Conclusions Our study shows that there are differences in exposure to carcinogenic agents among shift and non-shift workers, and so there is a need for prevention programs in order to reduce these discrepancies.

Results This cohort contained 39.5% night shift workers. Compared with the day workers, night shift workers had higher odds of e-ALT (OR: 1.18; 95% CI 1.00–1.40). Stratified analysis showed that a positive gradient between night shift years and elevated e-ALT was only restricted to the night shift workers without NAFL. No similar trend was observed among those with NAFL.

Conclusions Night shift work is positively associated with the abnormal liver function in workers without NAFL, which indicates that shift work involving circadian disruption is likely to affect abnormal liver function.

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Objective To examine the relationship between night shift work and elevated level of alanine transaminase (e-ALT) of workers, stratified by status of non-alcohol fatty liver.

Methods We established a prospective cohort of night shift workers without NAFL status using s-ALT and s-AST levels. We conducted a 3-week prospective cohort study in Shenzhen, China. We collected information on demographics, lifestyles, and lifetime working schedule from standardized questionnaire. The adjusted model showed that a positive gradient between night shift years and elevated e-ALT was only restricted to the night shift workers without NAFL. No similar trend was observed among those with NAFL.