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Up to date on prevention in Occupational Medicine

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The main change in Occupational Medicine is probably represented by the progressive transition from the focus on "Prevention of Disease" to the focus on "Promotion of Health". In the light of the definition of health given by the World Health Organization as a "state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity", and considering that people generally spend at work a large fraction of their lives, there is nowadays a large consensus that workplace represents a privileged target for active interventions of health promotion. Smokers, overweight people and sedentary workers are the subgroups in which most of have been interventions realized until now. Two types of measures are generally implemented:

a) Information of workers about the possible adverse health effects of their "unhealthy" lifestyle, followed by educational support aimed to help them to switch to a "healthy" one (sometimes in the context of trials with a treatment and a non treatment arm);

b) Organizational measures aimed at improving the health status of workers: as an example, our research group showed that during a four year follow-up, nurses performing night shifts were at higher risk of developing the metabolic syndrome (a clinical or pre-clinical entity characterized by the concomitant presence of at least three of the following conditions in the same subject: waist >102 cm in men and >88 cm in women, serum triglycerides >1.695 mmol/l^{-1} (150 mg/dl), HDL-cholesterol <1.036 mmol/ l^{-1} (40 mg/dl) in men and 1.295 mmol/ l^{-1} (50 mg/dl) in women, blood pressure >130 or >85 mmHg or treatment for hypertension, and plasma glucose >5.6 mmol/l^{-1} (100 mg/dl)). In this case, an organizational measure such as the change from night shifts to daytime work activities in susceptible workers might solve the health problem.

Interestingly, the above-depicted measures of health promotion seems to be effective not only from a clinical perspective, but also on the economic side: according to most published cost-effect analyses, the spared cost of absenteeism and presenteeism, along with the improved efficiency of workers, largely overcome in the mid-term the immediate costs linked with the implementation of a health promotion program.

Certainly, the accent on promotion does not imply a neglected role for prevention. However, even in this context, there are several news. Efforts are in fact directed towards quite different risks than those we faced with in the past. Nanoparticles exposure, reliable evaluation of psychological stress, and new (old?) diseases (the latter linked with the migration flux from foreign countries), pose new challenge to the occupational physician in the next year. These three conditions have in fact as a common denominator the difficulty in detection, and, at least for nanoparticles exposure and measurement of stress, methodological (e.g. how to measure) and interpretation uncertainties. On the other hand, it is mandatory that their risk is not only clearly defined, but also efficiently managed. The similarity with asbestos of some engineered nanoparticles such as carbon nanotubes sound as a monition to all of us that a tragic outcome may be present beyond the corner of the street. We must be adequately equipped before crossing this corner.