

## **Supplementary Information**

Supplemental Table 1 - Characteristics of persons for selected variables in quartiles at study entry

Supplemental Table 2 - Univariable associations with chest illness

Supplemental Table 3 - Association of vitamin D in categories and quartiles with chest illness with selected characteristics added to models with age (continuous), sex, smoking history, COPD history, and past chest illness

Supplemental Table 4 - Association of injury duration with chest illness, adjusted for age, sex, smoking history, COPD history, past illness, vitamin D in categories

Supplemental Table 5 - Association of SCI with chest illness, adjusting age, sex, smoking history, COPD history, and vitamin D in categories

**Supplemental Table 1. Characteristics of persons (n=253) for selected variables in quartiles at study entry**

	Total Persons n=253	Persons With Chest Illnesses n=60	Number of Illnesses	Persons Without Chest Illnesses n=193
<b>Age in quartiles (years)†</b>				
<44.1	63 (25)	12 (20)	16	51 (26)
≥44.1 - <53.7	64 (25)	17 (28)	27	47 (24)
≥53.7 - <63.3	63 (25)	15 (25)	31	48 (25)
≥63.3	63 (25)	16 (27)	32	47 (24)
<b>Injury duration in quartiles (years)†</b>				
<6.0	64 (25)	14 (23)	15	50 (26)
≥6.0 - ≤13.8	63 (25)	15 (25)	36	48 (25)
>13.8 - <25.2	63 (25)	16 (27)	29	47 (24)
≥27.2	63 (25)	15 (25)	26	48 (25)
<b>BMI in quartiles (kg/m<sup>2</sup>)†</b>				
≤22.8	64 (25)	15 (25)	20	51 (26)
>22.8 - ≤26.8	63 (25)	29 (48)	26	46 (24)
>26.8 - <30.6	63 (25)	16 (27)	32	48 (25)
≥30.6	63 (25)	26 (13)	28	48 (25)
<b>%-Trunk fat in quartiles†</b>				
≤33	66 (26)	12 (20)	21	54 (28)
>33 - ≤41	66 (26)	14 (23)	21	52 (27)
>41 - ≤48	66 (26)	23 (38)	52	43 (22)
>48	55 (22)	11 (18)	12	44 (23)
<b>%-Total body fat in quartiles</b>				
<31	63 (25)	11 (18)	20	52 (27)
≥31 - <38	63 (25)	13 (22)	24	50 (26)
≥38 - <43	63 (25)	20 (33)	30	43 (22)
≥43	64 (25)	16 (27)	32	48 (25)
	<i>n=244</i>	<i>n=58</i>		<i>n=186</i>
<b>FEV<sub>1</sub>/FVC in quartiles †</b>				
<0.71	61 (25)	18 (21)	31	43 (23)
≥0.71 - <0.77	61 (25)	13 (22)	37	48 (26)
≥0.77 - <0.84	61 (25)	17 (29)	23	44 (24)
≥0.84	61 (25)	10 (17)	13	51 (27)
<b>%-Predicted FEV<sub>1</sub> in quartiles†</b>				
≤65.3	61 (25)	21 (36)	31	40 (22)
>65.3 - ≤81.6	61 (25)	17 (29)	39	44 (24)
>81.6 - ≤91.8	61 (25)	8 (14)	10	53 (28)
>91.8	61 (25)	12 (21)	24	49 (26)
<b>%-Predicted FVC, in quartiles†</b>				
≤68.2	61 (25)	19 (33)	29	42 (23)
68.2 - ≤81.0	61 (25)	15 (26)	33	46 (25)
>81.0 - ≤91.4	61 (25)	11 (19)	19	50 (27)
>91.4	61 (25)	13 (22)	23	48 (26)

†n (%)

Supplemental Table 2. Univariable associations with chest illness (n=253)

Covariate	$\beta$ (SE)	Relative Risk	95% Confidence Limits	P-Value
<b>Age (yrs)</b>	0.019 (0.010)	1.02	1.00, 1.04	0.05
<b>Age in quartiles (yrs)</b>				
$\geq 63.3$	0.545 (0.422)	1.72	0.75, 3.94	0.20
$\geq 53.7$ - $< 63.3$	0.719 (0.379)	2.05	0.98, 4.32	0.06
$\geq 44.1$ - $< 53.7$	0.207 (0.344)	1.23	0.63, 2.41	0.55
$< 44.1$	Ref			
<b>Injury duration (yrs)</b>	0.009 (0.012)	1.01	0.99, 1.03	0.44
<b>Injury duration in quartiles (yrs)</b>				
$\geq 27.2$	0.329 (0.398)	1.39	0.64, 3.03	0.41
$> 13.8$ - $< 25.2$	0.688 (0.377)	1.99	0.95, 4.16	0.07
$\geq 6.0$ - $\leq 13.8$	0.173 (0.381)	1.19	0.56, 2.51	0.65
$< 6.0$	Ref			
<b>FEV<sub>1</sub>/FVC (n=244)</b>	-3.785 (0.918)	0.68 (per SD=0.10)	0.56, 0.81	$< 0.001$
$\leq 0.70$ (ref: $> 0.70$ )	0.081 (0.287)	1.08	0.62, 1.90	0.78
<b>FEV<sub>1</sub>/FVC in quartiles (n=244)</b>				
$< 0.71$	1.301 (0.517)	3.67	1.33, 10.12	0.01
$\geq 0.71$ - $< 0.77$	1.728 (0.534)	5.63	1.98, 16.03	0.001
$\geq 0.77$ - $< 0.84$	0.781 (0.603)	2.18	0.67, 7.12	0.20
$\geq 0.84$	Ref			
<b>%-Predicted FEV<sub>1</sub> (n=244)</b>	-0.012 (0.008)	0.79 (per SD=20.4)	0.57, 1.08	0.14
<b>%-Predicted FEV<sub>1</sub> in quartiles (n=244)</b>				
$\leq 65.3$	0.525 (0.419)	1.69	0.74, 3.84	0.21
$> 65.3$ - $\leq 81.6$	0.793 (0.445)	2.21	0.92, 5.29	0.07
$> 81.6$ - $\leq 91.8$	0.018 (0.471)	1.02	0.40, 2.56	0.97
$> 91.8$	Ref			
<b>%-Predicted FVC (n=244)</b>	-0.004 (0.009)	0.92 (per SD=19.1)	0.65, 1.30	0.63
<b>%-Predicted FVC in quartiles (n=244)</b>				
$\leq 68.2$	0.242 (0.383)	1.27	0.60, 2.70	0.53
$68.2$ - $\leq 81.0$	0.493 (0.426)	1.64	0.71, 3.78	0.25
$> 81.0$ - $\leq 91.4$	0.055 (0.403)	1.06	0.48, 2.33	0.89
$> 91.4$	Ref			
<b>Sex</b>				
Female (ref: Male)	0.737 (0.388)	2.09	0.98, 4.47	0.06
<b>Race</b>				
Non-White (ref: White)	-0.080 (0.435)	0.92	0.39, 2.17	0.86
<b>Pulmonary Medicine Use (n=244)</b>				
Current Use (ref: Not currently taking)	0.600 (0.533)	1.82	0.64, 5.18	0.26
<b>Vitamin D (ng/ml)</b>	-0.006 (0.012)	0.99	0.97, 1.02	0.63
<b>Vitamin D (per 20 ng/ml)</b>	-0.112 (0.234)	0.89	0.57, 1.41	0.63
<b>Vitamin D Categories (ng/ml)</b>				
$< 20$ (deficient)	-0.019 (0.374)	0.98	0.47, 2.04	0.96
$\geq 20$ - $< 30$ (insufficient)	-0.148 (0.334)	0.86	0.45, 1.66	0.66
$\geq 30$ (normal)	Ref			
<b>Vitamin D in quartiles (ng/ml)</b>				
$< 19.9$	0.007 (0.370)	1.01	0.49, 2.08	0.99
$\geq 19.9$ - $\leq 24.0$	-0.089 (0.390)	0.91	0.43, 1.97	0.82

>24.0 - ≤29.5	-0.172 (0.408)	0.84	0.38, 1.87	0.67
>29.5	Ref			
<b>%-Trunk fat,</b>	0.010 (0.011)	1.01	0.99, 1.03	0.36
<b>%-Trunk fat, in quartiles</b>				
≤33	Ref			
>33 - ≤41	0.190 (0.365)	1.21	0.59, 2.47	0.60
>41 - ≤48	0.560 (0.386)	1.75	0.82, 3.73	0.15
>48	0.079 (0.400)	1.08	0.49, 2.37	0.84
<b>%-Total body fat,</b>	0.017 (0.017)	1.02	0.98, 1.05	0.33
<b>%-Total body fat, in quartiles</b>				
<31	Ref			
≥31 - <38	0.340 (0.407)	1.40	0.63, 3.12	0.40
≥38 - <43	0.452 (0.386)	1.57	0.74, 3.35	0.24
≥43	0.470 (0.473)	1.60	0.63, 4.04	0.32
<b>BMI (kg/m<sup>2</sup>)</b>	0.017 (0.018)	1.02	0.98, 1.05	0.34
<b>BMI in categories (kg/m<sup>2</sup>)</b>				
>30 (obese)	0.430 (0.339)	1.54	0.79, 2.99	0.20
25-30 (overweight)	0.445 (0.340)	1.56	0.80, 3.04	0.19
< 25 (normal or underweight)	Ref			
<b>BMI in quartiles (kg/m<sup>2</sup>)</b>				
≤22.8	Ref			
>22.8 - ≤26.8	0.548 (0.401)	1.73	0.79, 3.80	0.17
>26.8 - <30.6	0.341 (0.385)	1.41	0.66, 2.99	0.38
≥30.6	0.219 (0.403)	1.24	0.57, 2.74	0.59
<b>Cigarette Smoking</b>				
current	0.262 (0.450)	1.30	0.54, 3.14	0.56
former	0.307 (0.332)	1.36	0.71, 2.60	0.35
never	Ref			
<b>Season</b>				
Summer	0.084 (0.235)	1.09	0.69, 1.72	0.72
Fall	-0.16 (0.255)	0.85	-0.66, 0.33	0.52
Winter	0.300 (0.313)	1.35	0.73, 2.49	0.34
Spring	Ref			
<b>Medical conditions (ref: no)</b>				
COPD	0.609 (0.439)	1.84	0.78, 4.34	0.17
Asthma	0.278 (0.340)	1.32	0.68, 2.57	0.41
Obstructive Lung Disease (asthma or COPD)	0.498 (0.328)	1.65	0.87, 3.13	0.13
Diabetes	-0.485 (0.331)	0.62	0.32, 1.18	0.14
Heart Disease	0.391 (0.376)	1.48	0.71, 3.09	0.30
Hypertension	-0.451 (0.420)	0.64	0.28, 1.45	0.28
Chronic Cough	0.002 (0.486)	1.00	0.39, 2.59	1.00
Chronic Phlegm	0.084 (0.318)	1.09	0.58, 2.03	0.79
Any wheeze	0.020 (0.261)	1.02	0.61, 1.70	0.94
Persistent wheeze	0.061 (0.326)	1.06	0.56, 2.01	0.85
Pneumonia/bronchitis after SCI	1.258 (0.322)	3.52	1.87, 6.61	<0.001
Chest illness in last year	1.343 (0.343)	3.83	1.96, 7.50	<0.001
Chest illness in last 3 years	1.182 (0.318)	3.26	1.75, 6.09	<0.001
Pneumonia/bronchitis after SCI				

Yes and chest illness in last 3 years	2.012 (0.359)	7.48	3.70, 15.11	<0.001
Yes and no chest illness in last 3 years	1.112 (0.427)	3.04	1.32, 7.02	0.01
No and chest illness in last 3 years	1.065 (0.585)	2.90	0.92, 9.12	0.07
No and no chest illness in last 3 years	Ref			
<b>SCI classification (ref: All AIS D)</b>				
4 categories				
Motor complete cervical & AIS C	-0.305 (0.355)	0.74	0.37, 1.48	0.39
Motor complete high thoracic & AIS C	-1.091 (0.437)	0.34	0.14, 0.79	0.01
All other motor complete & AIS C	-1.009 (0.446)	0.36	0.15, 0.87	0.02
3 categories				
Motor complete cervical & AIS C	-0.305 (0.355)	0.74	0.37, 1.48	0.39
Combined thoracic/all other motor com	-1.041 (0.367)	0.35	0.17, 0.72	0.005
4 categories - AIS C as a separate group				
Motor complete cervical	-0.125 (0.365)	0.88	0.43, 1.80	0.73
Combined thoracic/all other motor com	-0.999 (0.380)	0.37	0.17, 0.78	0.01
All AIS C	-1.433 (0.515)	0.24	0.09, 0.65	0.01

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545 repeated measures, other than %-trunk and body fat, with 542 repeated measures

**Supplemental Table 3. Association of vitamin D in categories and quartiles with chest illness with selected characteristics added to models with age (continuous), sex, smoking history, COPD history, and past chest illness (n=253)**

Characteristic	RR	95% C.I.	P-Value	Characteristic	RR	95% C.I.	P-Value
<b>Age in quartiles (instead of continuous)</b>				<b>Injury duration in quartiles</b>			
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<20 (deficient)	1.31	0.72, 2.37	0.37	<20 (deficient)	1.42	0.76, 2.66	0.27
≥20 - <30 (insufficient)	0.91	0.51, 1.62	0.75	≥20 - <30 (insufficient)	0.88	0.48, 1.60	0.68
≥30 (sufficient)	Ref	Ref	Ref	≥30 (sufficient)	Ref	Ref	Ref
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<19.9	1.36	0.76, 2.45	0.30	<19.9	1.46	0.80, 2.67	0.22
≥19.9 - ≤24.0	1.14	0.57, 2.28	0.72	≥19.9 - ≤24.0	1.04	0.51, 2.14	0.90
>24.0 - ≤29.5	0.77	0.36, 1.65	0.51	>24.0 - ≤29.5	0.75	0.34, 1.64	0.47
>29.5	Ref	Ref	Ref	>29.5	Ref	Ref	Ref
<b>Injury duration, continuous</b>				<b>SCI in 3 categories</b>			
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<20 (deficient)	1.35	0.74, 2.45	0.33	<20 (deficient)	1.33	0.70, 2.54	0.38
≥20 - <30 (insufficient)	0.90	0.50, 1.63	0.73	≥20 - <30 (insufficient)	0.92	0.52, 1.63	0.78
≥30 (sufficient)	Ref	Ref	Ref	≥30 (sufficient)	ref	ref	ref
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<19.9	1.40	0.78, 2.51	0.26	<19.9	1.37	0.72, 2.59	0.33
≥19.9 - ≤24.0	1.11	0.55, 2.24	0.77	≥19.9 - ≤24.0	1.12	0.56, 2.25	0.74
>24.0 - ≤29.5	0.76	0.35, 1.66	0.49	>24.0 - ≤29.5	0.77	0.37, 1.59	0.47
>29.5	Ref	Ref	Ref	>29.5	Ref	Ref	Ref
<b>SCI in 4 categories</b>				<b>SCI in 4 categories, AIS C as a separate group</b>			
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<20 (deficient)	1.33	0.70, 2.55	0.39	<20 (deficient)	1.33	0.70, 2.51	0.38
≥20 - <30 (insufficient)	0.92	0.52, 1.63	0.78	≥20 - <30 (insufficient)	0.88	0.50, 1.56	0.67
≥30 (sufficient)	Ref	Ref	Ref	≥30 (sufficient)	Ref	Ref	Ref
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<19.9	1.37	0.72, 2.60	0.34	<19.9	1.37	0.73, 2.57	0.33
≥19.9 - ≤24.0	1.12	0.57, 2.24	0.74	≥19.9 - ≤24.0	1.10	0.55, 2.19	0.80
>24.0 - ≤29.5	0.77	0.37, 1.59	0.47	>24.0 - ≤29.5	0.72	0.35, 1.47	0.37
>29.5	Ref	Ref	Ref	>29.5	Ref	Ref	Ref
<b>Any wheeze</b>				<b>Persistent wheeze</b>			
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<20 (deficient)	1.33	0.72, 2.42	0.36	<20 (deficient)	1.36	0.74, 2.50	0.32
≥20 - <30 (insufficient)	0.90	0.51, 1.61	0.73	≥20 - <30 (insufficient)	0.90	0.51, 1.59	0.71
≥30 (sufficient)	Ref	Ref	Ref	≥30 (sufficient)	Ref	Ref	Ref
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<19.9	1.37	0.76, 2.47	0.29	<19.9	1.41	0.78, 2.55	0.26
≥19.9 - ≤24.0	1.13	0.56, 2.27	0.74	≥19.9 - ≤24.0	1.10	0.55, 2.22	0.78
>24.0 - ≤29.5	0.75	0.35, 1.59	0.45	>24.0 - ≤29.5	0.76	0.36, 1.61	0.48
>29.5	Ref	Ref	Ref	>29.5	Ref	Ref	Ref
<b>Chronic cough</b>				<b>Chronic phlegm</b>			
Vitamin D (ng/ml)				Vitamin D (ng/ml)			
<20 (deficient)	1.38	0.76, 2.53	0.29	<20 (deficient)	1.35	0.74, 2.46	0.33
≥20 - <30 (insufficient)	0.91	0.51, 1.61	0.74	≥20 - <30 (insufficient)	0.90	0.51, 1.60	0.72
≥30 (sufficient)	Ref	Ref	Ref	≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.43	0.79, 2.60	0.23
≥19.9 - <24.0	1.11	0.55, 2.25	0.77
>24.0 - <29.5	0.76	0.35, 1.68	0.50
>29.5	Ref	Ref	Ref

**Heart disease**

Vitamin D (ng/ml)			
<20 (deficient)	1.34	0.74, 2.44	0.34
≥20 - <30 (insufficient)	0.91	0.50, 1.65	0.75
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.39	0.77, 2.50	0.27
≥19.9 - <24.0	1.11	0.54, 2.28	0.79
>24.0 - <29.5	0.78	0.36, 1.67	0.52
>29.5	Ref	Ref	Ref

**BMI in categories**

Vitamin D (ng/ml)			
<20 (deficient)	1.27	0.67, 2.41	0.46
≥20 - <30 (insufficient)	0.89	0.50, 1.60	0.71
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.31	0.71, 2.44	0.39
≥19.9 - <24.0	1.07	0.54, 2.14	0.85
>24.0 - <29.5	0.77	0.36, 1.66	0.51
>29.5	Ref	Ref	Ref

**%-Trunk fat**

Vitamin D (ng/ml)			
<20 (deficient)	1.34	0.72, 2.52	0.36
≥20 - <30 (insufficient)	0.89	0.50, 1.59	0.70
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.40	0.76, 2.58	0.28
≥19.9 - <24.0	1.10	0.55, 2.23	0.78
>24.0 - <29.5	0.76	0.36, 1.60	0.47
>29.5	Ref	Ref	Ref

**%-Total Fat**

Vitamin D (ng/ml)			
<20 (deficient)	1.35	0.73, 2.51	0.34
≥20 - <30 (insufficient)	0.90	0.50, 1.60	0.71
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.41	0.77, 2.57	0.26
≥19.9 - <24.0	1.11	0.55, 2.25	0.77
>24.0 - <29.5	0.76	0.36, 1.60	0.47
>29.5	Ref	Ref	Ref

**Asthma**

Vitamin D (ng/ml)			
<20 (deficient)	1.41	0.79, 2.52	0.25
≥20 - <30 (insufficient)	0.91	0.52, 1.61	0.75
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.40	0.78, 2.52	0.26
≥19.9 - <24.0	1.10	0.55, 2.22	0.78
>24.0 - <29.5	0.76	0.36, 1.62	0.48
>29.5	Ref	Ref	Ref

**BMI, continuous**

Vitamin D (ng/ml)			
<20 (deficient)	1.35	0.73, 2.52	0.34
≥20 - <30 (insufficient)	0.90	0.50, 1.60	0.72
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.41	0.77, 2.57	0.27
≥19.9 - <24.0	1.11	0.55, 2.24	0.77
>24.0 - <29.5	0.76	0.36, 1.61	0.48
>29.5	Ref	Ref	Ref

**BMI in quartiles**

Vitamin D (ng/ml)			
<20 (deficient)	1.38	0.74, 2.57	0.32
≥20 - <30 (insufficient)	0.93	0.52, 1.67	0.80
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.43	0.78, 2.63	0.25
≥19.9 - <24.0	1.15	0.57, 2.30	0.70
>24.0 - <29.5	0.79	0.37, 1.70	0.55
>29.5	Ref	Ref	Ref

**%-Trunk fat in quartiles**

Vitamin D (ng/ml)			
<20 (deficient)	1.34	0.69, 2.59	0.39
≥20 - <30 (insufficient)	0.86	0.47, 1.56	0.61
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.40	0.74, 2.65	0.31
≥19.9 - <24.0	1.08	0.53, 2.20	0.82
>24.0 - <29.5	0.70	0.33, 1.50	0.36
>29.5	Ref	Ref	Ref

**%-Total fat in quartiles**

Vitamin D (ng/ml)			
<20 (deficient)	1.36	0.71, 2.58	0.35
≥20 - <30 (insufficient)	0.87	0.49, 1.54	0.63
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.41	0.76, 2.63	0.28
≥19.9 - <24.0	1.07	0.52, 2.17	0.86
>24.0 - <29.5	0.74	0.35, 1.53	0.41
>29.5	Ref	Ref	Ref

**Obstructive lung disease (in place of COPD)**

Vitamin D (ng/ml)			
<20 (deficient)	1.35	0.74, 2.48	0.33
≥20 - <30 (insufficient)	0.90	0.51, 1.59	0.71
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.46	0.83, 2.58	0.19
≥19.9 - ≤24.0	1.13	0.56, 2.26	0.73
>24.0 - ≤29.5	0.76	0.37, 1.59	0.47
>29.5	Ref	Ref	Ref

Vitamin D per 20 ng/ml	0.69	0.43, 1.10	0.12
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**Pulmonary medicine use**

Vitamin D (ng/ml)			
<20 (deficient)	1.36	0.74, 2.50	0.32
≥20 - <30 (insufficient)	0.90	0.50, 1.61	0.71
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.41	0.78, 2.55	0.25
≥19.9 - ≤24.0	1.10	0.54, 2.26	0.79
>24.0 - ≤29.5	0.75	0.35, 1.61	0.46
>29.5	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.40	0.77, 2.53	0.27
≥19.9 - ≤24.0	1.10	0.54, 2.23	0.80
>24.0 - ≤29.5	0.76	0.36, 1.58	0.46
>29.5	Ref	Ref	Ref

Vitamin D per 20 ng/ml	0.71	0.44, 1.14	0.16
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**Season**

Vitamin D (ng/ml)			
<20 (deficient)	1.34	0.73, 2.44	0.35
≥20 - <30 (insufficient)	0.90	0.51, 1.60	0.72
≥30 (sufficient)	Ref	Ref	Ref

Vitamin D (ng/ml)			
<19.9	1.38	0.76, 2.50	0.29
≥19.9 - ≤24.0	1.07	0.53, 2.17	0.84
>24.0 - ≤29.5	0.78	0.37, 1.64	0.51
>29.5	Ref	Ref	Ref



**Supplemental Table 4. Association of injury duration with chest illness, adjusted for age, sex, smoking history, COPD history, past illness, vitamin D in categories (n=253)**

<b>Characteristic</b>	<b>Relative Risk</b>	<b>95% C.I.</b>	<b>P-Value</b>
Injury duration (yrs)	1.00	0.98, 1.03	0.79
Injury duration in quartiles (yrs)			
$\geq 27.2$	1.01	0.45, 2.29	0.97
$> 13.8 - < 25.2$	1.62	0.78, 3.37	0.20
$\geq 6.0 - \leq 13.8$	0.96	0.45, 2.04	0.91
$< 6.0$	Ref	Ref	Ref

**Supplemental Table 5. Association of SCI with chest illness, adjusting age, sex, smoking history, COPD history, and vitamin D in categories (n=253)**

<b>Characteristic</b>	<b>Relative Risk</b>	<b>95% C.I.</b>	<b>P-Value</b>
<b>SCI in 3 categories</b>			
SCI classification			
Motor complete cervical & AIS C	0.58	0.28, 1.22	0.15
Motor high thoracic/all other motor complete & AIS C	0.48	0.24, 0.99	0.05
All AIS D	Ref	Ref	Ref
<b>SCI in 4 categories</b>			
SCI classification			
Motor complete cervical & AIS C	0.58	0.28, 1.23	0.16
Motor complete high thoracic & AIS C	0.49	0.17, 1.38	0.18
All other motor complete & AIS C	0.48	0.21, 1.07	0.07
All AIS D	Ref	Ref	Ref
<b>SCI in 4 categories, AIS C as separate group</b>			
SCI classification			
Motor complete cervical	0.80	0.36, 1.75	0.57
Motor high thoracic/all other motor complete	0.54	0.25, 1.12	0.10
All AIS C	0.19	0.07, 0.49	<0.001
All AIS D	Ref	Ref	Ref