

nurse should be the professional to plan, prepare and ensure (coordinate) training to school staff (ADA, 2014) [1]. Objectives: To evaluate the effectiveness of an intervention program focused on the development of knowledge of education staff on type 1 diabetes.

#### Methods

This is a quasi-experimental study, with a pre-post intervention design with no control group, which included 81 educators. It was implemented an intervention program by a school nurse with theoretical and practical components. Before and after intervention, it was applied a questionnaire with socio-economic data and the Portuguese version of the "Diabetes knowledge Questionnaire" scale [2] about type 1 diabetes.

#### Results

The knowledge improved with the intervention. Total score (ranging from 0 -17) obtained before intervention was  $11.10 \pm 2.69$  and after this average rose to  $13.84 \pm 1.87$ , having a statistically significant difference ( $p < 0.001$ ). Less knowledge was identified in healthy eating and monitoring blood glucose, before intervention. After intervention, worst scores were identified in the detection of hypoglycemia signals and in intervention during hypoglycemia.

#### Conclusions

Knowledge is a basic condition for monitoring and for a correct intervention in type 1 diabetes complications, such as severe hypoglycemia. It is, therefore, necessary to develop effective intervention programs towards the acquisition of knowledge by the school staff that supervise students with diabetes.

#### References

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#### Keywords

Type 1 diabetes mellitus, nursing, knowledge, health school

#### O105

##### Treatment of diabetic peripheral neuropathic pain: a systematic review of clinical trials of phase II and III

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Diabetic Peripheral Neuropathic Pain (DPNP) is a common complication of diabetes, which affects a wide fraction of patients, and it's likely to increase due to the prevalence of Diabetes. Diabetic neuropathy is a complication associated with patient age, illness course and hyperglycaemia severity. DPNP pharmacologic treatment includes antidepressants, anti-convulsants, and opioid drugs, among others. However, and given the different pharmacologic options, pain relief is currently unsatisfactory in most of the cases.

The aim of this study was to systematically review randomized controlled trials of oral and topical pharmacotherapy for DPNP, including studies published in peer-reviewed journals in PUBMED and unpublished trials retrieved from ClinicalTrials.gov, reporting predefined efficacy and safety outcomes, published from 2010 on. Participants in these trials included people with diabetes mellitus and diabetic peripheral neuropathy who were given any treatment for diabetic peripheral neuropathy. Data from the trials were reviewed by two authors independently, and extracted using standardized data extraction sheets.

From the 29 selected trials, 11 were elected after exclusion criteria were applied; these trials included drugs with different pharmacotherapeutic profiles. Significant improvement of pain was only reported for

two trials: one with a serotonin and norepinephrine reuptake inhibitor and other with a cholinergic agonist of the nicotinic receptors. Both these drugs present statistically significant differences in the intensity of the pain when compared to placebo.

Further investigation is required to fully explain the mechanisms of the nerve injury in order to develop a target therapy for DPNP, with more efficient pain control.

#### Keywords

neuropathic pain, diabetic peripheral neuropathic pain, diabetes mellitus, drug, treatment

#### O106

##### New drugs for osteoporosis treatment: Systematic review of clinical trials of phase II and III

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Osteoporosis is a disease characterized by decreased bone mass and deterioration of bone microarchitecture. It is a highly prevalent condition in western countries, and it is estimated to affect 5 % of the Portuguese population. Advances in the research in the pathophysiology of the disease have been used for the development of new molecules. In addition, several clinical trials have been developed in order to determine the effectiveness of new drugs to treat osteoporosis.

The aim of this study was to systematically review randomized controlled trials of oral drugs for osteoporosis treatment. The systematic review was performed in electronic databases, particularly at ClinicalTrials (www.clinicaltrials.gov) and PubMed (http://www.ncbi.nlm.nih.gov/pubmed), of which were selected only clinical trials of phase II and III, in patients of female gender, published in the last five years, which addressed any drug for the treatment of osteoporosis.

After inclusion and exclusion criteria, of the 132 studies, 34 were selected to be included in the systematic review. These trials included drugs of different pharmacologic profiles. Regarding drugs with anabolic effects, molecules which stimulate bone formation, clinical trials show efficacy for Romosozumab and BA 058, while for MK-5442 the results were unsatisfactory. Regarding bone antiresorptive drugs, Denosumab was reported in several studies to have high efficacy. Other further promising drugs included ONO-5334 and Odanacatib, which showed positive results in several clinical trials.

Despite the wide diversity of drugs under clinical trials, new pharmacological options should be developed to revert bone loss in this highly prevalent chronic disease.

#### Keywords

Osteoporosis, drugs, clinical trials, bone mineral density

#### O107

##### Promoting hope at the end of life: Effectiveness of an Intervention Programme

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#### Background

Hope is essential to life and a coping strategy for people with advanced chronic illness facing the end of life. Objectives: Test the

effect of an intervention Programme to Promote Hope (PPH) on hope, quality of life (QOL) and comfort of people in palliative situation.

#### Methods

Fifty-six (56) palliative patients were randomly assigned to an intervention group (n = 28) and a control group (n = 28). The intervention group was provided with 3 PPE sessions (1 hour) for one week, while the control group were submitted to the regular treatment. All patients were assessed with the Portuguese versions of the Herth Hope Index, McGill Quality of Life Questionnaire and Holistic Comfort Questionnaire at pre-test/post-test, at one month follow up. The dropouts resulted in n = 11 in intervention group and 12 in control group. Results were analysed using non-parametric statistics.

#### Results

Patients experienced good levels of hope, QOL and comfort. There was no significant difference at the pre-test of outcome measures (p > 0.05). After the intervention significant differences existed between the 2 groups in Hope and QOL, but no differences in comfort levels. Follow-up hope levels decreased with significant differences between the groups (p < 0.05). Differences in QOL were not found. Comfort levels were significantly different in follow up, with higher levels of comfort experienced by the intervention group.

#### Conclusions

A structural hope intervention programme in palliative patients in a community setting had a positive effect on improving hope, quality of life and comfort. More studies need to be developed to test the intervention on a bigger sample.

#### Keywords

Hope, quality of life, comfort, end of life, intervention program

### P43

#### Psychomotor therapy effects on adaptive behaviour and motor proficiency of adults with intellectual disability

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Persons with intellectual disabilities (ID) usually present limitations in adaptive behaviour and motor skills, which constitute a barrier to their daily independent functioning. Our goal was to analyse the efficacy of a Psychomotor Intervention (PMT) programme on adults with ID, in terms of adaptive behaviour and motor proficiency skills.

The sample comprised 15 participants divided into 3 groups of 5 individuals each (A = ID, B = Down Syndrome and C = typical development). Ages ranged from 22 to 31 years old (26.5 ± 3.76), 6 were females and 9 males. All adults with ID were institutionalized and adults without ID were selected by convenience. Portuguese versions of the Adaptive Behaviour Scale [1] and of the Bruininks-Oseretsky Motor Proficiency Test were applied [2]. After establishing a baseline, a 3-month PMT Programme was designed for participants with ID, focused on balance, global/fine motor skills, economic/vocational activities and academic/verbal skills. A Kruskal-Wallis test comparing pre-, post- and retention test scores of all groups was computed and to compare intra-groups differences a Wilcoxon test was performed.

Results showed statistically significant differences between groups with and without ID, with the latter presenting higher scores after the PMT program. Assessments showed great improvements in motor and adaptive skills, by the participants with ID.

Findings may indicate that PMT could strengthen and improve the areas assessed, although these findings should be interpreted with caution, due to the reduced sample.

#### References

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#### Keywords

Adaptive behaviour, motor proficiency, intellectual and developmental disabilities, psychomotor Intervention

### P44

#### The effect of exercise therapy in multiple sclerosis – a single study case

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#### Background

Multiple sclerosis (MS) is a chronic, often disabling disease of the central nervous system. Disability in MS is related with decline in general functioning (e.g., mobility, gait, balance). The exercise therapy is known to reduce the rate of functional decline in other diseases; however, its effect in the treatment of MS remains relatively unexplored. Objective: To determine the effect of exercise therapy in MS.

#### Methods

One patient with MS was included in a 6-week exercise program (2 sessions/week: progressive muscle strength, balance and aerobic exercises) conducted by a physiotherapist. Anthropometric (height; weight) and sociodemographic (age; gender) data, stage of disease (Abbreviated Expanded Disability status scale - AED) and functional tests (5-meter walking test at comfortable speed - 5mWT; Functional Reach test - FRT; 5 times sit-to-stand test - 5STS) were collected at the beginning (T0) and at the end (T1) of the exercise program. Averages of two trials for each functional test were compared between T0 and T1 and the remaining functional impairment was calculated as a percentage of normative aged adjusted values (%).

#### Results

A female (52 years; 48 kg; 1.59 m) in a stage 4 of AED scale (ambulatory without aid 12 h) participated in this study. From T0 to T1 the participant increased the performance in: 5mWT (0.51 m/s ± 0.08 vs 0.64 m/s ± 0.01; 36.69 % vs 46.04 %); FRT (20.5 cm ± 2.12 vs 25 cm ± 0.71; 47.99 % vs 58.53 %); 5STS (19.45 s ± 1.62 vs 16.55 s ± 2.47; 36.5 % vs 42.9 %).

#### Conclusions

The exercise therapy improved general functioning in one patient with MS, getting functional scores close to/above 50 % of the expected value.

#### Keywords

Exercise, therapy, multiple sclerosis

### P45

#### Physical condition and self-efficacy in people with fall risk – a preliminary study

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#### Background

In people with fall risk, the perceived inefficiency in dealing with falls contributes greatly to restrictions in movement and therefore might interfere with physical condition. However, this relationship has been relatively unexplored. Objective: To explore the association between physical condition and self-efficacy in people with fall risk.

#### Methods

People older than 50 years old with moderate fall risk (Morse scale) were included in a fall prevention exercise programme. Age, gender and Body Mass Index (BMI) were collected. At the end of the