

Table 1. Health, biochemistry and work/psychosocial parameters (mean  $\pm$  SD) in truck drivers working day shifts (n=21) compared to irregular shifts (n=21).

	DAY SHIFT		IRREGULAR SHIFT		
	mean	$\pm$ SD	mean	$\pm$ SD	p-value
<b>Health parameters</b>					
BMI (kg/m <sup>2</sup> )	26.4	4.0	28.5	4.0	0.09
Waist hip ratio (WHR)	0.9	0.1	1,0	0.1	<b>0.01*</b>
Heart rate (BPM)	72.5	8.0	72.7	9.1	0.89
Systolic blood pressure (mm Hg)	131.3	14.7	138.8	13.6	0.09
Diastolic blood pressure (mm Hg)	84.6	10.5	90.1	10.8	0.11
<b>Biochemistry parameters</b>					
Glucose (mg/dl)	90.4	13.5	89.5	9.6	0.80
Triglycerides (mg/dl)	197.3	163.1	203.1	86.0	0.88
Cholesterol (mg/dl)	184.5	50.4	205.0	36.9	0.14
LDL – cholesterol (mg/dl)	108.4	36.7	125.6	32.4	0.13
HDL – cholesterol (mg/dl)	41.1	12.5	38.7	10.0	0.50
VLDL – cholesterol (mg/dl)	28.7	17.9	40.6	17.2	<b>0.04*</b>
<b>Work/psychosocial parameters</b>					
Time driving the truck (min)	497.1	106.0	384.4	100.3	< <b>0.01**</b>
Waiting truck to be filled (min)	215.4	137.6	124.6	92.7	<b>0.02*</b>
Years working at the company	4.0	4.0	5.2	5.1	0.26
Years working as driver	11.3	5.1	15.6	4.7	<b>0.01*</b>
Tired before work (VAS)	2.5	1.5	2.5	1.8	0.96
Tired after work (VAS)	4.9	2.4	6.5	2.5	<b>0.03*</b>
Truck noise (VAS)	2.6	1.4	3.2	2.6	0.37
Truck vibration (VAS)	2.7	1.7	4.4	3.1	<b>0.03*</b>
Job satisfaction score (OSI)	89.8	19.3	90.1	16.0	0.95
Job demand score	16.9	2.0	14.1	3.0	< <b>0.01**</b>
Job control score	15.2	3.1	14.0	2.0	0.12
Job social support score	17.3	3.4	18.1	3.8	0.47
Minor psychiatric disorder score (SQR-20)	2.9	2.3	2.2	2.4	0.33

\* Student t-test p < 0.05, \*\* p < 0.01; compared to day shift workers

Table 2. Average clock time (mean decimal h  $\pm$  SD) and range of cortisol sample collection in day workers (n=21) and irregular shift workers (n=21).

<b>Cortisol</b>	<b>DAY SHIFT</b>				<b>IRREGULAR SHIFT</b>			
	<b>Time</b>	<b><math>\pm</math>SD</b>	<b>min.</b>	<b>max.</b>	<b>Time</b>	<b><math>\pm</math>SD</b>	<b>min.</b>	<b>max.</b>
<b>Work day</b>								
At wake up	4.99	1.14	3.17	8.67	12.19	2.95	6.00	18.00
At 30 minutes	5.47	1.26	3.67	9.83	12.98	3.12	6.50	19.00
At bedtime	23.24	0.87	21.67	23.83	9.87	4.91	5.00	23.00
<b>Day off</b>								
At wake up	7.41	1.83	4.30	10.00	8.88	1.39	7.33	12.25
At 30 minutes	8.05	1.70	4.83	10.50	9.13	1.48	7.83	12.75
At bedtime	22.82	1.67	18.50	24.00	23.42	1.40	21.33	23.50

Table 3. Spearman correlation between work, health and sleep variables and cortisol levels measured at waking, 30 minutes after waking and at bed time, on the days off, in day shift and irregular shift working truck drivers.

Variable	Day shift (rho)			Irregular Shift (rho)		
	At wakening	30 min	bedtime	At wakening	30 min	bedtime
<b>Sociodemographic</b>						
Age (years)	0.01	-0.22	0.35	0.16	0.03	0.12
Coffee intake (mean cups/day)	0.35	-0.01	-0.65	0.02	-0.08	-0.17
<b>Work and Psychosocial factors</b>						
Minor psychiatric disorder	-0.36	-0.31	-0.43	-0.15	-0.44	0.01
Job satisfaction score	0.37	0.16	-0.11	-0.53*	0.11	-0.24
Job demand score	-0.19	-0.21	-0.11	0.22	0.30	0.08
Job control score	0.55*	0.36	0.09	0.36	0.45	0.33
Job social support score	0.36	0.21	-0.45	-0.29	0.36	-0.24
Truck noise perception (VAS)	-0.29	-0.32	-0.31	-0.25	-0.24	0.22
Truck vibration perception (VAS)	-0.22	-0.32	-0.19	-0.32	-0.15	-0.03
Time of working (years)	0.30	0.47*	-0.43	-0.02	-0.09	0.33
Length of working (years)	-0.08	-0.02	0.45	0.12	-0.10	0.08
Time driving (min)	-0.37	-0.05	0.05	0.28	0.25	0.44
Waiting to load the truck (min)	0.49	-0.39	0.23	-0.05	-0.20	-0.10
<b>Health</b>						
Mean heart rate (BPM)	-0.03	0.25	-0.04	0.19	-0.10	-0.13
Systolic blood pressure (mm Hg)	0.30	0.31	0.27	0.55*	0.37	0.20
Diastolic blood pressure (mm Hg)	0.27	0.26	0.07	0.47	0.23	0.44
BMI (kg/m <sup>2</sup> )	-0.30	0.41	0.03	0.47	0.30	0.48
Waist hip ratio (WHR)	-0.18	0.15	0.06	0.54*	0.42	0.51
<b>Biochemical results</b>						
Glucose (mg/dl)	-0.29	-0.14	-0.08	-0.07	0.03	0.04
Triglycerides (mg/dl)	0.10	0.11	0.14	0.40	0.33	0.63*
Cholesterol (mg/dl)	-0.06	0.13	-0.02	-0.01	0.55*	0.06
LDL – Cholesterol (mg/dl)	-0.10	-0.08	-0.07	-0.10	0.58*	0.00
HDL – Cholesterol (mg/dl)	0.13	0.14	-0.22	-0.43	-0.17	-0.76*
VLDL – Cholesterol (mg/dl)	-0.04	0.07	0.20	0.40	0.33	0.63*
<b>Sleep</b>						
Sleep duration - actigraphy	-0.31	-0.14	-0.18	-0.43	-0.62*	-0.03
Sleep latency - actigraphy	-0.10	0.45	0.05	-0.24	0.02	0.60
Sleep movement -actigraphy	0.07	0.06	0.50	-0.07	0.02	0.15
Main sleep quality (VAS)	0.48*	0.14	-0.08	-0.21	-0.18	-0.12
Secondary quality (VAS)	0.06	0.71*	-0.10	0.25	0.27	-0.30
Sleep on work day (min)	-0.46	0.15	-0.32	-0.09	-0.18	-0.06
Sleep on day off (min)	-0.17	-0.42	0.37	-0.21	0.24	0.33
<b>Fatigue</b>						
Tired before working (VAS)	-0.25	-0.14	0.07	-0.10	-0.48	0.4
Tired after working (VAS)	-0.38	0.06	0.18	-0.01	-0.01	0.67*

\*p≤ 0.05