosognosic symptoms.

**REF ID: 6239**

**Level II: Individual experimental study**

**Topic 4.3: Management-Medication**

**PKC-DRS Study Group. (2005). The effect of ruboxistaurin on visual loss in patients with moderately severe to very severe nonproliferative diabetic retinopathy: Initial results of the protein kinase C s inhibitor diabetic retinopathy study (PKC-DRS) multicenter randomized clinical trial. *Diabetes*, 54(7), 2188-2197.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

The purpose of this study was to evaluate the Safety and efficacy of the orally administered protein kinase C (PKC) beta isoform-selective inhibitor ruboxistaurin (RBX) in subjects with moderately severe to very severe nonproliferative diabetic retinopathy (NPDR). In this multicenter, double-masked, randomized, placebo-controlled study, 252 subjects received placebo or RBX (8, 16, or 32 mg/day) for 36-46 months. Patients had an Early Treatment Diabetic Retinopathy Study (ETDRS) retinopathy severity level between 47B and 53E inclusive, an ETDRS visual acuity of 20/125 or better, and no history of scatter (panretinal) photocoagulation. Efficacy measures included progression of DR, moderate visual loss (MVL) (doubling of the visual angle), and sustained MVL (SMVL). RBX was well tolerated without significant adverse effects but had no significant effect on the progression of DR. Compared with placebo, 32 mg/day RBX was associated with a delayed occurrence of MVL (log rank,  $P = 0.038$ ) and of SMVL ( $P = 0.226$ ). RBX reduction of SMVL was evident only in eyes with definite diabetic macular edema at baseline (10% 32 mg/day RBX vs. 25% placebo,  $P = 0.017$ ). In multivariable Cox proportional hazard analysis, 32 mg/day RBX significantly reduced the risk of MVL compared with placebo (hazard ratio 0.37 [95% CI 0.17-0.80],  $P = 0.012$ ). In this clinical trial, RBX was well tolerated and reduced the risk of visual loss but did not prevent DR progression.

**REF ID: 6334**

**Level IV: Non-experimental study**

**Topic 4.3: Management-Medication**

**Quint, C., Temmel, A. F. P., Hummel, T., & Ehrenberger, K. (2002). The quinoxaline derivative caroverine in the treatment of sensorineural smell disorders: A proof-of-concept study. *Acta Oto-Laryngologica*, 122(8), 877-881.**

**Journal; Peer Reviewed Journal**

The treatment of non-conductive olfactory disorders is to a large extent an unsolved problem. This proof-of-concept study focused on possible effects of the N-methyl-D-aspartate (NMDA) antagonist caroverine. Potential mechanisms for the hypothesized effect included reduced feedback inhibition in the olfactory bulb as a consequence of NMDA antagonistic actions and antagonism of an excitotoxic action of glutamate. A total of 77 consecutive patients with non-conductive olfactory disorders were included in the study. Fifty-one patients received caroverine for 4 weeks (120 mg/day); 26 controls matched for age, gender and duration of olfactory loss were treated with zinc sulfate for the same length of time (400 mg/day). Olfactory sensitivity was evaluated before and after treatment. Testing included assessment of n-butanol odor threshold and odor identification. When compared to baseline, treatment with caroverine improved both odor thresholds ( $p = 0.005$ ) and odor identification ( $p = 0.042$ ) in anosmic patients. In hyposmic patients it significantly improved odor identification ability ( $p = 0.041$ ). In contrast, zinc sulfate had no significant effect on olfactory function. These results indicate that caroverine appears to be effective for the treatment of non-conductive smell disorders. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6308**

**Level III: Quasi-experimental study**

**Topic 1: Risks**

**Rakitin, B. C., Stern, Y., & Malapani, C. (2005). The effects of aging on time reproduction in delayed free-recall. *Brain and Cognition*, 58(1), 17-34.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

The experiments presented here demonstrate that normal aging amplifies differences in time production occurring in delayed free-recall testing. Experiment 1 compared the time production ability of two healthy aged groups as well as college-aged participants. During the test session, which followed a 24-h delay and omitted all feedback and examples of the two target intervals, the two groups of aged participants' over-produced a 6s interval. This effect is similar in form to errors shown by young participants, but twice the magnitude. Productions of a 17 s interval were generally accurate overall. However, further analysis indicated that the majority of aged participants over-produced the 17 s interval while a minority greatly under-produced the 17 s interval. Furthermore, aged participants showed violations of the scalar property of timing variability in the training session, while in the test session, only those who under-produced the 17 s interval showed this tendency. In contrast, training session performance was good for all participants. Experiments 2 and 3 investigated the ability of the participants in Experiment 1 to reproduce the length of a line from memory, under conditions analogous to those of the time production experiments. These experiments provided tests of the specificity of the errors observed in Experiment 1. Performance in the older participants was accurate, if more variable, compared to the young participants, in contrast to the time production results, indicating that production inaccuracy in free-recall is specific to interval timing in the current context.

**REF ID: 6263**

**Level II: Individual experimental study**

**Topic 4.3: Management-Medication**

**Reisser, C., & Weidauer, H. (2001). Ginkgo biloba extract EGb 761 or pentoxifylline for the treatment of sudden deafness: A randomized, reference-controlled, double-blind study. *Acta Oto-Laryngologica*, 121(5), 579-584.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

In a randomized, prospective, double-blind study involving 72 patients, the therapeutic efficacy of ginkgo extract EGb 761 ( $n = 37$ ) was compared to that of pentoxifylline ( $n = 35$ ) for the treatment of sudden deafness. The two therapeutic schedules were equally well tolerated and showed a statistically significant equivalence in improvement or in return to normal of the auditory thresholds in the two

patient groups. Furthermore, no differences were found between the treatment groups with regard to the criteria for a return to normal of speech discrimination and reduction of the tinnitus which arose at the same time as the sudden hearing loss. The patient's subjective assessment of the treatment with regard to improvement in hearing and reduction in tinnitus suggested that Ginkgo biloba extract was more beneficial than pentoxifylline. In summary, it was shown that treatment of sudden deafness with ginkgo special extract EGb 761 was as effective as treatment with pentoxifylline.

**REF ID: 6238**

**Level I: Systematic Reviews**

**Topic 4.1: Management-General**

**Rutledge, D. N., Donaldson, N. E., & Pravikoff, D. S. (2002). Update. pain assessment and documentation. special populations of adults. *Online Journal of Clinical Innovations*, 5(2), 1-49. Journal Article, Questionnaire/Scale, Research, Systematic Review, Tables/Charts**

In 1998, a review published in the Online Journal of Clinical Innovations entitled "Pain Assessment and Documentation, Part II. Special Populations of Adults" described the difficulty in assessing pain in various populations of adults with cognition disorders, altered pain sensations, or substance abuse, among other problems. Since that publication, additional research has been conducted concerning pain assessment of these populations. This current manuscript updates the 1998 review.

**REF ID: 6321**

**Level V:**

**Topic 4.4: Management-Products**

**Ryan Woolley, B. M., & Rees, J. A. (2005). Initializing concordance in frail elderly patients via a medicines organizer. *Annals of Pharmacotherapy*, 39(5), 834-839.**

**Journal Article, Equations & Formulas, Research, Tables/Charts**  
abstract not available

**REF ID: 6327**

**Level II: Individual experimental study**

**Topic 4.5: Management-Surgery**

**Sen, H. N., Sarikkola, A. U., Uusitalo, R. J., & Laatikainen, L. (2004). Quality of vision after AMO array multifocal intraocular lens implantation. *Journal of Cataract & Refractive Surgery*, 30(12), 2483-2493.**

**Clinical Trial. Journal Article. Randomized Controlled Trial**

**PURPOSE:** To evaluate safety and efficacy of Array SA40N multifocal intraocular lens (IOL) (AMO) implantation in cataract surgery. **SETTING:** Helsinki University Eye Hospital, Helsinki, Finland. **METHODS:** In this prospective randomized comparative trial, 80 patients scheduled for cataract surgery were selected based on preoperative counseling and randomized to have multifocal or monofocal IOL implantation. Fifty-three eyes of 35 patients received a multifocal IOL and 67 eyes of 40 patients, a monofocal IOL. The incidence of complications and visual outcome in the multifocal and monofocal IOL groups were compared. Quality of vision was measured by comparing the severity of visual symptoms (glare, halos, and cataract symptoms score), changes in functional impairment measured by a 7-item visual function test (VF-7), changes in global measures of vision (trouble and satisfaction with vision), and range of accommodation and contrast sensitivity. **RESULTS:** Intraoperative and postoperative complications and adverse events were few and required no further surgical intervention. Both distance and near visual acuities were significantly better in the multifocal group than in the monofocal group; the difference was most prominent in distance corrected near acuity ( $P < .001$ ). Thirty-five eyes (67.3%) in the multifocal group and 10 eyes (14.9%) in the monofocal group achieved a distance corrected near acuity of J6 (20/40) or better; 30 eyes (56.6%) and 19 eyes (28.4%), respectively, achieved a best corrected distance acuity of 20/20 or better. Glare symptoms decreased postoperatively in both groups but were slightly more common in the multifocal group. In contrast, halos were significantly more common at 1 month in the multifocal group ( $P < .001$ ). Contrast sensitivity values were slightly lower with multifocal IOLs at almost all spatial frequencies, but the difference was not significant. The change in the quality of life postoperatively, measured with the VF-7, was

significant and identical in both groups. CONCLUSIONS: Pseudophakic eyes with multifocal IOLs had better distance and near acuity and range of accommodation than eyes with a monofocal IOL. Slightly lower contrast sensitivity and increased perception of halos by subjects with the multifocal IOL appear to be an acceptable compromise to enhanced near and distance vision.

**REF ID: 6228**

**Level I: Systematic Reviews**

**Topic 1: Risks**

**Smeeth, L., & Iliffe, S. (2006). Community screening for visual impairment in the elderly. *The Cochrane Library*, (1)**

**Journal Article, Research, Systematic Review**

A substantive amendment to this systematic review was last made on 29 July 1998. Cochrane reviews are regularly checked and updated if necessary. Background: While the aims of multicomponent screening of older people are broad, any benefit arising from the inclusion of a vision component in the assessment will necessarily be dependent on improved vision. Objectives: The objective of this review is to assess the effects on vision of mass screening of older people for visual impairment. Search strategy: We searched the Cochrane Controlled Trials Register - CENTRAL/CCTR, which contains the Cochrane Eyes and Vision Group trials register (Cochrane Library Issue 2 2002), MEDLINE (1966 to March 2002), EMBASE (1980 to February 2002), SciSearch and reference lists of relevant trial reports and review articles. We contacted investigators to identify additional published and unpublished trials. Selection criteria: We included randomised trials of visual or multicomponent screening for vision impairment in people aged 65 or over in a community setting. Data collection and analysis: Both reviewers independently extracted data and assessed trial quality. Main results: Visual outcome data were available for 3494 people in five trials of multicomponent assessment. Length of follow up ranged from two to four years. All the trials used self-reported measures for visual impairment, both as screening tools and as outcome measures. In four of the trials people reporting visual problems were referred to either the eye services or to a physician. In one trial people reporting visual problems received information about resources in the community designed to assist those with poor vision. The proportions of participants in the intervention and control groups who reported visual problems at the time of outcome assessment were 0.26 and 0.23 respectively (relative risk for visual impairment 1.03, 95% confidence interval 0.92 to 1.15). Authors' conclusions: There is no evidence that community-based screening of asymptomatic older people results in improvements in vision. [CINAHL Note: The Cochrane Collaboration systematic reviews contain interactive software that allows various calculations in the MetaView.]

**REF ID: 980**

**Level I: Systematic Reviews**

**Topic 3: Assessment**

**Smith, M. (2005). Pain assessment in nonverbal older adults with advanced dementia. *Perspectives in Psychiatric Care*, 41(3), 99-113.**

**Journal Article, Research, Systematic Review, Tables/Charts**

TOPIC: Pain assessment is a particular challenge among individuals with advanced dementia who lack the ability to formulate and express their experience of discomfort. PURPOSE: Awareness of pain scales and methods specifically designed for use with nonverbal individuals with dementia is critical to expanded use and testing in clinical settings. SOURCES: Computerized literature searches using four databases revealed the five observational scales and two caregiver reports methods reviewed. CONCLUSIONS: A small number of valid, reliable, and sensitive scales are available for use by nurses and allied health personnel. Each has strengths and limitations and all would benefit from additional testing.

**REF ID: 6226**

**Level I: Systematic Reviews**

**Topic 4.5: Management-Surgery**

**Snellingen, T., Evans, J. R., Ravilla, T., & Foster, A. (2006). Surgical interventions for age-related**

**cataract. *The Cochrane Library*, (1)**

**Journal Article, Research, Systematic Review**

A substantive amendment to this systematic review was last made on 27 February 2002. Cochrane reviews are regularly checked and updated if necessary. Background: Cataract is the major cause of global blindness, accounting for 40 to 80% of all blindness in developing countries. The number of people blind from cataract is expected to rise due to the changing age distribution and increasing life expectancy. There is currently no proven intervention to prevent cataract and surgery is the only form of treatment. Objectives: The objective of this review is to compare the effects of different surgical interventions for age-related cataract. Search strategy: We searched the Cochrane Controlled Trials Register - CENTRAL/CCTR, which contains the Cochrane Eyes and Vision Group trials register (Cochrane Library Issue 3 2001), MEDLINE (1966 to August 2001), EMBASE (1980 to September 2001), the reference lists of identified trials, and we contacted investigators and experts in the field for details of published and unpublished trials. Selection criteria: We included randomised controlled trials evaluating surgical treatment for people with age-related cataract. Data collection and analysis: Two reviewers independently extracted data and discrepancies were resolved by discussion. Where appropriate, relative risks, odds ratios and weighted mean differences were summarised after assessing heterogeneity between the studies. We used a fixed effect model due to the low number of trials in each comparison. Main results: We identified six trials that randomised a total of 7828 people.

Phacoemulsification gave a better visual outcome than extracapsular surgery and gave a similar average cost per procedure in one trial conducted in the UK. Extracapsular surgery with posterior chamber lens implant and intracapsular surgery with or without an anterior chamber intraocular lens implant gave acceptable visual outcomes at 12 to 24 months after surgery. In three large trials in south Asia, best-corrected visual acuity of less than 6/60 ranged from 0.5 to 4%. Higher rates of poor outcome were observed in a multicentre study with 19 surgeons compared to a single-centre study with two surgeons. Authors' conclusions: This review provides evidence from one randomised controlled trial that phacoemulsification gives a better visual outcome than extracapsular extraction with sutures. However, this trial was conducted in a developed country specialised hospital setting and extrapolation to other settings must be made with caution. This review also found evidence that extracapsular cataract extraction with a posterior chamber lens implant provides better visual outcome than intracapsular extraction with aphakic glasses. This finding is also based on the results of a single trial. The long term effects of posterior capsular opacification need to be assessed in larger populations. The data in the review suggest that intracapsular extraction with an anterior chamber lens implant is an effective alternative to intracapsular extraction with aphakic glasses, with similar safety. Further data from developing regions are needed to compare all aspects of intraocular lens surgery with the three main surgical procedures - intracapsular extraction with an anterior chamber lens, extracapsular surgery with a posterior chamber lens with or without sutures. [CINAHL Note: The Cochrane Collaboration systematic reviews contain interactive software that allows various calculations in the MetaView.]

**REF ID: 6351**

**Level III: Quasi-experimental study**

**Topic 4.5: Management-Surgery ; Topic 4.3: Management-Medication**

**Suzuki, H., Furukawa, M., Kumagai, M., Takahashi, E., Matsuura, K., & Katori, Y. et al. (2003). Defibrinogenation therapy for idiopathic sudden sensorineural hearing loss in comparison with high-dose steroid therapy. *Acta Oto-Laryngologica*, 123(1), 46-50.**

**Journal; Peer Reviewed Journal**

The efficacy of defibrinogenation therapy for idiopathic sudden sensorineural hearing loss was studied in comparison with high-dose steroid therapy. Eighty-eight consecutive patients with hearing levels > 40 dB and who had suffered hearing loss for = 80 dB the hearing outcomes did not differ between the 2 groups. Three patients in the PSL group manifested hyperglycemia while no serious side-effects were observed in the BX group. These results indicate that high-dose steroid therapy should be employed in preference to defibrinogenation therapy for patients with moderate hearing loss. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6252**

**Level II: Individual experimental study**

**Topic 4.5: Management-Surgery ;Topic 4.4: Management-Products**

**Swanik, C. B., Lephart, S. M., & Rubash, H. E. (2004). Proprioception, kinesthesia, and balance after total knee arthroplasty with cruciate-retaining and posterior stabilized prostheses. *Journal of Bone and Joint Surgery (American)*, 86A(2), 328-334.**

**Journal Article, Clinical Trial, Pictorial, Research, Tables/Charts**

**BACKGROUND:** The effect of total knee arthroplasty on proprioception, kinesthesia, and postural control remains controversial. It is argued that retaining the posterior cruciate ligament may help to preserve these sensorimotor functions and improve the longevity of the prosthesis and the functional outcome. We performed a prospective, randomized study to assess proprioception, kinesthesia, and balance following total knee arthroplasty with cruciate-retaining and posterior stabilized prostheses. **METHODS:** Twenty patients scheduled to undergo total knee arthroplasty were randomly assigned to receive either a cruciate-retaining or a posterior stabilized prosthesis. Joint-position sense, the threshold to detect joint motion, and the subject's ability to balance on an unstable platform were assessed prior to and at least six months after the operation. Paired two-tailed t tests (with a level of significance of  $p < 0.05$ ) were used to assess the effect of the arthroplasty on the preoperative measures for all subjects. Analysis of covariance was performed to identify the effects of prosthetic design. **RESULTS:** Following total knee arthroplasty, patients detected motion significantly faster and reproduced joint position with less error. The balance index also improved significantly from the preoperative to the postoperative evaluation. The group treated with the posterior stabilized prosthesis more accurately reproduced joint position when the knee was extended from a flexed position. **CONCLUSIONS:** Total knee arthroplasty results in mild improvements in proprioception, kinesthesia, and balance. These changes may result from the retensioned capsuloligamentous structures and reduced pain and inflammation. Retention of the posterior cruciate ligament does not appear to significantly improve proprioception and balance compared with those functions in patients with a posterior stabilized total knee design.

**REF ID: 6243**

**Level II: Individual experimental study**

**Topic 4.3: Management-Medication**

**Tobey, E. A., DevousSr., Buckley, K., Overson, G., Harris, T., & Ringe, W. et al. (2005). Pharmacological enhancement of aural habilitation in adult cochlear implant users... VIII international cochlear implant conference, indianapolis, 2004. *Ear and Hearing*, 26(4): Supplement), 45S-56S.**

**Journal Article, Clinical Trial, Diagnostic Images, Research, Tables/Charts**

**OBJECTIVE:** The purpose of this report was to examine the preliminary data collected under a larger on-going feasibility study conducted with cochlear implant patients exploring the potential benefit of pharmacologically-enhanced aural rehabilitation therapy as a means of increasing speech tracking skills. **DESIGN:** Eight adult cochlear implant participants participated in a randomized, double-blind study and received either 10 mg d-amphetamine (Treatment group, N = 4) or a placebo (Placebo group, N = 4) 60 minutes prior to a 1.5 hour intensive aural rehabilitation session occurring twice a week for two months. Treatment consisted of a multi-step rehabilitation program individualized for each participant to develop auditory-only speech tracking skills. Prior to and at the conclusion of the therapy sessions, SPECT rCBF imaging and speech tracking assessments were conducted. **RESULTS:** Speech tracking scores of the placebo and treatment groups were similar before the aural habilitation intervention. In the placebo group, speech tracking performance increased 13.5% for visual plus auditory and auditory only presentations as a function of aural habilitation alone. The 10 mg d-amphetamine-facilitated program resulted in minimal increases in visual plus auditory tracking scores (2%) but led to a 43% increase for auditory-only speech tracking. Regional cerebral blood flow measures indicated no substantial improvement of brain activation in the placebo group while both the extent and magnitude of primary and associative auditory cortex activations increased significantly with the pharmacologically enhanced treatment program. **CONCLUSIONS:** These data support previous studies indicating an accelerated

acquisition of speech and language abilities in stroke patients receiving traditional speech therapy in combination with d-amphetamine. Data, however, are preliminary and further study is warranted.

**REF ID: 6261**

**Level II: Individual experimental study**

**Topic 4.1: Management-General**

**Tolson, D., Swan, I., & Knussen, C. (2002). Adult/elderly care nursing. hearing disability: A source of distress for older people and carers. *British Journal of Nursing, 11(15), 1021-1025.***  
**Journal Article, Clinical Trial, Research, Tables/Charts**

Many older people develop hearing disability: however, only a small proportion who would benefit from a hearing aid own one. Communication is a shared experience that can be substantially limited by hearing difficulty, so this lack of hearing aid provision is likely to affect both individuals and those around them. This study, a randomized, controlled trial, was designed to examine the influence of hearing aid provision on dependent older people and caring family members who lived together within multigeneration households. A total of 63 intervention families and 70 control group families participated in the trial. We found that hearing disability and handicap are related to reduced well-being and depression in older people, and in turn these are related to increased levels of carer distress. Of the 63 older people in the intervention group fitted with hearing aids, all but one was experiencing benefit at 6 months, although no changes in depression were detected. Hearing aids significantly reduced the carer's perception of related difficulties and was a welcome intervention.

**REF ID: 6345**

**Level V:**

**Topic 1: Risks**

**Vecchiet, L. (2002). Muscle pain and aging. *Journal of Musculoskeletal Pain, 10(1-2), 5-22.***  
**Journal; Peer Reviewed Journal**

Reviews literature concerning the physiologic and pathologic factors contributing to increased muscle pain sensitivity in the elderly. Possible causes include a decrease in pain thresholds, which occurs concomitantly with increased oxidative damage to muscle fibers. As well, the prevalence of pathologic events potentially painful for the muscle increases with age. This increase, however, regards primary muscle pain, such as myofascial pain, or muscle pain secondary to deep somatic structure involvement, such as referred muscle pain and hyperalgesia from osteoarthritic joints. This phenomenon is not observed for muscle pain secondary to visceral pathology. The extent of pain symptoms due to pathologic conditions does not increase proportionally to that of the underlying pathologic process, probably due to reduced reactivity of aging tissues towards inflammatory events. It is concluded that the increased musculoskeletal pain with aging appear to be the result of a complex interaction between the physiologic process of aging, which may promote muscle damage and muscle hypersensitivity especially in males, and the increased prevalence of most potentially painful pathologic conditions of the muscle itself or of other deep somatic structures. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

**REF ID: 6225**

**Level I: Systematic Reviews**

**Topic 4.3: Management-Medication**

**Vrancken, A. F. J., van Schaik, I. N., Hughes, R. A. C., & Notermans, N. C. (2006). Drug therapy for chronic idiopathic axonal polyneuropathy. *The Cochrane Library, (1)***  
**Journal Article, Research, Systematic Review**

A substantive amendment to this systematic review was last made on 10 January 2004. Cochrane reviews are regularly checked and updated if necessary. Background: Chronic idiopathic axonal polyneuropathy is an insidiously progressive sensory or sensorimotor polyneuropathy that affects elderly people. Although severe disability or handicap does not occur, it reduces quality of life. Objectives: To assess whether drug therapy for chronic idiopathic axonal polyneuropathy reduces disability, ameliorates neurological symptoms and associated impairments, and whether treatment is safe. Search strategy: We searched Cochrane Library (Cochrane Neuromuscular Disease Review Group

Register, Cochrane Database of Systematic Reviews, Cochrane Database of Abstracts of Reviews of Effectiveness, and the Cochrane Central Register of Controlled Trials), MEDLINE, EMBASE, ISI, and ACP Journal Club's Best Evidence, from 1981 until December 2002. We also hand searched the reference lists of relevant articles, reviews and textbooks identified electronically, and contacted authors and other experts in the field to identify additional studies. Selection criteria: We sought all randomised or quasi-randomised (alternate or other systematic treatment allocation), unconfounded trials that examined the effects of any drug therapy in patients with chronic idiopathic axonal polyneuropathy at least one year after the onset of treatment. Patients with chronic idiopathic axonal polyneuropathy had to fulfil the following criteria: age 40 years or older, distal sensory or sensorimotor polyneuropathy, absence of systemic or other neurological disease, chronic clinical course not reaching a nadir in less than two months, exclusion of any recognised cause of the polyneuropathy by medical history taking, clinical or laboratory investigations, electrophysiological studies in agreement with axonal polyneuropathy without evidence of demyelinating features. The primary outcome was the proportion of patients with a significant improvement in disability. Secondary outcomes were change in the mean disability score, change in the proportion of patients who make use of walking aids, change in the mean Medical Research Council sum score, degree of pain relief and/or reduction of other positive sensory symptoms, change in the proportion of patients with pain or other positive sensory symptoms, and frequency of adverse effects. Data collection and analysis: Two reviewers independently reviewed and extracted details of trial methodology and outcome data of all potentially relevant trials. Main results: Eighteen studies were identified and assessed for possible inclusion in the review, but all were excluded because of insufficient quality or lack of relevance. Authors' conclusions: Even though chronic idiopathic axonal polyneuropathy has been clearly described and delineated, no adequate randomised or quasi-randomised controlled clinical treatment trials have been performed. In their absence there is no proven efficacious drug therapy. [CINAHL Note: The Cochrane Collaboration systematic reviews contain interactive software that allows various calculations in the MetaView.]

**REF ID: 6309**

**Level II: Individual experimental study**

**Topic 2: Prevention**

**Waddington, G. S., & Adams, R. D. (2004). The effect of a 5-week wobble-board exercise intervention on ability to discriminate different degrees of ankle inversion, barefoot and wearing shoes: A study in healthy elderly. *Journal of the American Geriatrics Society*, 52(4), 573-576.**

**Journal Article, Pictorial, Research, Tables/Charts**

**OBJECTIVES:** There is some evidence of an improvement in falls risk in the elderly after completing a wobble-board training program. This study examined the effects of wobble-board training on ability to discriminate between different extents of ankle inversion movements in a group of older subjects, tested wearing shoes and barefoot. **DESIGN:** A randomized, controlled, crossover pilot study. **SETTING:** Canberra region, Australia. **PARTICIPANTS:** Twenty community-dwelling subjects aged 65 to 85 participated in this study; all were in good health with no known disorder of the musculoskeletal system. **MEASUREMENTS:** The accuracy with which subjects could identify a set of ankle inversion movements of different extents was measured, with testing conducted in an upright, weightbearing stance. **Intervention:** The effects of a 5-week training program using a wobble board modified for data logging or a period of normal activity only were assessed. Subjects underwent an ankle movement discrimination test pre- and posttraining, with shoes on and off. **RESULTS:** Greater improvement in ankle movement discrimination capability was made in subjects who underwent wobble-board training than in subjects who did not train ( $F(1,18)=11.2, P=.003$ ). Active movements at the ankle were also significantly better discriminated throughout when subjects were wearing shoes than when barefoot ( $F(1,18)=40.6, P=.001$ ). **CONCLUSION:** Training with a wobble board provides a simple in-home intervention that improves ability to differentiate between extent of movements into ankle inversion in subjects aged 65 and older. Research on trip and fall frequency after wobble-board use is needed before such training could be widely used.

**REF ID: 6331**

**Level V:**

**Topic 4.6: Management-Other**

**Weiss, P. L., Naveh, Y., & Katz, N. (2003). Design and testing of a virtual environment to train stroke patients with unilateral spatial neglect to cross a street safely. *Occupational Therapy International*, 10(1), 39-55.**

**Journal; Peer Reviewed Journal**

Virtual reality (VR) entails the use of advanced technologies, including computers and various multimedia peripherals, to produce a simulated (that is, virtual) environment that users perceive as comparable to real world objects and events. In recent years, virtual reality technologies have begun to be used as an assessment and treatment tool in occupational therapy, in part because of the ability to create environments that provide patients with opportunities to engage in meaningful, purposeful tasks that are related to real-life interests and activities. The objective of this study was to determine the suitability and feasibility of using a PC-based, nonimmersive, VR system (that is, a system in which the user has a reduced sense of actual presence in and control over the simulated environment) for training individuals with unilateral spatial neglect to cross streets in a safe and vigilant manner. A virtual environment, consisting of a typical city street, was programmed using Superscape's-super(TM) 3D-Webmaster, a 3D web-authoring tool. Twelve subjects, aged 55 to 75 years, participated in the initial feasibility study and, to date, a further eight subjects have participated in the intervention study. Six of the initial subjects and all eight of the intervention subjects had sustained a right hemispheric stroke at least 6 weeks prior to the study. The remaining subjects were healthy age-matched adults who were independently mobile and had no difficulty in crossing streets. The results show that this virtual environment was suitable in both its cognitive and motor demands for the targeted population and indicate that the virtual reality training is likely to prove beneficial to people who have difficulty with crossing streets. The generalizability of these results, and recommendations regarding the use of virtual reality as an occupational therapy intervention, must be substantiated by further studies using a range of VR platforms with people with different cognitive and motor disabilities. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 6247**

**Level II: Individual experimental study**

**Topic 4.4: Management-Products**

**Wilber, S. T., Burger, B., Gerson, L. W., & Blanda, M. (2005). Reclining chairs reduce pain from gurneys in older emergency department patients: A randomized controlled trial. *Academic Emergency Medicine*, 12(2), 119-123.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

**OBJECTIVES:** Pain related to the gurney is a frequent complaint of older emergency department (ED) patients. The authors hypothesized that these patients may have less pain and higher satisfaction if allowed to sit in a reclining hospital chair. **METHODS:** A single-blind, randomized controlled trial was performed. Patients 65 years old or older who were able to sit upright, transfer, and engage in normal conversation were eligible. Severely ill or cognitively impaired patients were excluded. Patients were randomized to either remain on the gurney or transfer to the chair after initial evaluation. Patients reported pain at arrival (t0), at one hour (t1), and at two hours (t2) using a 0-10 pain scale, and satisfaction at study completion on a 0-10 scale. The primary outcome was a decrease in pain between t0 and t1 or no pain at both t0 and t1. This outcome was analyzed using a 95% confidence interval for the difference between proportions; exclusion of zero was considered significant. **RESULTS:** Sixty-six patients in each group were enrolled. There was no difference in demographics between groups, but the chair patients were more likely to have pain at t0 than the gurney patients. More chair patients than gurney patients had a successful primary outcome (97% vs. 76%, 21% difference, 95% CI=10% to 32%). The mean satisfaction score was higher in the chair group than in the gurney group (8.1 vs. 6.0, 2.1 difference, 95% CI=1.4% to 2.8%). **CONCLUSIONS:** The simple modification of allowing older ED patients to sit in reclining chairs resulted in less pain and higher satisfaction.

**Level I: Systematic Reviews**

**Topic 4.6: Management-Other**

**Wormald, R., Evans, J., Smeeth, L., & Henshaw, K. (2006). Photodynamic therapy for neovascular age-related macular degeneration. *The Cochrane Library*, (1)**

**Journal Article, Research, Systematic Review**

A substantive amendment to this systematic review was last made on 23 August 2005. Cochrane reviews are regularly checked and updated if necessary. Background: In neovascular age-related macular degeneration (AMD) new vessels grow under the retina distorting vision and leading to scarring. This is exacerbated if the blood vessels leak. Photodynamic therapy (PDT) has been investigated as a way to treat the neovascular membranes without affecting the retina. Objectives: The aim of this review was to examine the effects of PDT in the treatment of neovascular AMD. Search strategy: We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (which includes the Cochrane Eyes and Vision Group Trials Register) on The Cochrane Library (Issue 1, 2005), MEDLINE (1966 to January 2005), EMBASE (1980 to January 2005). We used the Science Citation Index to search for reports that cited relevant studies. We contacted experts in the field and searched the reference lists of relevant studies. Selection criteria: We included randomised trials of PDT in people with choroidal neovascularisation due to AMD. Data collection and analysis: Two authors independently extracted the data. Relative risks were combined using a fixed-effect model after testing for heterogeneity. Main results: Two published trials were identified that randomised 948 participants to verteporfin therapy compared to 5% dextrose in water. Both trials were performed by the same investigators using largely the same clinical centres and funded by manufacturers of verteporfin. Outcome data were available at 12 and 24 months after the first treatment. Participants received on average five treatments over two years. The relative risk of losing three or more lines of visual acuity at 24 months comparing the intervention with the control group was 0.77 (95% confidence interval 0.69 to 0.87). The relative risk of losing six or more lines of visual acuity at 24 months comparing the intervention with the control group was 0.62 (95% confidence interval 0.50 to 0.76). The results at 12 months were similar to those at 24 months. The most serious adverse outcome, acute (within 7 days of treatment) severe visual acuity decrease, occurs in about one in 50 patients. Authors' conclusions: Photodynamic therapy in people with choroidal neovascularisation due to AMD is probably effective in preventing visual loss though there is doubt about the size of the effect. Outcomes and potential adverse effects of this treatment should be monitored closely. Further independent trials of verteporfin are required to establish that the effects seen in this study are consistent and to examine important issues not yet addressed, particularly relating to quality of life and cost. [CINAHL Note: The Cochrane Collaboration systematic reviews contain interactive software that allows various calculations in the MetaView.]

**Level II: Individual experimental study**

**Topic 4.6: Management-Other**

**Wright, C., Goudas, L. C., Bentsch, A., Mehdi, M., Perry, P. P., & Carr, D. B. (2004). Hyperalgesia in outpatients with dermal injury: Quantitative sensory testing versus a novel simple technique. *Pain Medicine*, 5(2), 162-167.**

**Journal Article, Clinical Trial, Research, Tables/Charts**

OBJECTIVE: Dermal inflammation from many causes may produce a reversible period of hyperalgesia (increased sensitivity to pain perception) or allodynia (pain from innocuous stimuli). Hyperalgesia and allodynia have received relatively little attention in clinical trials of acute pain. We sought to quantitate tactile allodynia and thermal hyperalgesia in outpatients presenting with acute dermal injuries. DESIGN: We performed a randomized clinical trial to compare standard methodology for the assessment of hyperalgesia with two novel simple quantitative techniques. PATIENTS: After Institutional Review Board approval, 40 patients presenting with acute chemical, thermal, mechanical, or infectious skin injury were subjected to a series of tests at the site of injury, an intact mirror site, and a noninjured

ipsilateral control site. OUTCOME MEASURES: Quantitative thermal sensory testing (Medoc sensory analyzer) was followed by a 5-second application, in random order, of copper rods preheated in water to 40 degrees C, 43 degrees C, 46 degrees C, and 49 degrees C. Pressure testing was conducted with a 1.25-inch diameter commercially available pressure transducer gauge. RESULTS: The observed pattern of responses was remarkably consistent among testing methods. All challenges with the four different temperatures elicited pain scores on a visual analog scale markedly greater at the injured than at the mirror or control site ( $P < 0.001$  vs control). Pressure discomfort thresholds followed a similar pattern. CONCLUSIONS: We conclude that hyperalgesia is a prominent contributor to discomfort in acute dermal injury and hence is a legitimate therapeutic target. Quantitation of the contribution of thermal hyperalgesia and tactile allodynia and assessment of their management is feasible using simple, rugged, low-cost methods. This inexpensive methodology may be useful in everyday clinical practice as well as in clinical research evaluating pharmacological agents to manage hyperalgesia.

**REF ID: 6340**

**Level V:**

**Topic 1: Risks**

**Wright, G., Rowe, G., & McColl, A. (2004). A framework for future study of expert and lay differences in the judgment of risk. *Risk, Decision & Policy*, 9(2), 91-106.**

**Journal; Peer Reviewed Journal**

It has become almost an accepted fact that experts perceive or judge risks in a different manner to laypersons. This apparent finding has stemmed from the pioneering work of Slovic and colleagues (e.g., Slovic, Fischhoff, and Lichtenstein, 1985), who have suggested that experts perceive risks in terms of statistical fatalities, whereas laypersons interpret the term in a more complex manner. Subsequent research has also suggested that experts tend to judge risks as lesser than comparative lay samples. However, Rowe and Wright (2001) critiqued this research and came to the conclusion that there is little evidence of expert-lay differences in risk perception or judgment. Among their main contentions were that important demographic factors that have been shown to be associated with perception or judgment of risk have generally not been controlled for across expert and lay samples, and that the "experts" sampled have generally not been studied in a manner liable to make their expertise meaningful. They also questioned whether it is as likely as seems intuitively apparent that experts will be more accurate than laypersons at judging certain risks, given the lack of "learnability" of the risk-assessing task in many domains. In a carefully constructed study, Wright, Bolger and Rowe (2002) attempted to attain a truly expert sample (life assurance underwriters) for comparison with a lay sample. They found qualitatively similar biases in both samples, and that the experts were only slightly more accurate than the laypersons, and only in certain tasks. This article discusses this research and argues for the necessity of careful selection of expert samples and their appropriate matching to lay samples. To aid this, two questionnaires are presented that readers are invited to use. The first may be used to ascertain the nature of the workaday tasks of the experts to enable appropriate design of the experimental study, the second may be used as a test to gauge the ecological validity of one's study. We argue that use of these--or similar--questionnaires are vital if the differences and similarities between experts and laypersons in the perception and judgment of risk are to be properly established and understood. (PsycINFO Database Record (c) 2006 APA, all rights reserved) (journal abstract)

**REF ID: 5507**

**QM: Quality Measures**

**Topic 5: Evaluation/Follow-up**

**Wu, N., Miller, S. C., Lapane, K., Roy, J., & Mor, V. (2005). The quality of the quality indicator of pain derived from the minimum data set. *Health Services Research*, 40(4), 1197-1216.**

**Journal Article, Equations & Formulas, Research, Tables/Charts**

OBJECTIVE: To examine facility variation in data quality of the level of pain documented in the minimum data set (MDS) as a function of level of hospice enrollment in nursing homes (NHs). DATA SOURCE: Clinical assessments on 3,469 nonhospice residents from 178 NHs were merged with On-line Survey Certification and Reporting data of 2000, Medicare Claims data of 2000 and the MDS of 2000-

2002. STUDY DESIGN: Using the same assessment protocol, NH staff and study nurses independently assessed 3,469 nonhospice residents. Study nurses' assessments being gold standard, we quantified and compared quality of NH staff's pain rating across NHs with high, medium, or low hospice use. Multilevel models were built to assess the effect of NH hospice use levels on the occurrence of false positive (FP) and false negative (FN) errors in NH-rated "severe pain." PRINCIPAL FINDINGS: Of 178 NHs, 25 had medium and 41 high hospice use. NHs with higher hospice use had lower sensitivities. In multilevel analysis, we found a significant facility-level variation in the probability of FP and FN errors in facility-rated "severe pain." Resident characteristics only explained 4 and 0 percent of the facility variation in FP and FN, respectively; characteristics and locations (state) of NHs further explained 53 and 52 percent of the variance. After controlling for resident and NH characteristics, staff in NHs with medium or high hospice use were less likely to have FP or FN errors in their MDS documentation of pain than were staff in NHs with low or no hospice use. CONCLUSIONS: The examination of data quality of pooled MDS data from multiple NHs is insufficient. Multilevel analysis is needed to elucidate sources of heterogeneity in the quality of MDS data across NHs. Facility characteristics, e.g., hospice use or NH location, are systematically associated with overrated/underrated pain and may bias pain quality indicator (QI) comparisons. To ensure the integrity of QI comparison in the NH setting, the government may need to institute regular audits of MDS data quality.

**REF ID: 6326**

**Level II: Individual experimental study**

**Topic 4.3: Management-Medication**

**Yucel, A., Ozyalcin, S., Koknel Talu, G., Kiziltan, E., Yucel, B., & Andersen, O. K. et al. (2005). The effect of venlafaxine on ongoing and experimentally induced pain in neuropathic pain patients: A double blind, placebo controlled study. *European Journal of Pain: Ejp*, 9(4), 407-416. Clinical Trial. Journal Article. Randomized Controlled Trial**

BACKGROUND AND AIM: The aim of this randomized double blind placebo controlled study was to investigate the effectiveness and the safety of venlafaxine XR 75 and 150 mg on ongoing pain and on quantitative sensory tests in 60 patients with neuropathic pain for 8 weeks. METHODS: Evaluation parameters consisted of ongoing pain intensity (VAS), patient satisfaction, side effects, global efficacy and tolerance. Quantitative sensory measurements taken from the affected area before and after the drug treatment included pin-prick hyperalgesia, allodynia, detection and pain thresholds to electrical and heat stimuli, temporal summation of repetitive electrical and heat stimuli. RESULTS: A total of 55 patients completed the study. VAS scores decreased significantly compared to the baseline measurements in all groups. There was no significant difference between the groups regarding pain intensity and escape medication. The areas of allodynia and pin-prick hyperalgesia decreased significantly in venlafaxine groups compared to the placebo. There was no significant difference between the groups regarding the detection thresholds (electrical and heat). The pain threshold and the summation threshold to electrical stimuli and the summation threshold to heat stimuli increased significantly following treatment in both venlafaxine groups. In addition, the degree of the temporal summation to electrical and heat stimuli decreased significantly following treatment in both venlafaxine groups compared to the placebo. CONCLUSION: The study showed significant effect of venlafaxine in the manifestations of hyperalgesia and temporal summation, but not on the ongoing pain intensity. Furthermore, the quantitative sensory tests provided complementing information to the clinical measures.

**REF ID: 6233**

**Level I: Systematic Reviews**

**Topic 1: Risks**

**Yueh, B., Shapiro, N., MacLean, C. H., & Shekelle, P. G. (2003). Scientific review and clinical applications. screening and management of adult hearing loss in primary care: Scientific review. *JAMA: Journal of the American Medical Association*, 289(15), 1976-1985.**

**Journal Article, Pictorial, Questionnaire/Scale, Research, Systematic Review, Tables/Charts**

CONTEXT: Hearing loss is the third most prevalent chronic condition in older adults and has important effects on their physical and mental health. Despite these effects, most older patients are not assessed or

treated for hearing loss. **OBJECTIVE:** To review the evidence on screening and management of hearing loss of older adults in the primary care setting. **DATA SOURCES AND STUDY SELECTION:** We performed a search from 1985 to 2001 using MEDLINE, HealthSTAR, EMBASE, Ageline, and the National Guideline Clearinghouse for articles and practice guidelines about screening and management of hearing loss in older adults, as well as reviewed references in these articles and those suggested by experts in hearing impairment. **DATA EXTRACTION:** We reviewed articles for the most clinically important information, emphasizing randomized clinical trials, where available, and identified 1595 articles. **DATA SYNTHESIS:** Screening tests that reliably detect hearing loss are use of an audioscope, a hand-held combination otoscope and audiometer, and a self-administered questionnaire, the Hearing Handicap Inventory for the Elderly-Screening version. The value of routine screening for improving patient outcomes has not been evaluated in a randomized clinical trial. Screening is endorsed by most professional organizations, including the US Preventive Services Task Force. While most hearing loss in older adults is sensorineural and due to presbycusis, cerumen impaction and chronic otitis media may be present in up to 30% of elderly patients with hearing loss and can be treated by the primary care clinician. In randomized trials, hearing aids have been demonstrated to improve outcomes for patients with sensorineural hearing loss. Nonadherence to use of hearing aids is high. Prompt recognition of potentially reversible causes of hearing loss, such as sudden sensorineural hearing loss, is important to maximize the possibility of functional recovery. **CONCLUSION:** While untested in a clinical trial, older adults can be screened for hearing loss using simple methods, and effective treatments exist and are available for many forms of hearing loss. PMID: 12697801 [PubMed - indexed for MEDLINE]