

**Work and health:  
Working conditions, job requirements,  
and sickness risk**

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# This paper

- analyses *the relationship between the health status of individuals and their working conditions, and their job requirements*
- First, we show some descriptive statistics of the duration of absence due to sickness, by working conditions (WC) and job requirements (JR).
- Second, we analyze the effects of WC & JR on the probability of becoming long-term sick (LTS), as well as on the probability of leaving spells of LTS.

# Risk factors for health

## *Lifting heavy objects, 10kg or more*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
Never/almost never	4087	32.32	32.32	8781	28.19	28.19
Couple of times / month	1167	9.23	41.55	2159	6.93	35.12
Couple of times / week	1444	11.42	52.97	3632	11.66	46.77
Couple of times /day	1877	14.84	67.81	4973	15.96	62.74
Several times each day	4056	32.08	99.89	11575	37.15	99.89
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

# Risk factors for health

## *Repeated and monotone movements*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
<b>Yes, always</b>	4432	35.05	35.05	14485	46.49	46.49
<b>Yes, periodically</b>	3280	25.94	60.99	7917	25.41	71.91
<b>No</b>	4914	38.86	99.85	8664	27.81	99.72
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

# Risk factors for health

## *Twisting and bending*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
Most of the time	6402	50.63	50.63	19995	64.18	64.18
Quite often	1213	9.59	60.22	2876	9.23	73.41
Sometimes	297	2.35	62.57	721	2.31	75.73
Not so often	709	5.61	68.18	613	1.97	77.69
Almost never / Never	4013	31.74	99.91	6910	22.18	99.87
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

# Risk factors for health

*The job requires doing the same thing(s) repeatedly*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
Often	6737	53.28	53.28	20118	64.58	64.58
Sometimes	3831	30.30	83.57	7114	22.83	87.41
Rarely	1203	9.51	93.09	2907	9.33	96.74
Almost never / Never	863	6.82	99.91	990	3.18	99.92
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

# Risk factors for health

## *The job requires working hard*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
Often	3640	28.79	28.79	10362	33.26	33.26
Sometimes	5753	45.50	74.28	12266	39.37	72.63
Rarely	2182	17.26	91.54	5783	18.56	91.20
Almost never / Never	1059	8.37	99.91	2680	8.60	99.80
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

# Risk factors for health at work place

## *Tobacco smoke*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
<b>Most of the time</b>	1209	9.56	9.56	4151	13.32	13.32
<b>Quite often</b>	532	4.21	13.77	1834	5.89	19.21
<b>Sometimes</b>	1316	10.41	24.18	3431	11.01	30.22
<b>Not so often</b>	1160	9.17	33.35	3041	9.76	39.99
<b>Almost never / Never</b>	8412	66.52	99.87	18673	59.94	99.92
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	



# Risk factors for health at work place

## *Gas/chemicals/colorants*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
<b>Most of the time</b>	1571	12.42	12.42	4764	15.29	15.29
<b>Quite often</b>	711	5.62	18.05	1894	6.08	21.37
<b>Sometimes</b>	1003	7.93	25.98	2915	9.36	30.73
<b>Not so often</b>	1111	8.79	34.76	2185	7.01	37.74
<b>Almost never / Never</b>	8233	65.11	99.87	19350	62.11	99.85
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

# Risk factors for health at work place

## *Dust*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
<b>Most of the time</b>	2045	16.17	16.17	6941	22.28	22.28
<b>Quite often</b>	1193	9.43	25.61	3415	10.96	33.24
<b>Sometimes</b>	1624	12.84	38.45	3924	12.60	45.84
<b>Not so often</b>	1488	11.77	50.22	3033	9.74	55.57
<b>Almost never / Never</b>	6270	49.58	99.80	13810	44.33	99.90
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

# Risk factors for health at work place

## *Other*

	Insured Population			Long-term Sick Insured Population		
	n	%	C%	n	%	C%
<b>Most of the time</b>	933	7.38	7.38	2971	9.54	9.54
<b>Quite often</b>	425	3.36	10.74	1134	3.64	13.18
<b>Sometimes</b>	500	3.95	14.69	1340	4.30	17.48
<b>Not so often</b>	320	2.53	17.22	656	2.11	19.58
<b>Almost never / Never</b>	9741	77.03	94.26	23474	75.35	94.93
All	12645	100.00		31154	100.00	
. Included	17073	25.94		43094	27.71	

## Average Duration of the sickness spells by *risk factors' magnitude* & gender

	Tobacco		Gas		Dust		Other	
	Men	Women	Men	Women	Men	Women	Men	Women
<b>Most of the time</b>	41.80	24.88	25.93	31.04	25.47	27.39	24.77	22.50
<b>Quite often</b>	26.41	22.48	18.78	21.75	19.72	16.85	23.44	12.14
<b>Sometimes</b>	27.08	16.50	25.74	15.40	20.66	14.71	13.59	11.20
<b>Not so often</b>	13.04	17.59	15.48	11.92	20.43	10.47	10.22	11.96
<b>Almost never / Never</b>	16.20	16.97	17.77	16.89	16.74	18.08	20.50	18.89

# Analysis of Maximum Likelihood Estimates

## Probability of LT- sickness

Parameter	Estimate	Standard Error	Odds Ratio
Intercept	2.2854	110.7	<i>Point Estimate</i>
<i>Lifting heavy objects, 10kg or more</i>			
Couple of times / month	-0.0802	0.2738	0.852
Couple of times / week	0.1279	0.2154	1.291
Couple of times /day	0.1122	0.2051	1.252
Several times each day	<b>0.483</b>	0.1683	2.627
<i>Movements (CG: never)</i>			
Most of the time	0.0116	0.1809	1.023
Quite often	0.1884	0.1649	1.458
<i>Tobacco smoke (CG: never)</i>			
Most of the time	<b>0.4769</b>	0.1847	2.595
Quite often	0.1068	0.2656	1.238
Sometimes	0.1202	0.1859	1.272
Not so often	<b>-0.7694</b>	0.3787	0.215
<i>Gas, colorants, chemicals (CG: never)</i>			
Most of the time	0.0366	0.2115	1.076
Quite often	0.2342	0.2510	1.597
Sometimes	0.0294	0.2142	1.061
Not so often	-0.1423	0.2614	0.752
<i>Dust (CG: never)</i>			
Most of the time	0.0016	0.1969	1.003
Quite often	<b>0.4829</b>	0.1955	2.627
Sometimes	0.0787	0.1888	1.17
<i>Working hard (CG: never)</i>			
Most of the time	<b>0.9974</b>	0.3518	7.35
Quite often	<b>0.6927</b>	0.343	3.997
Sometimes	<b>0.6429</b>	0.362	3.617
Commuting time (in minutes)	<b>0.0034</b>	0.00354	1.003
Worked hours per week	<b>-0.0054</b>	0.0121	0.995
Woman	<b>0.4748</b>	0.1412	2.584

## Analysis of Maximum Likelihood Estimates

## Proportional hazards model

	Men			Women		
	<u>Paramet</u>	SE	<u>Hazard</u>	<u>Param</u>	SE	Hazard
<i>Lifting heavy objects 10kg,&gt;</i>						
Couple of times / month	0.116	0.163	1.123	0.007	0.165	1.007
Couple of times / week	<b>-0.402</b>	0.156	0.669	0.081	0.147	1.084
Couple of times /day	0.056	0.151	1.058	0.097	0.144	1.102
Several times each day	<b>-0.338</b>	0.141	0.713	-0.004	0.131	0.996
<i>Movements (CG: never)</i>						
Most of the time	-0.091	0.145	0.913	-0.164	0.138	0.849
Quite often	-0.046	0.120	0.955	0.037	0.121	1.038
<i>Tobacco smoke (CG: never)</i>	-0.164	0.169	0.849	-0.152	0.169	0.859
<i>Gas, chemicals (CG: never)</i>	-0.184	0.160	0.832	<b>-0.378</b>	0.194	0.685
<i>Dust (CG: never)</i>	0.219	0.151	1.245	-0.143	0.161	0.867
<i>Working hard (CG: never)</i>	-0.104	0.121	0.901	-0.038	0.119	0.963
<b>No union member</b>	<b>-0.222</b>	0.115	0.801	-0.064	0.136	0.938
<b>Commuting time (minutes)</b>	0.000	0.005	1.000	0.006	0.005	1.006
<b>Worked hours per week</b>	0.000	0.001	1.000	0.000	0.001	1.000
<b>Age</b>	<b>-0.025</b>	0.004	0.976	<b>-0.015</b>	0.004	0.986

## Conclusions

Using Swedish longitudinal data on sickness absenteeism, our *preliminary* results show that both **Job Requirements & Working Conditions** are significant factors for the **probability of becoming long-term sick.**