2018 ICOED Bangkok/SK.KANG



STRATEGIC MANAGEMENT ON OCCUPATIONAL HEALTH IN WORKPLACE

KANG, Seong-Kyu Gachon University Gil Medical Center

2018-12-14

KANG, Seong-Kyu

- Prof. / Gachon University Gil Medical Center
- KOSHA Vice President/Director of OH Dept
- OSHRI Director General

US CDC/NIOSH

- Epidemic Intelligence Service(EIS) Officer
- Editor-in-Chief SH@W
 - Safety and Health at Work
- ICOH Vice President (2015-2021)
 - International Commission on Occupational Health
- Fellow of Collegium Ramazzini





Health Protection

Wellness Program

Health Promotion

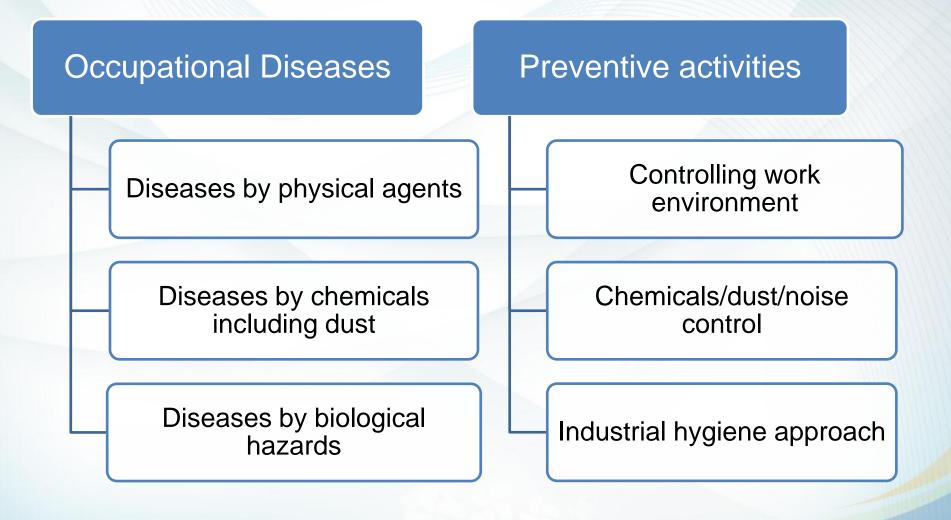




2018-12-14



Health Protection





Health Promotion

Work-related diseases

Preventive Activities

Musculo-skeletal disorders

Cerebro-Cardiovascular diseases

Stress related mental disorders

Life style diseasesHypertension, DM, hyperlipemia, obesity

Alcohol, Smoking, Nutrition, Exercise

Job related stress Reduce working hours



Wellness Program

Prevent early retirement

Burn out syndrome

Absenteeism

Occurs in the countries where the social security system is well organized.

Preventive Activities

Psychological support

Social support

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2018-12-14

Good wellness = Health promotion

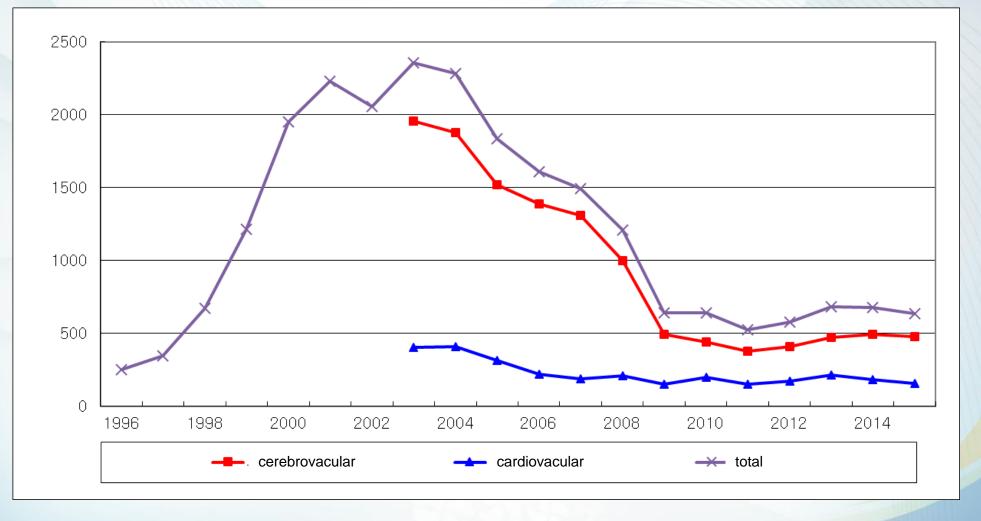


Health

Good CHealth Wellness Promotion on



Compensated Cardiovascular diseases



Kim DS and Kang SK. J Korean Med Sci v.25(Suppl); 2010 Dec 2018-12-14

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The Lancet

Cardiovascular Diseases

	Total (N)	Events (N)	Relative risk (95% CI)	p value
Published studies				
Holtermann (2010)47	4943	591 —	1.28 (0.92-1.79)	0-1495
Virtanen (2010)41	10957	750	1.50 (1.03-2.19)	0.0364
Netterstrom (2010) ⁴⁹	12103	854 -	1.40 (0.96-2.05)	0.0821
Toker (2012)48	20941	947	1.30 (1.03-1.66)	0-0301
O'Reilly (2013)8	435890	1904	1.25 (1.06-1.47)	0.0067
Unpublished studies				
WOLF-S18	441444	2016	1.23 (1.02–1.49)	0-0296
Belstress ¹⁹	453129	2089	1.21 (0.99-1.49)	0-0678
WOLF-N ²⁰	457777	2222	1.21 (1.00-1.47)	0.0476
COPSOQ-I ²²	459580	2259	1.20 (1.01-1.44)	0.0417
HeSSup ²³	475730	2327		0-0154
FPS ²⁵	520295	2548	1.19 (1.00-1.42)	0.0500
HNR ²⁶	522.069	2586	1.19 (1.02-1.39)	0.0290
DWECS27	527604	2652	1.17 (1.01-1.37)	0.0392
COPSOQ-II ²⁸	530 993	2664	1.18 (1.02–1.36)	0.0231
NWCS ²⁹	574503	2780		0.0225
Alameda ³⁰	575946	2905		0.0297
NHANES ³¹	580868	3185		0-0160
ACL ³²	582371	3329		0.0064
WLSG ³³	587795	3977		0.0329
WLSS ³⁴	590271	4234		0.0115
MIDUS ³⁵	593591	4566		0.0125
HILDA ³⁶	598470	4652		0.0159
	0-6 ∢ D	ecreased risk	1 1-5 2-5	

Figure 2: Cumulative meta-analysis of published and unpublished data of the association between long working hours and incident coronary heart disease

Estimates adjusted for age, sex, and socioeconomic status.

	Total (N)	Events (N)		Relative risk (95% CI)	p value
Published studies					
O'Reilly (2013)8	414949	215 -		1-38 (0-88-2-17)	0-1616
Unpublished studies					
WOLF-S18	420496	312 —		1.28 (0.84-1.95)	0-2540
COPSOQ-I ²²	422343	349 -		1-30 (0-87-1-93)	0-2053
HeSSup ²³	438549	427		1.46 (1.03-2.07)	0-0340
FPS ²⁵	483050	760	_	1-40 (1-05-1-88)	0-0229
DWECS27	488629	852		1-35 (1-03-1-77)	0-0314
COPSOQ-II ²⁸	492117	874	_	1-37 (1-05-1-79)	0-0197
Whitehall II ¹⁷	499782	1026		1-34 (1-05-1-71)	0-0199
Alameda ³⁰	501426	1063	∎	1-38 (1-09-1-75)	0-0077
NHANES ³¹	506 554	1180		1-42 (1-14-1-77)	0-0017
ACL ³²	508063	1259		1-37 (1-10-1-70)	0-0042
WLSG ³³	514715	1422		1-38 (1-14-1-68)	0-0012
WLSS ³⁴	518003	1512		1-33 (1-11-1-61)	0-0025
MIDUS ³⁵	520925	1535		1-33 (1-11-1-61)	0-0022
		0.6	1 1.5	2.5	
		Decreased risk	Increased risk		

Stoke

Figure 3: Cumulative meta-analysis of published and unpublished data of the association between long working hours and incident stroke

Estimates adjusted for age, sex, and socioeconomic status.

The Lancet: 2015:386:1739-1746. Kivimäki M et al. Long working hours and risk of coronary heart disease and stroke



Working hours and Cerebro-Cardiovascular diseases

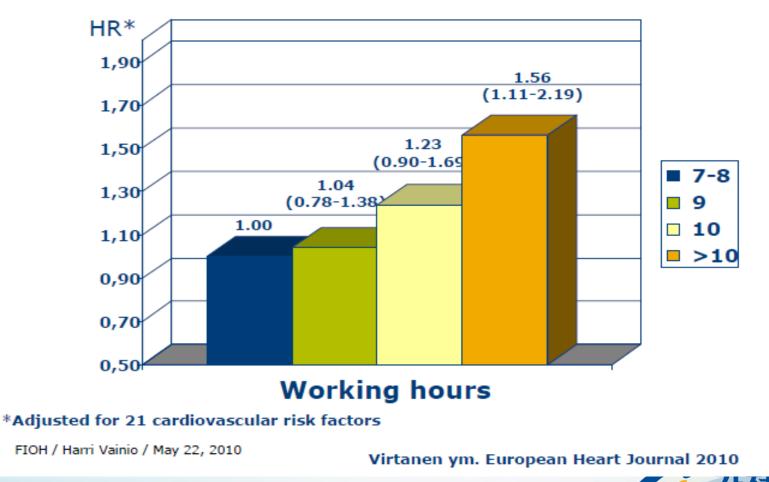
	Events (I	N) Total (N)			Relative risk (95% CI)	pvalue	Dose– response p value*
Coronary h	eart disease						
<35 h	478	16022		-	1.08 (0.92-1.27)	0-3628	
35-40 h	1393	88115	- ÷		1-00 (reference)		
41-48 h	460	21521		F	1.02 (0.91-1.15)	0-6980	1
49-54 h	281	8302	-+-		1.07 (0.92-1.24)	0-3946	0.18
≥55 h	347	11363		-	1.08 (0.94-1.23)	0-2738	
Stroke							
<35 h	243	14189	+		1.20 (0.98-1.46)	0-0783	
36-40 h	774	67102	- •		1-00 (reference)		
41-48 h	241	18768	-		1.10 (0.94-1.28)	0-2401	
49-54 h	117	7206	-		1-27 (1-03-1-56)	0-0265	<0·0001
≥55 h	132	7170			1-33 (1-11-1-61)	0-0022	ļ
		0-6 Decrease	1 d risk	1-5 ► Increased risk	2.5		

Figure 4: Association of categories of weekly working hours with incident coronary heart disease and stroke 2018-12 Estimates adjusted for age, sex, and socioeconomic status. *For trend from standard to long working hours.

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Working hours and Cardiovascular Diseases

Fatal CHD, non-fatal myocardial infarction, or definite angina pectoris



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Diagnostic Criteria for CVA

Diseases

- Cerebrovascular diseases: hemorrhage, SAH, infarction
- Cardiovascular diseases: MI, Dissecting aneurysm
- Working Condition
 - Acute stress (within 24hours)
 - Subacuteastress (for 1 week) Condition
 - Condition
 Condition
 Condition
 Condition
 Condition

Workrelated

&Long working hours = more than 60 hours per week Or more than 52 hours with combined conditions.



What to do at the workplace

Environmental control

Human factor control

Physical Environment

Manage the basic medical condition

Social Environment

Maintain the healthy status



Environmental Control

Visible risks (traditional risks)

• Accidents

• Physical, Chemical, Biological risks

Invisible risks (social, organizational risks)

- Shift work, long working hours
- Sex, age, migrant workers
- Job stress psychological support
- Organizational culture



Human Factor Control

Those who have a basic medical condition

- Control life style diseases
- Hypertension, hyperlipemia, diabetes, obesity

Those who are healthy

- Smoking (tobacco tax)
- Drinking (Reduce)
- Exercise (30 mins, 3 times a week)
- Nutrition (balanced, less salt)





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ขอบคุณครับ



Kang SK/ GUGMC