

Parkinson's Disease

Current Awareness

Bulletin

March 2016

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**Jason Ovens
Head of Library & Knowledge Services**

Title: Short and long term effect of cognitive rehabilitation in mild cognitive impairment subtypes in parkinson's disease

Citation: Parkinsonism and Related Disorders, January 2016, vol./is. 22/(e74), 1353-8020 (January 2016)

Author(s): Diez-Cirarda M., Ojeda N., Pena J., Lucas-Jimenez O., Gomez-Beldarrain M.A., Gomez-Esteban J.C., Ibarretxe-Bilbao N.

Abstract: Objectives: To evaluate the impact of cognitive rehabilitation at short (3 months) and long (18 months) term in mild cognitive impairment subtypes in Parkinson's disease (PD-MCI). Methods: Forty-four PD patients were divided in cognitive rehabilitation group (REHACOP group) and control group (CG) attaining occupational therapy. At baseline and after 3 months treatment, both groups underwent a neuropsychological assessment. After 18 months patients from REHACOP group were again assessed. Classification for PD-MCI subtypes followed Level II of Movement Disorder Society Task Force criteria. Results: At baseline, from the REHACOP group, 3 patients (15%) had single-domain MCI (SDMCI), 9 (45%) multiple-domain MCI (MDMCI), and 8 (40%) noMCI, while from CG, 1 (4.5%) had SDMCI, 5 (22.7%) had MDMCI and 16 (72.7%) noMCI. After REHACOP program, 6 out of 12 PD-MCI patients (50%) from REHACOP group changed their PD-MCI subtype (2 from MDMCI to SDMCI, 2 from SDMCI to noMCI and 2 from MDMCI to noMCI), while only 1 from CG changed from SDMCI to noMCI ($X^2=6.301; p=.012$) (see Fig.1). At 18 months follow-up, 11 out of 16 patients from REHACOP group (68.75%) remained unchanged (McNemar-Bowker= 5.0; $p=.174$). Eleven out of 16 patients from REHACOP group that were assessed at 18 months follow-up, attained occupational therapy during this period. However, no differences were found between those patients that received occupational therapy or no treatment in the maintenance in the subtype of PD-MCI ($X^2=2.424; p=.119$). Conclusions: Findings suggest that an integrative cognitive rehabilitation program could produce a change in PD-MCI subtypes. (Figure presented).

Title: Analogy learning in Parkinson's disease: A proof-of-concept study.

Citation: International Journal of Therapy & Rehabilitation, 2016, vol./is. 23/3(123-130), 17411645

Author(s): Li-Juan Jie, Goodwin, Victoria, Kleynen, Melanie, Braun, Susy, Nunns, Michael, Wilson, Mark

Title: Addressing neuropsychiatric symptoms of Parkinson's disease with a multidisciplinary approach

Citation: International Psychogeriatrics, December 2015, vol./is. 27/(S128), 1041-6102 (December 2015)

Author(s): Hermida A.P.

Abstract: Objective: Describe the impact of a two-day comprehensive care clinic program for Parkinson's disease to identify non-motor symptoms. Background: The neuropsychiatric symptoms of Parkinson's disease have the potential to be more debilitating than the motor features of the disorder and usually prompt patients to earlier institutionalization. Non-motor symptoms are often missed during routine visits even though non-motor symptoms have a more negative impact on quality of life than motor symptoms as Parkinson's disease (PD) progresses. Patients who believe that PD is only a neurological disorder often avoid psychiatric care. The Comprehensive Care Clinic (CCC) at Emory University incorporates psychiatric care in their inter-disciplinary evaluation giving the patients the opportunity to address their emotional difficulties and get appropriate treatment improving their quality of life. Methods: The Emory PD Comprehensive Care Clinic (PD CCC) provides interdisciplinary team based assessment and treatment of PD patients. Referrals to the clinic come from within the university health system, community providers, and patient self-

referrals through word of mouth and support groups. The presence or absence of non-motor symptoms is not a requirement for participation in the PD CCC. During a 2-day evaluation, patients are evaluated by providers in sleep, psychiatry, medicine, speech and language therapy, physical therapy, occupational therapy, social work, neuropsychology, nursing, and movement disorders. Data were collected to describe the PD CCC patients. A subgroup completed the PDQ-39 to assess quality of life (QOL) at the initial evaluation and at 6 months. Results: Ninety-five patients participated in the PD CCC (60% men, 75% white, mean age 68 yrs (range 38-97), UPDRS part III mean score 23.8 (range 3-72). Of these, 79% were diagnosed with a psychiatric condition, 76% with cognitive dysfunction, 98% with a sleep disorder, and 95% with autonomic dysfunction. Additionally, 86% received recommendations for rehabilitation therapy. At 6 months, among 12 patients who completed the PDQ-39, a significant improvement in overall QOL (decrease in PDQ-39 score) was detected (pre mean 0.220 +/- 0.107, post 0.166 +/- 0.129, p-value 0.050). Subset scores for mobility (pre mean 0.175 +/- 0.141, post 0.123 +/- 0.113, p-value 0.054) and ADL independence (pre mean 0.295 +/- 0.173, post 0.219 +/- 0.156, p-value 0.056) also improved. Conclusions: The Emory PD CCC model is effective in detecting non-motor conditions in PD patients. Treatment of the psychiatric comorbidities improves quality of life in PD patients who otherwise would not have had a psychiatric evaluation and treatment. Incorporating psychiatric care as a routine visit for neurodegenerative illnesses such as PD offers the opportunity of addressing the complex neuropsychiatric comorbidities of this debilitating disorder.

Title: Immediate effects of acupuncture on tongue pressure including swallowing reflex latency in Parkinson's disease.

Citation: Acupuncture in medicine : journal of the British Medical Acupuncture Society, Feb 2016, vol. 34, no. 1, p. 59-61, 1759-9873 (February 2016)

Author(s): Fukuda, Shimpei, Kuriyama, Nagato, Tsuru, Hiroyuki, Egawa, Masato

Abstract: It is important to evaluate tongue function in terms of its clinical implications for swallowing ability. Motor dysfunction and loss of coordination of the tongue are frequently seen, and this influences the oral and pharyngeal phases of swallowing. The purpose of this pilot study was to evaluate the effect of a single acupuncture treatment for tongue pressure in Parkinson's disease. A total of 13 patients, aged 57- 84 years, were recruited. Tongue pressure was measured using a tongue pressure manometer. Furthermore, swallowing reflex latency was measured in 3 of the 13 patients. Significant changes were seen after acupuncture in mean tongue pressure, which increased from 23.1 to 26.7 kPa ($p < 0.01$). Reductions were seen after acupuncture in mean swallowing reflex latency (from 5.2 to 4.6 s for first saliva swallow; from 19.9 to 15.7 s for second saliva swallow; and from 10.4 to 5.7 s for third saliva swallow(s)). Our study's findings suggest that acupuncture may be useful for improving oral cavity function, but further controlled trials are needed. Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to <http://www.bmj.com/company/products-services/rights-and-licensing/>

Title: Abdominal massage for the alleviation of symptoms of constipation in people with Parkinson's: a randomised controlled pilot study.

Citation: Age and ageing, Mar 2016, vol. 45, no. 2, p. 299-303, 1468-2834 (March 2016)

Author(s): McClurg, Doreen, Hagen, Suzanne, Jamieson, Katharine, Dickinson, Lucy, Paul, Lorna, Cunningham, AnneLouise

Abstract: constipation is one of the most common non-motor features of Parkinson's affecting up to 90% of patients. In severe cases, it can lead to hospitalisation and is usually managed with laxatives which in themselves can lead to side effects. Abdominal massage has been used as

adjunct in the management of constipation in various populations, but not in those with Parkinson's. the primary objective was to test the recruitment, retention and the appropriateness of the intervention methods and outcome measures. thirty-two patients with Parkinson's were recruited from three movement disorder clinics and were randomised to receive either 6 weeks of daily abdominal massage plus lifestyle advice on managing constipation (Intervention Group, n = 16) or lifestyle advice (Control Group, n = 16). Data were collected prior to group allocation (Baseline), at Week 6 (following intervention) and 4 weeks later (Week 10). Outcome tools included the Gastrointestinal Rating Scale and a bowel diary. constipation has a negative impact on quality of life. The study recruited to target, retention was high and adherence to the study processes was good. The massage was undertaken as recommended during the 6 weeks of intervention with 50% continuing with the massage at 10 weeks. Participants in both groups demonstrated an improvement in symptoms, although this was not significantly different between the groups. abdominal massage, as an adjunct to management of constipation, offers an acceptable and potentially beneficial intervention to patients with Parkinson's. © The Author 2016. Published by Oxford University Press on behalf of the British Geriatrics Society. All rights reserved. For Permissions, please email: journals.permissions@oup.com.

Title: Comparative Effect of Power Training and High-Speed Yoga on Motor Function in Older Patients With Parkinson Disease.

Citation: Archives of physical medicine and rehabilitation, Mar 2016, vol. 97, no. 3, p. 345, 1532-821X (March 2016)

Author(s): Ni, Meng, Signorile, Joseph F, Mooney, Kiersten, Balachandran, Anoop, Potiaumpai, Melanie, Luca, Corneliu, Moore, James G, Kuenze, Christopher M, Eltoukhy, Moataz, Perry, Arlette C

Abstract: To compare the effects of power training (PWT) and a high-speed yoga program on physical performances in older patients with Parkinson disease (PD), and to test the hypothesis that both training interventions would attenuate PD symptoms and improve physical performance. Randomized controlled trial. A laboratory of neuromuscular research and active aging. Patients with PD (N=41; mean age \pm SD, 72.2 \pm 6.5y). Two high-speed exercise interventions (specifically designed yoga program and PWT) were given for 12 weeks (twice a week), and 1 nonexercise control group. Unified Parkinson Disease Rating Scale motor score (UPDRSMS), Berg Balance Scale (BBS), Mini-Balance Evaluation Systems Test (Mini-BESTest), Timed Up and Go, functional reach, single leg stance (SLS), postural sway test, 10-m usual and maximal walking speed tests, 1 repetition maximum (RM), and peak power (PPW) for leg press. For the posttests, both training groups showed significant improvements ($P < .05$) in all physical measurements except functional reach on the more affected side, SLS, and postural sway compared with the pretests, and significantly better scores for UPDRSMS, BBS, Mini-BESTest, Timed Up and Go, functional reach on the less affected side, 10-m usual and maximal walking speed tests, 1RM, and PPW than controls, with no differences detected between the yoga program and PWT. Both the specially designed yoga program and PWT programs can significantly improve physical performance in older persons with PD. Copyright © 2016 American Congress of Rehabilitation Medicine. Published by Elsevier Inc. All rights reserved.

Title: Two-Year Trajectory of Fall Risk in People With Parkinson Disease: A Latent Class Analysis.

Citation: Archives of physical medicine and rehabilitation, Mar 2016, vol. 97, no. 3, p. 372, 1532-821X (March 2016)

Author(s): Paul, Serene S, Thackeray, Anne, Duncan, Ryan P, Cavanaugh, James T, Ellis, Theresa D, Earhart, Gammon M, Ford, Matthew P, Foreman, K Bo, Dibble, Leland E

Abstract: To examine fall risk trajectories occurring naturally in a sample of individuals with early to middle stage Parkinson disease (PD). Latent class analysis, specifically growth mixture modeling (GMM), of longitudinal fall risk trajectories. Assessments were conducted at 1 of 4 universities. Community-dwelling participants with PD of a longitudinal cohort study who attended at least 2 of 5 assessments over a 2-year follow-up period (N=230). Not applicable. Fall risk trajectory (low, medium, or high risk) and stability of fall risk trajectory (stable or fluctuating). Fall risk was determined at 6 monthly intervals using a simple clinical tool based on fall history, freezing of gait, and gait speed. The GMM optimally grouped participants into 3 fall risk trajectories that closely mirrored baseline fall risk status ($P=.001$). The high fall risk trajectory was most common (42.6%) and included participants with longer and more severe disease and with higher postural instability and gait disability (PIGD) scores than the low and medium fall risk trajectories ($P<.001$). Fluctuating fall risk (posterior probability <0.8 of belonging to any trajectory) was found in only 22.6% of the sample, most commonly among individuals who were transitioning to PIGD predominance. Regardless of their baseline characteristics, most participants had clear and stable fall risk trajectories over 2 years. Further investigation is required to determine whether interventions to improve gait and balance may improve fall risk trajectories in people with PD. Copyright © 2016 American Congress of Rehabilitation Medicine. Published by Elsevier Inc. All rights reserved.

Title: Measurement of Voluntary Cough Production and Airway Protection in Parkinson Disease.

Citation: Archives of physical medicine and rehabilitation, Mar 2016, vol. 97, no. 3, p. 413-420, 1532-821X (March 2016)

Author(s): Silverman, Erin P, Carnaby, Giselle, Singletary, Floris, Hoffman-Ruddy, Bari, Yeager, James, Sapienza, Christine

Abstract: To examine relations between peak expiratory (cough) airflow rate and swallowing symptom severity in participants with Parkinson disease (PD). Cross-sectional study. Outpatient radiology clinic at an acute care hospital. Men and women with PD (N=68). Participants were cued to cough into an analog peak flow meter then swallowed three 20-mL thin liquid barium boluses. Analyses were directed at detecting potential relations among disease severity, swallowing symptom severity, and peak expiratory (cough) airflow rate. Peak expiratory (cough) airflow rate and swallow symptom severity. Peak expiratory (cough) airflow rate varied significantly across swallowing severity classifications. Participants with more severe disease displayed a significant, linear decrease in peak expiratory (cough) airflow rate than those participants with earlier stage, less severe disease. Swallowing symptom severity varied significantly across groups when comparing participants with less severe PD with those with more severe PD. Participants with early stage PD demonstrated little to no swallowing symptoms and had the highest measures of peak expiratory (cough) airflow rate. In contrast, participants with the most severe swallowing symptoms also displayed the lowest measures of peak expiratory (cough) airflow rate. Relations existed among PD severity, swallowing symptom severity, and peak expiratory (cough) airflow rate in participants with PD. Peak expiratory (cough) airflow rate may eventually stand as a noninvasive predictor of aspiration risk in those with PD, particularly those with later stage disease. Inclusion of peak expiratory (cough) airflow rates into existing clinical swallowing assessments may increase the sensitivity and predictive validity of these assessments. Copyright © 2016 American Congress of Rehabilitation Medicine. Published by Elsevier Inc. All rights reserved.

Title: Comorbidity in Drivers with Parkinson's Disease.

Citation: Journal of the American Geriatrics Society, Feb 2016, vol. 64, no. 2, p. 342-346, 1532-5415 (February 2016)

Author(s): Ranchet, Maud, Tant, Mark, Akinwuntan, Abiodun Emmanuel, Neal, Erin, Devos, Hannes

Abstract: To determine the effect of comorbidity on fitness-to-drive recommendations that physicians and on-road driving assessors make and to investigate the agreement in fitness-to-drive recommendations between physicians and on-road driving assessors. Retrospective. Data on comorbidities associated with Parkinson's disease (PD) and fitness-to-drive recommendations were investigated. Individuals with PD who underwent an official on-road test in Belgium (N = 72). Correlations between comorbidity and fitness-to-drive recommendations were calculated. Stepwise logistic regression models were used to investigate whether comorbidity was an independent predictor of fitness-to-drive recommendations (pass/fail) that the physicians or the on-road assessors made. The percentage of agreement and the prevalence and bias-adjusted kappa (PABAK) were used to investigate agreement between the physicians and the on-road assessors. Moderate correlations were found between comorbidity and fitness-to-drive recommendations that the physicians ($\rho = 0.34$, $P = .004$) and the on-road assessors ($\rho = 0.30$, $P = .01$) made. Comorbidity was the most important determinant (coefficient of determination = 0.16, $P = .005$) of the physicians fitness-to-drive recommendations. No significant effect of comorbidity on the on-road recommendations was found. The physicians and the on-road assessors agreed in 46 (64%) of the cases (PABAK = 0.46, $P < .001$). Comorbidity plays a role in physicians' recommendations of fitness to drive that may explain, in part, inconsistencies between physicians and on-road assessors' fitness-to-drive recommendations. This study indicates the need for an interdisciplinary dialogue between physicians and on-road assessors to reach a comprehensive fitness-to-drive decision. © 2016, Copyright the Authors Journal compilation © 2016, The American Geriatrics Society.

Full Text:

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Title: Parkinson's disease.

Citation: Lancet, 2016, vol./is. 387/10015(217-217), 00995355

Author(s): Barnett, Richard

Abstract: The article explores the discovery of Parkinson's Disease or formerly paralysis agitans by English doctor James Parkinson, who is known for being the author of "An Essay on the Shaking Palsy" and was among the revolutionaries in 1700s Great Britain. Topics discussed include Parkinson's observation and description of the condition, the contribution of French neurologist Jean-Martin Charcot to the study of the disease and developments related to Parkinson's disease since its first observation.

Title: Evaluation of Speech Amplification Devices in Parkinson's Disease.

Citation: American journal of speech-language pathology / American Speech-Language-Hearing Association, Feb 2016, vol. 25, no. 1, p. 29-45, 1558-9110 (February 1, 2016)

Author(s): Andreetta, Monika D, Adams, Scott G, Dykstra, Allyson D, Jog, Mandar

Abstract: The purpose of this study was to evaluate the efficacy of selected speech amplification devices in individuals with hypophonia and idiopathic Parkinson's disease (PD). This study

compared the effectiveness of seven devices (ADDvox, BoomVox, ChatterVox, Oticon Amigo, SoniVox, Spokeman, and Voicette) to unamplified speech for 11 participants with PD during conversation in 65-dB SPL multitalker noise, using experience ratings collected from participant questionnaires and speech performance measures (i.e., speech-to-noise ratio [SNR], speech intensity, and intelligibility) obtained from audio recordings. Compared with unamplified speech, device use increased SNR by 1.07-4.73 dB SPL and speech intensity by 1.1-5.1 dB SPL, and it significantly increased transcribed intelligibility from 13.8% to 58.9%. In addition, the type of device used significantly affected speech performance measures (e.g., BoomVox was significantly higher than most of the other devices for SNR, speech intensity, and intelligibility). However, experience ratings did not always correspond to performance measures. This study found preliminary evidence of improved speech performance with device use for individuals with PD. A tentative hierarchy is suggested for device recommendations. Future research is needed to determine which measures will predict long-term device acceptance in PD.

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Available from *EBSCOhost* in [American Journal of Speech-Language Pathology](#)

Title: Choral singing therapy following stroke or Parkinson's disease: an exploration of participants' experiences.

Citation: Disability and rehabilitation, May 2016, vol. 38, no. 10, p. 952-962, 1464-5165 (May 2016)

Author(s): Fogg-Rogers, Laura, Buetow, Stephen, Talmage, Alison, McCann, Clare M, Leão, Sylvia H S, Tippett, Lynette, Leung, Joan, McPherson, Kathryn M, Purdy, Suzanne C

Abstract: People with stroke or Parkinson's disease (PD) live with reduced mood, social participation and quality of life (QOL). Communication difficulties affect 90% of people with PD (dysarthria) and over 33% of people with stroke (aphasia). These consequences are disabling in many ways. However, as singing is typically still possible, its therapeutic use is of increasing interest. This article explores the experiences of and factors influencing participation in choral singing therapy (CST) by people with stroke or PD and their significant others. Participants (eight people with stroke, six with PD) were recruited from a community music therapy choir running CST. Significant others (seven for stroke, two for PD) were also recruited. Supported communication methods were used as needed to undertake semi-structured interviews (total N = 23). Thematic analysis indicated participants had many unmet needs associated with their condition, which motivated them to explore self-management options. CST participation was described as an enjoyable social activity, and participation was perceived as improving mood, language, breathing and voice. Choral singing was perceived by people with stroke and PD to help them self-manage some of the consequences of their condition, including social isolation, low mood and communication difficulties. Implications for Rehabilitation Choral singing therapy (CST) is sought out by people with stroke and PD to help self-manage symptoms of their condition. Participation is perceived as an enjoyable activity which improves mood, voice and language symptoms. CST may enable access to specialist music therapy and speech language therapy protocols within community frameworks.

Title: Effects of a Single Hand-Exercise Session on Manual Dexterity and Strength in Persons with Parkinson Disease: A Randomized Controlled Trial.

Citation: PM & R : the journal of injury, function, and rehabilitation, Feb 2016, vol. 8, no. 2, p. 115-122, 1934-1563 (February 2016)

Author(s): Mateos-Toset, Sara, Cabrera-Martos, Irene, Torres-Sánchez, Irene, Ortiz-Rubio, Araceli, González-Jiménez, Emilio, Valenza, Marie Carmen

Abstract: To evaluate the effects on manual dexterity, hand grip, and pinch strength of a single intervention focused on hand exercises. Randomized, controlled, blinded study. Sixty people with Parkinson disease (PD) were recruited; 30 participants were allocated to a brief exercise session and 30 to a control group. Participants randomized to the experimental group received a 15-minute exercise session focused on hand training using therapeutic putty. Participants allocated to the control group performed active upper limb exercises. Measures of manual dexterity (assessed by the Purdue Pegboard Test and the Chessington Occupational Therapy Neurologic Assessment Battery dexterity task) and strength (hand grip and pinch strength) were recorded at baseline and after the intervention. Participants had significantly improved manual dexterity values ($P < .05$) after the intervention. They also had increased hand grip ($P < .001$) and pinch strength ($P < .05$). A single hand-exercise session showed an improvement in manual dexterity and strength in persons with PD. Copyright © 2016 American Academy of Physical Medicine and Rehabilitation. Published by Elsevier Inc. All rights reserved.

Title: 'Signposts on the journey'; medication adherence and the lived body in men with Parkinson's disease.

Citation: Social science & medicine (1982), Mar 2016, vol. 152, p. 27-34, 1873-5347 (March 2016)

Author(s): Gibson, Grant

Abstract: Adherence to medication has been identified as a key issue in the treatment of many chronic illnesses, however such a perspective fails to account for the lived experience of medication usage and its effects on the body as lived. Parkinson's Disease, a neurological disease predominantly affecting movement and mobility, and which is treated via a wide range of medications provides a useful opportunity to explore experiences of medication usage in chronic illness. Reporting on findings of a study exploring men's experience of living with Parkinson's Disease, this paper adopts a lived body perspective to explore lived experiences of medication usage and adherence in PD. Findings are reported from 30 narrative in depth interviews with 15 men of various ages living with Parkinson's disease of mild to severe intensity. Findings first discuss PD's effects on men's sense of the lived body, in which a fluctuating embodiment is linked to medication regimes and their bodily effects. Second, as PD disrupts the body's place with the everyday and habitual experience of lived time, medication regimens come to place new structures upon the men's everyday experience of time. Finally, the paper explores the role medications play in men's attempts to create and sustain narratives for the individual progression of their illness, and how these narratives differ from clinical narratives associated with PD's treatment. This paper concludes by discussing debates around adherence to medication within the treatment of PD and the need to consider lived experience of medication usage and their effects at the level of the lived body. Copyright © 2016 Elsevier Ltd. All rights reserved.

Title: Intakes of fish and polyunsaturated fatty acids and mild-to-severe cognitive impairment risks: a dose-response meta-analysis of 21 cohort studies.

Citation: The American journal of clinical nutrition, Feb 2016, vol. 103, no. 2, p. 330-340, 1938-3207 (February 2016)

Author(s): Zhang, Yu, Chen, Jingnan, Qiu, Jieni, Li, Yingjun, Wang, Jianbing, Jiao, Jingjing

Abstract: The intake of fish and polyunsaturated fatty acids (PUFAs) may benefit cognitive function. However, optimal intake recommendations for protection are unknown. We systematically

investigated associations between fish and PUFA intake and mild-to-severe cognitive impairment risk. Studies that reported risk estimates for mild cognitive impairment (MCI), cognitive decline, dementia, Alzheimer disease (AD), or Parkinson disease (PD) from fish, total PUFAs, total n-3 (ω -3) PUFAs, or at least one n-3 PUFA were included. Study characteristics and outcomes were extracted. The pooled RR was estimated with the use of a random-effects model meta-analysis. A dose-response analysis was conducted with the use of the 2-stage generalized least-squares trend program. We included 21 studies (181,580 participants) with 4438 cases identified during follow-up periods (2.1-21 y). A 1-serving/wk increment of dietary fish was associated with lower risks of dementia (RR: 0.95; 95% CI: 0.90, 0.99; P = 0.042, I(2) = 63.4%) and AD (RR: 0.93; 95% CI: 0.90, 0.95; P = 0.003, I(2) = 74.8%). Pooled RRs of MCI and PD were 0.71 (95% CI: 0.59, 0.82; P = 0.733, I(2) = 0%) and 0.90 (95% CI: 0.80, 0.99; P = 0.221, I(2) = 33.7%), respectively, for an 8-g/d increment of PUFA intake. As an important source of marine n-3 PUFAs, a 0.1-g/d increment of dietary docosahexaenoic acid (DHA) intake was associated with lower risks of dementia (RR: 0.86; 95% CI: 0.76, 0.96; P < 0.001, I(2) = 92.7%) and AD (RR: 0.63; 95% CI: 0.51, 0.76; P < 0.001, I(2) = 94.5%). Significant curvilinear relations between fish consumption and risk of AD and between total PUFAs and risk of MCI (both P-nonlinearity < 0.001) were observed. Fishery products are recommended as dietary sources and are associated with lower risk of cognitive impairment. Marine-derived DHA was associated with lower risk of dementia and AD but without a linear dose-response relation. © 2016 American Society for Nutrition.

Title: Entraining with another person's speech rhythm: Evidence from healthy speakers and individuals with Parkinson's disease.

Citation: Clinical linguistics & phonetics, Jan 2016, vol. 30, no. 1, p. 68-85, 1464-5076 (2016)

Author(s): Späth, Mona, Aichert, Ingrid, Ceballos-Baumann, Andrés O, Wagner-Sonntag, Edith, Miller, Nick, Ziegler, Wolfram

Abstract: This study examines entrainment of speech timing and rhythm with a model speaker in healthy persons and individuals with Parkinson's. We asked whether participants coordinate their speech initiation and rhythm with the model speaker, and whether the regularity of metrical structure of sentences influences this behaviour. Ten native German speakers with hypokinetic dysarthria following Parkinson's and 10 healthy controls heard a sentence ('prime') and subsequently read aloud another sentence ('target'). Speech material comprised 32 metrical regular and irregular sentences, respectively. Turn-taking delays and alignment of speech rhythm were measured using speech wave analyses. Results showed that healthy participants initiated speech more closely in rhythm with the model speaker than patients. Metrically regular prime sentences induced anticipatory responses relative to metrically irregular primes. Entrainment of speech rhythm was greater in metrically regular targets, especially in individuals with Parkinson's. We conclude that individuals with Parkinson's may exploit metrically regular cues in speech.

Sources Used

The following databases are searched on a regular basis in the development of this bulletin: Amed, British Nursing Index, Cinahl, Medline

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