

# Yoga and Physiotherapy Congress

October 16-17, 2017 Chicago, USA

Yoga and Physiotherapy 2017

## Utility of five time sit to stand (FTSTS) test as a fall risk assessment tool in COPD

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**Background:** FTSTS appear to be very useful for assessing fall risk in individuals with COPD, it has not yet been examined in this population.

**Objectives:** The purpose of this study was to identify the risk of fall using FTSTS in patient with COPD. The study aimed to: 1) Characterize FTSTS performance in COPD at different stages of disease, year of illness, use of oxygen supplementation, medication and smoking history. 2) Determine the relationships between FTSTS test performance and timed up and go (TUG) test performance. 3) To determine the utility of the FTSTS for discriminating between individuals with COPD with and without a history of falls and identify an appropriate cutoff score to delineate between these groups.

**Methods:** 129 COPD patients from Dhulikhel Hospital were recruited by using purposive sampling method. The year of illness; severity of the disease, medication details, use of oxygen supplementation, history of smoking, retrospective history of fall was collected. TUG test as well as FTSTS test was performed by the patient on two consecutive days by the same physiotherapist.

**Results:** There was significant correlation found between fall history and age ( $r=0.251$ ,  $p<0.01$ ); FEV1 ( $r=-0.530$ ,  $p<0.01$ ); years of illness ( $r=.336$ ,  $p<0.01$ ). There was no significant correlation between other variables. The ROC curve analysis determined a cutoff of 14.6 seconds (sensitivity, 0.836; specificity, 0.860) for discriminating between fallers and non-fallers, with an area under the curve of 0.928.

**Conclusion:** The FTSTS is a quick, easily administered measure that is useful for gross determination of fall risk in individuals with COPD.

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