

철강업교대근무자의수면·각성행태

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ABSTRACT

The purpose of this study was to investigate the effects of sleep/wake behavior for shift workers in the iron and steel industry using wrist actigraph for 59 male workers on a continuous full-day three-team three-shift system of backward rotation including on-duty and off-duty periods. The wrist actigraph data were recorded for 15 days (1 shift cycle) for each subject. The sleep length at home during night shift decreased significantly as compared to the morning or evening shifts. The night shift nap length increased significantly in all sections as compared to the morning or evening shifts. The nap length in the Steel Manufacturing Process and Rolling Process during night shift decreased significantly as compared to the Machine Maintenance Section, the Forwarding of Products Section, and the Field Management Section. However, the sleep length at home while off-duty period increased significantly. The percentage of nap length during night shift in the Rolling Process, Steel Manufacture Process, and the other three types of jobs was 16.0%, 20.4%, and about 50.0%, respectively. The nap length during night shift for the above 50 year olds increased significantly as compared to the below 50 year olds. Finally, we discussed the role of nap-taking during the burden on night shift workers and the increased difficulty in continuing their job.

Keywords : Wrist actigraph, iron and steel industry, shift workers, nighttime nap, sleep/wake behavior