S1. Summary of results

Study, years	n	Results	Conclusion
Butcher et.al, 2004	COPD: 15 Control: 21	Significant differences in TUG were observed when oxygen-dependent COPD patients were compared against the COPD without oxygen and healthy controls groups. (COPD with oxygen: 7.2 ± 0.4 v/s COPD without oxygen: 5.8 ± 0.4, Control: 5.3 ± 0.3).	Significant differences in balance were observed when comparing controls and non-oxygen-dependent COPD with oxygen-dependent COPD. There were no differences when comparing healthy controls with the non-oxygen-dependent COPD group.
Hernandes et al, 2009	COPD: 40 Control: 30	Statistically significant differences were observed in COPD patients on the 6MWT relative to controls. (COPD: 419 ± 111 v/s Control: 560 ± 75).	COPD patients had lower exercise capacity than healthy controls.
Ozalevli et al. 2010	COPD: 36 Control: 20	BBS scores were significantly different between COPD patients and healthy individuals (p=0.001). The 6MWT of COPD patients was shorter than that of healthy individuals (111.5±12.0 vs. 520.2±21.8, p=0.001).	The findings suggest that assessment and training to improve balance impairment among the elderly with COPD should be a component of pulmonary rehabilitation programs in clinical practice.
Correa et.al 2011	COPD: 10 Control: 10	Statistically significant differences were observed in COPD patients on the 6MWT relative to controls. (COPD: 434 ± 105 v/s Control: 593 ± 87).	COPD patients had lower exercise capacity than healthy controls.
Roig et a. 2011	COPD: 21 Control: 21	Statistically significant differences were observed in individuals with COPD on 6MWT relative to controls. (<0.001).	Compared with healthy controls, people with moderate to severe COPD show marked deficits in mobility.
Ilgin et al. 2011	COPD: 511 Control: 113	Statistically significant differences were observed in COPD patients on 6MWT relative to controls. (COPD: 397.5 ± 63.9v/s Control: 554.9 ± 65).	Walking distance and walking speed decrease with increasing COPD severity
Beauchamp et al. 2012	COPD: 37 Control: 20	COPD subjects demonstrated lower balance on each component of the total BESTest (70.7% ±11.3), with marked deficits, compared to controls (91.9% ±4.0); differences were also observed on the BBS (48.7±5.7 points) compared to healthy subjects (54.9±1.8 points).	COPD patients show reductions in subcomponents of postural control, shorter reaction time to perturbations and delayed balance recovery compared to healthy subjects of the same age.
Annegarn et al. 2012	COPD: 79 Control: 24	Statistically significant differences were observed in COPD patients on the 6MWT relative to controls. (COPD: 494 ± 96 v/s Control: 672 ± 85.	COPD patients have an altered walking pattern during 6MWT compared to healthy subjects. These differences in walking pattern partially explain the lower 6MWD in patients with COPD.
Chien et al. 2013	COPD: 40 (Moderate / 48 severe) Control: 14	Significant differences were observed in meters run on the 6MWT between COPD patients and controls (Moderate COPD: 405 ± 14, Severe COPD: 330 ± 15 v/s control: 496 ± 27).	There are differences in 6MWT performance between COPD patients and healthy controls, in favor of controls. The greater the severity, the worse the performance.

Amorin et. al. 2014	COPD 40 Control: 40	Statistically significant differences were observed in COPD patients in the 6MWT relative to controls, being lower in COPD patients (COPD: 483 ± 70 v/s Control: 565 ± 78).	COPD patients had significantly lower exercise capacity.
Mkacher et al. 2014	COPD: 16 Control: 18	Significant differences were observed between the two groups before starting the pulmonary rehabilitation program: TUG (COPD: 15.7 ± 0.74 s vs Control 12.47 ± 0.80 s), SLS (COPD: 24.5 ± 2.28 s vs Control: 35.25 ± 7.24), BSS (COPD: 46.17 ± 1.79 vs Control: 51.31 ± 1.4).	A significant difference was observed between the two groups in all measures of balance at baseline.
Crisan et al. 2015	COPD: 29 Control: 17	The presence of COPD was associated with a significant worsening of balance tests: BBS (55 control, vs. 53 COPD), TUG (8.6 control vs. 12.3 COPD), SLS (31.1 control vs. 17.7 COPD).	According to the results, patients with moderate-severe stage COPD have a high risk of falls compared to healthy controls.
Oliveira et al. 2015	COPD: 40 Control: 25	Compared to healthy older adults, patients with COPD had a higher FOF with a mean difference of 4.8 (95% CI: 1.5 - 8.0) on the Falls Efficacy Scalee - International score. Individuals with COPD had impaired balance in the (BBS: 51.6 ± 4.2) compared to healthy subjects (BBS: 55.2 ± 1.4), p < 0.001.	Patients with COPD (moderate to severe) have an increased risk of falls and higher Falls Efficacy Scalee - International scores compared to controls. These results may guide future therapeutic strategies aimed at reducing the risk of falls.
Tudorache et al. 2015	COPD: 22 Control: 20	The presence and severity of COPD were associated with a significant decrease in 6MWD (P,0.001), SLS (P,0.001) and BBS (P,0.001) scores.	Patients with COPD have an increased history of falls, impaired balance and muscle weakness in the lower extremities.
Iwakura et al. 2016	COPD: 22 Control: 13	COPD patients demonstrated shorter SLS times (mean difference: -16.0 seconds, P=0.033) than healthy controls.	Impairments in balance and reductions in physical activity were observed in the COPD group. Deficits in balance are independently associated with physical inactivity.
Voica et al. 2016	COPD: 27 Control 17	The results point to a negative impact of the presence of COPD on all balance tests compared to controls. 6MWD (<0.001), BBS (<0.001), TUG (<0.001), SLS (<0.001).	COPD patients have greater balance impairment than their healthy controls. In addition, we observed that the Bronchitic phenotype of COPD is more likely to have falls compared to the emphysematous phenotype.
Albarrati et al. 2016	COPD: 520 Control: 150	COPD patients had a higher TUG (mean ± standard deviation: 11.5 ± 4 s) than controls (8.3 ± 1.3 s, p = 0.001); distance in the 6MWD was shorter in COPD patients (335 ± 125 m) versus control subjects (502 ± 85 m); p = 0.001.	The study confirmed that TUG, a simple and valid measure of physical performance, was higher in COPD than in controls.
Alhaddad et al. 2016	COPD: 119 Control: 58	The mean ± SD TUG time was longer in COPD patients (11.9 ± 3.7 s) versus controls (9.5 ± 1.8 s; P < 0.001). The difference remained significant when adjusted for age and sex. While 6MWD time was shorter in COPD patients (291 ± 97 m) compared to healthy controls (380 ± 76 m; P < 0.001).	TUG test time was longer in those with more comorbidities and demonstrated a relationship with recorded falls. The TUG test is a simple and reliable test to detect general functional performance in patients with COPD and may be useful in predicting the risk of falls.
Decastro et al. 2016	COPD: 47 Control: 25	17% of the COPD group obtained a unipodal support test result < 30 s, whereas 100% of the subjects in the control group completed the test. The COPD group had worse functional balance compared to the control group (TUG test: 8.5 ± 1.3 s vs. 10.3 ± 1.8 s, respectively, P < 0.001). Women	Individuals with COPD had worse static balance compared to healthy controls.

		with COPD performed worse on the TUG compared to men.	
Oliveira et al. 2017	COPD: 26 Control: 25	COPD patients had significantly reduced scores on the BBS compared to healthy controls (51.7 ± 4.4 vs. 55.2 ± 1.4).	COPD patients had impaired functional balance performance using the BBS compared to controls.
Porto et al. 2017	COPD: 93 Control: 39	There was no significant difference in static body balance between the COPD and healthy groups (P = 0.79). Dynamic balance (BBS) was significantly lower in COPD patients (50 ± 0.69) with respect to healthy persons (54 ± 0.52). Impairment of this dynamic balance was greater in COPD than in healthy persons (35% vs. 5%). The assessed risk of falls was also higher in COPD (100%) than in healthy subjects.	Impaired dynamic balance measured with BBS was more frequent in individuals with COPD compared to healthy subjects. While in static balance there was no difference between COPD and healthy controls.
Iwakura et al. 2019	COPD: 34 Control: 16	Gait speed, step length, cadence, and acceleration magnitude were significantly lower in the COPD group than in the control group. Gait speed and stride length were significant predictors of decreased 6MWD.	The combination of gait speed, stride length and stride time is accurate in detecting poor 6MWD, which can clinically help assess the need to increase exercise capacity, muscle strength and physical activity in the routine of COPD patients.
Serrão et.al, 2020	COPD: 54 Control: 20	Statistically significant differences were observed in COPD patients on the 6MWT relative to controls. (COPD: 352 ± 122 v/s Control: 536 ± 80).	COPD patients had lower exercise capacity than healthy controls.
Gore et al.2021	COPD: 382 Control: 382	Older adults with COPD had a greater history of falls (44.9%) compared to healthy controls (34%), P= 0.003. There was no difference in tandem stance time (COPD: 24.63 ± 18.15 vs Control 26.50 ± 18.05), P = 0.45.	In older adults with COPD, cognitive function was associated with balance. Screening for cognitive function should be part of the management of falls in this population.
Jirange et al. 2021	COPD: 42 Control: 45	Individuals with COPD had decreased dynamic balance assessed by TUG (COPD: 13 (12-16) seconds vs. 12 (10-12) seconds, p < 0.01.	Individuals with COPD have reduced static balance, dynamic balance and a greater fear of falling compared to individuals without COPD.
Ozsoy et al. 2021	COPD: 35 Control: 27	During the single task the COPD patient group had a TUG of 8.85 ± 2.05 seconds, while the healthy control group had a time of 7.36 ± 1.69 seconds.	In individuals with COPD, cognitive performance impairments are more pronounced than motor performance defects during the dual task.
Schons et al 2021.	COPD: 20 Control: 16	COPD patients performed worse on most functional tests compared to the control group: TUG (COPD: 10.3 ±1.3 seconds vs. Control: 8.9 ± 12 seconds) and 6MWT (COPD: 387.6 ± 87.6 meters vs. Control: 579.8 ± 65.9 meters).	We suggest that interventions targeting rapid strength may bring improvements in functional mobility and fitness, as well as reduce fall episodes in patients with COPD.

Abbreviations: 6MWT, 6-minute walk test; BMI, body mass index; COPD, chronic obstructive pulmonary disease; BBS, Berg Balance Scale; BESTest, Balance Evaluation Systems Test; FOF, Fear of Falling; F, female; FEV_1, Forced expiratory volume in the first second; M, male; NR, not reported; TUG, Timed Up and Go; SLS, single leg stance.