physiotherapist, who was blinded to treatment assignment, evaluated the patients immediately before and after treatment as well as 4, 12 and 24 weeks later.

Results: Immediately after the completion of treatment, the mean VAS dropped from 78 to 66 mm in the acupuncture group (G1) but increased at the follow up visits to 76 mm after 24 weeks. In contrast, VAS scores decreased from 80 to 48 mm in the laser acupuncture group. Although it increased in the follow up visits 60 mm after 24 weeks, it remained significantly better (24 mm $P < 0.0001$) than at the initial assessment. The mean of fingertips and floor distance decreased significantly in G2 from 41 cm to 15 cm immediately after the completion of the first session (the difference from baseline was 26 cm) compared to a decrease from 44 to 35 after the first session in G1. Forward flexion of the lumbar spine improvement remained stable between the first assessment and the other four assessments in patients exposed to prayers with the difference between the baseline and 24 week assessments highly significant ($p < 0.0001$) compared to G1 ($p > 0.05$).

Conclusions: Both measures were decreased in both groups but laser acupuncture resulted in a significant improvement in functional and symptomatic outcomes in this group of patients with CLBP even after 24 weeks follow up.

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THU0529 THE COMPARISON OF PHYSICAL ACTIVITY LEVEL IN PREGNANT WOMEN WITH AND WITHOUT LOW BACK PAIN

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Background: Low back pain (LBP) is one of the most common musculoskeletal problems during pregnancy that occurs due to a combination of mechanical, hormonal, circulatory and psychological factors. The changes in the load, body mechanics and centre of gravity, increased levels of relaxin, and decreased venous circulation in the pelvic and lumbar region may contribute to LBP in pregnant women.^{1,2} It has been reported that the prevalence of LBP ranges between 50% and 80%. Pregnant women suffer from LBP may experience significant physical, psychological and social problems which adversely affect their quality of life.³

Objectives: The aim of the study was to compare the physical activity level of pregnant women with and without LBP.

Methods: A total of 151 pregnant women without obstetric and medical complications were included in this study. Sociodemographic and obstetric characteristics of the participants were assessed with a standart questionnaire. The presence of LBP was recorded as "yes" and "no". The level of physical activity was assessed with the Pregnancy Physical Activity Questionnaire (PPAQ). The PPAQ is self-administered and asks respondents to report the time spent participating in 32 activities including household/caregiving, occupational, sports/exercise, transportation and inactivity. Independent samples t test was used to determine whether there was a difference in physical activity level between two independent groups (Group 1: Pregnant women with LBP, Group 2: Pregnant women without LBP).

Results: 77 pregnant women (mean age: 29.28±5.14 years, mean body mass index (BMI): 25.95±3.86 kg/m²) had no LBP. However, 74 pregnant women (mean age: 29.22±4.90 years, BMI: 26.85±2.78 kg/m²) have experienced LBP. There was no statistically significant difference in gestational week between two groups ($p > 0.05$). Exercise-sports activity (mean: 5.69±7.29 MET-h.week⁻¹) and vigorous activity (mean: 2.39±3.80 MET-h.week⁻¹) scores of PPAQ were significantly lower in the pregnant with LBP than in those without LBP. Other activity scores were similar between groups ($p > 0.05$).

Conclusions: The presence of LBP during pregnancy causes decreased levels of sports and exercise activities in the pregnant women while household/caregiving and occupational activities are being carried out. LBP can be a barrier to perform physical activities and exercises for pregnant women. Therefore, it should be treated with appropriate methods and pregnant women should be encouraged to regularly participate to exercise programs.

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THU0530 CHRONIC LOW BACK PAIN AND DEPRESSION: SIGNIFICANT DECREASE WITH GLUCOSAMINE-CHONDROITIN SULFATE TREATMENT IN A LARGE, COMMUNITY-BASED, PILOT, OPEN PROSPECTIVE INTERVENTIONAL STUDY

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Background: Low back pain (LBP) is the leading cause of Years Lived with Disability worldwide.¹ The number of people suffering from LBP grew more than 50% from 1990 to 2013, to 651 million.¹ Chronic low back pain can often lead to depression. Data on 1 90 593 community-dwelling adults aged ≥18 years from the World Health Survey (WHS) 2002–2004 in 43 Low and middle-income countries show a strong correlation between chronic back pain and depression.² Glucosamine-chondroitin sulfate (GCS) combination is widely used in the treatment of OA; however, there are few prospective scientific investigations of its therapeutic merits in severe LBP.

Objectives: To study the efficacy of GCS in the decreasing depression in patients with chronic low back pain in a large open pilot prospective observational study.

Methods: We enrolled patients between 40 and 65 years of age who had LBP for at least 12 weeks with a pain intensity >3 on a 0–10-point visual analogue scale (VAS) in a single-arm, open-label prospective interventional study. Major exclusion criteria were the presence of fibromyalgia, degenerative spondylolisthesis, and alcohol and/or drug abuse. All patients were treated with a combination of glucosamine hydrochloride 500 mg and chondroitin sulfate 500 mg in tablet form (Unipharm Inc.) at a dose of 1 tablet bid for the first month and then 1 tablet daily for the next two months. The primary endpoint was pain intensity (at rest and movement) as measured on a 0–10 point VAS. Depression was measured by the 13-questionnaire Beck's Depression Inventory (BDI). There are 13 questions in this score with highest possible score of 39 (5–7 is mild depression; 8–15 moderate depression, 16 and over severe depression).³

Results: A total of 8598 subjects (mean age 52.1 years, 67.3% women, mean BMI 27.4) were enrolled in the study, and formed the intent-to-treat (ITT) population. All but 95 subjects (1.1%) completed the study. Previously-reported ITT analysis with worst observation carried forward (WOCF) showed an improvement in pain at rest from mean (±SD) of 5.2±1.9 at study entry to 1.4±1.6 at 3 months ($p < 0.0001$). Pain at movement decreased from 6.8±1.6 to 2.2±1.8 ($p < 0.0001$). Baseline BDI scores showed a highly significant correlation with baseline pain scores at rest and movement ($p < 0.0001$ for both). After 12 weeks of GCS treatment, the mean BDI score dropped from 8.7 (95% CI 8.6 to 8.9) to 2.9 (95% CI 2.8–3.0) (paired-test $p < 0.0001$). An adverse event (AE) was reported by 604 (7.0%) patients (mostly gastrointestinal in origin, such as nausea, abdominal pain and dry mouth) but only 85 (1.0%) patients deemed it severe enough to discontinue therapy.

Conclusions: Although open and uncontrolled, this large pilot community-based study shows dramatic reductions in pain and depression in patients with LBP treated with GCS. With its benign safety profile, GCS therapy deserves serious evaluation in the management of LBP in a prospective randomised double-blinded clinical trial.

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THU0531 COMPARISON OF THREE DIFFERENT TRIGGER POINT TREATMENT IN THE MANAGEMENT OF LOW BACK PAIN: A PILOT STUDY

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Background: Low-back pain is a common health problem worldwide. In the majority of cases, the pathoanatomical source of an individual's pain cannot be identified and are therefore defined as non-specific in nature. Although there are many potential contributing factors to low back pain, one area that has received

scientific emphasis is the trigger point (TrP). TrP is defined as hyperirritable areas within taut bands of skeletal muscle and classified as either active or latent. Although many methods have been proposed for use in the treatment of TrP, there has been no study investigating which method is more effective.

Objectives: The aim of our study is to compare the different trigger point techniques used in the treatment of low back pain.

Methods: 28 cases with low back pain with trigger point origin were included in the study. The subjects were randomly divided into 3 groups. Strain-Counter Strain (SCS) technique was applied to Group 1 (n=16), Integrated Neuromuscular Inhibition Technique (INIT) for Group 2 (n=16), and Ischaemic Compression Technique (ICT) for Group 3 (n=16). The duration of treatment was a maximum of 6 weeks (12 sessions) in both three groups. Visual Analogue Scale (VAS) was used for pain severity, algometer examination was used to measure pain threshold, and Oswestry Disability Index was used to assess disability score. In addition, the Beck Depression Scale was used to assess the psychosocial status of the cases, and the STAI (State Trait Anxiety Inventory)- I and STAI-II scales were used to assess emotion-state and continuity. The evaluations were made before the treatment, after the 1st session of the treatment and at the end of the treatment (after 6 weeks). The data were analysed by using Kruskal-Wallis Test.

Results: Mean age and body mass index (BMI) of our study group were, respectively, 38.6±12.3 years and 26.6±6.2 kg/m² in the SCS group, 34.2±10.1 years and 26.3±5.9 kg/m² in the INIT group and 34.8±14.2 years and 24.5±5.2 kg/m² in the ICT group. There was no significant difference among groups in respect of age, BMI, depression and anxiety score (p>0.05) before the treatment. Three groups had significant decreases in pain according to the VAS and algometer (p<0.05). The ROM values and function level significantly improved within three groups after treatment (p<0.05). There was no statistically significant difference in pain (p=0.13), lumbar flexion (p=0.77), lumbar extension ROM (p=0.43) and disability score (p=0.65) among the three groups before and after the treatment.

Conclusions: The results indicate that patients with low back pain gain clinically benefit from trigger point treatment on pain, ROM and function. Therefore, we suggest that physiotherapist either can apply SCS, INIT or ICT based on their clinical experience in the management of low back pain. This work was supported by Istanbul University, Scientific Research Projects (Number: TYL-2017-24209)

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THU0532 TO ASSESS WHETHER THERE IS AN ASSOCIATION BETWEEN HYPERMOBILITY AND SPORTS INJURY

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Background: Joint Hypermobility (JH) is an extremely heritable condition in which joints have a range of motion beyond normal limits. This is frequently seen in healthy individuals.¹ It is important to differentiate this from Joint Hypermobility Syndrome (JHS).² (JH is diagnosed as a Beighton score of four or more).³

Objectives: The objective of this project was to determine whether there is an association between hypermobility and sports injury.

Methods: A quantitative observational approach using a cross sectional survey was adopted. A pilot study and initial focus group was arranged, involving 10 university students. Individuals were identified as hypermobile or not using the Beighton score. All participants were asked to complete two questionnaires; the first asking demographic information; the second questionnaire was injury specific. Fisher's exact test was used for statistical analysis.

Results: A total of 114 individuals participated in the study. 62 were women and 52 men. 26% of participants were found to be hypermobile. There was no significant association between hypermobility and sports injury (p=0.6596). There was a significant increase in joint and ligament sprain amongst the non-hypermobile (NH) group covering all sports studied (p=0.0269). Results showed that joint dislocation was found exclusively amongst hypermobile individuals. Duration of injury in hypermobile individuals was higher than NH. The use of oral painkillers or anti-inflammatories in the semi professional group was greater than the general population.

Table 1 Prevalence of hypermobility in each sport

Sport	Total Participants	H	NH	H (%)
Running	26	8	18	30.8
Football	24	6	18	25
Cycling	5	2	3	40
Squash	2	0	2	0
Swimming	1	1	0	100
Rugby	16	2	14	12.5
Hockey	19	6	13	31.6
Tennis	4	1	3	25
Netball	17	4	13	23.5
Total	114	30	84	26.3

Conclusions: Hypermobility is relatively common amongst individuals and there is a lot of anecdotal evidence associating it with increased rates of injuries. This

project finds that NH individuals are more likely to sustain a ligament or joint sprain in sports. This is thought to be due to increased joint laxity and flexibility preventing injury.

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THU0533 PREVALENCE OF LOW BACK PAIN AND KINESIOPHOBIA IN ELDERLY RESIDENTS OF SAO PAULO CITY: A CROSS-SECTIONAL PRELIMINARY DATA

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Background: Low back pain (LBP) is an important health problem around the world associated with disability, high costs for the health system and work absenteeism. A recent systematic review estimated that in Brazil, the point prevalence of LBP in the elderly is 25%, superior to knee osteoarthritis and rheumatoid arthritis, being considered one of the most relevant health conditions in the elderly.

Objectives: To measure the prevalence of LBP and kinesiophobia in the elderly, following the existing guidelines on conducting specific prevalence studies about LBP and to investigate the factors associated.

Methods: This is a cross-sectional study and the total sample to be recruited is 513 individuals of both genders, over 60 years old. Pain was investigated at two different times: current and last year, and pain intensity was measured by Numerical Pain Rating Scale (NPRS). Disability was measured using the Roland Morris Disability Questionnaire – Brazil version (RMDQ - BRA) and kinesiophobia was measured by the Tampa Scale for Kinesiophobia (TSK).

Results: Until now, 387 elderly were interviewed, of which 77% were women and the mean age was 71.98 (±7.70). The prevalence of LBP was 76.23%, with a punctual prevalence of 72.54% and a 12 months prevalence of 93.22%. The mean NPRS score was 7.52 (±2.16), the mean RMDQ - BRA score was 11.32 (±5.35), and the mean of the TSK score was 43.78 (±7.50).

Conclusions: Preliminary data indicate that the prevalence of LBP and kinesiophobia are high in this population. However, the level of functional disability due is moderate. There are few studies that approach these symptoms in the elderly population, and will serve as the basis for the creation of health policies.

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THU0534 THE EFFECT OF LUMBER STABILISATION EXERCISE ON THE BALANCE AND CLINICAL HEALTH

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Objectives: The aim of this study is to investigate the effects of lumbar stabilisation exercises on chronic low back pain in term of pain, functioning, quality of life, balance and trophic improvement of lumbar multifidus muscles.