

angle ( $M_{diff}=4.81$ ,  $SE=.51$ ,  $t_{(268)}=9.42$ ,  $p=.000$ , 95% CI: 3.81 – 5.82) than non-ballet students. In contrast, ballet students had lesser mean than non-ballet students in tibiofemoral angle tibiofemoral angle ( $M_{diff}=-1.05$ ,  $SE=.31$ ,  $t_{(268)}=-3.39$ ,  $p=.001$ , 95% CI: -1.64 – -0.44), prone rearfoot angle ( $M_{diff}=-8.65$ ,  $SE=.56$ ,  $t_{(254.04)}=-16.16$ ,  $p=.000$ , 95% CI: -9.71 – -7.60), tibial varum ( $M_{diff}=-2.52$ ,  $SE=.23$ ,  $t_{(159.90)}=-10.98$ ,  $p=.000$ , 95% CI: -2.96 – -2.06), hip anteversion ( $M_{diff}=-11.47$ ,  $SE=.72$ ,  $t_{(156.15)}=-15.87$ ,  $p=.000$ , 95% CI: -12.90 – -10.04), and navicular drop ( $M_{diff}=-4.45$ ,  $SE=.42$ ,  $t_{(182.22)}=-10.44$ ,  $p=.000$ , 95% CI: -5.29 – -3.61).

**Conclusions** Significant results from the alignment indicate that ballet movement and turn-out position may suggest changes in LEA, therefore, clinicians should consider these aspects while preventing and treating dancer injuries.

## 257 INFLUENCE OF LOWER QUARTER Y-BALANCE TEST™ SCREENING PROTOCOL ON DYNAMIC BALANCE OUTCOMES

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**Background** The Lower Quarter Y-Balance Test™ (LQYBT) is commonly used to determine risk of injury or readiness for return to sport. However, clinicians conduct the assessment with differing test protocols potentially altering test outcomes. **Objective** To determine if differences in reach distances, composite score, and limb symmetry exist between LQYBT testing protocols.

**Design** Prospective cohort study.

**Setting** Controlled laboratory research.

**Participants** 48 non-injured participants: 32 females, 16 males ( $21.4\pm0.3$  years,  $170.6\pm9.2$  cm,  $72.9\pm14.2$  kg).

**Interventions** Participants completed four testing protocols including barefoot with hands fixed at their hips, barefoot with hands free to move, shod with hands fixed at hips, and shod with hands free to move.

**Main Outcome Measures** Maximum reach distance was recorded for each limb in the anterior, posteromedial, and posterolateral directions. Limb length composite scores and limb symmetry index (LSI) were calculated for each LQYBT assessment.

**Results** No statistically significant differences were observed in reach distances, composite scores, or LSI between shod and barefoot protocols. Significant differences were observed in reach distances ( $p=0.00$ ) and in limb length composite scores (right limb  $p=0.00$ , left limb  $p=0.00$ ) between protocols comparing hands fixed at hips and hand free to move, although no differences were observed in LSI between these conditions when participants were shod ( $p=0.27$ ) or barefoot ( $p=0.49$ ).

**Conclusions** No differences were observed when participants wore athletic shoes or were barefoot during assessments. Reach distance and limb composite score differences were present when participants were allowed to move their arms and counterbalance their movement during the LQYBT, although no differences in LSI was observed. Results suggest if LSI is used to make clinical decisions, any LQYBT testing protocol can be used. However, testing protocols could influence clinical decisions if reach distances or composite scores are used to make patient care decisions.

## 258 SPORT PRE-PARTICIPATION HEALTH EVALUATION IN ELITE ATHLETES FROM A MULTISPORT CLUB: PROPOSAL FOR A PERSONALIZED PROTOCOL

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**Background** In 2009 the IOC published a Consensus Statement highlighting the value of periodic health evaluation in elite athletes.

**Objective** The aim of this study was to evaluate the prevalence of pathological findings, and the preventive value of the method used.

**Design** Retrospective epidemiological study.

**Setting and Participants** A total of 2574 elite and professional athletes from Football Club Barcelona (FCB). FCB is a sports club with 13 different sports, 5 professional and 8 amateur.

**Interventions (or Assessment of Risk Factors)** Between 2008 and 2018, a total of 2574 athletes, with range from 12 to 35 years old, were evaluated through a personalized sport pre-participation health evaluation protocol (SPPHE) at the FCB Medical Department.

**Main Outcome Measurements** The protocol used was the 'Guía de la Revisión Médica del Fútbol Club Barcelona'. The SPPHE examination consisted of basic medical information, anthropometric data, physical examination, spirometry, basal 12-lead electrocardiography, submaximal cardiovascular exercise testing, and cardiac echocardiography.

**Results** In 2574 SPPHE, we recorded 750 medical findings (29.1%); including 495 (19.2%) pathological findings, 255 (9.9%) minor abnormal findings, and 958 (37.2%) previous sports injuries. Specific treatment was necessary in 6 cardiovascular diseases. We found 3 endocrinological diseases (type 1e Diabetes Mellitus). Periodic follow-up was specified in all cases, although none prevented the athlete from competing.

**Conclusions** The SPPHE was effective in identifying a wide range of pathologies (66.3%) in elite athletes from this multisport club. This allow us to provide fast treatment and implement ad hoc strategic preventive programs. We found no alteration that affected the athlete's development or hindered them in reaching the highest level of competition.

## 259 SHOULD THE SIDE-HOP TEST BE REDUCED FROM 40 CM TO 30 CM WHEN USED IN DEVELOPMENTAL ATHLETES?

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**Background** The side-hop test by Gustavsson et al. (2006) helps with return to play decision making after lower extremity injury.

**Objective** Determine whether a reduced width of 30cm (compared with 40cm) may be more suitable for use in developmental athletes.

**Design** Cross-sectional study.

**Setting** School gymnasium.