



## PRESS RELEASE

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### Cumulative exposure in the workplace: 12 profiles to inform prevention policies

During their careers, employees may be exposed simultaneously to a number of sources of stress likely to affect their health in the short or long term. These include night work, exposure to biological agents or chemicals, a lack of resources, or workplace tensions. Taking account of this cumulative exposure or multiple exposure is a major challenge in developing effective prevention policies and improving occupational health in France. A study conducted jointly by ANSES, *Santé Publique France* and DARES shows that all employees are concerned, regardless of their occupation or sector of activity. It also describes a number of typical profiles for cumulative exposure.

#### Almost all employees are affected by cumulative exposure at work

To better describe the situations of multiple exposure experienced by employees in France, and to identify the main occupational sectors concerned, a joint study was conducted by ANSES, *Santé Publique France* and DARES, based on the results of the [2016-2017 Sumer survey](#). Carried out as part of the **third Occupational Health Plan** for the period 2016-2020 (PST 3), the study follows a [review](#) of the main actions taken concerning multiple exposure, both in France and in other countries, published in 2018.

This analysis shows that **almost all (97%) of the 25 million public- and private-sector employees experience conditions of multiple exposure**, i.e., they are exposed to at least two sources of stress in one or more categories over the course of their professional career. These occupational sources of stress fall into five categories:

- **chemical** - potentially dangerous substances;
- **biological** - bacteria, viruses or mould;
- **physical** - noise, postural or thermal stress, exposure to radiation;
- **organisational** - working hours, lack of material and/or human resources, intensity and pace of work, limited autonomy, etc.;
- **relational** - strong pressure, lack of recognition at work, hostility from colleagues or management, tensions, etc.

#### A dozen profiles identified for cumulative exposure

Based on a statistical analysis, the study grouped employees according to 12 profiles, describing the most common situations of cumulative exposure.

Some profiles may be associated with one or more specific occupational fields, such as healthcare, agriculture, seagoing and fishing activities.

Others describe a situation of multiple exposure common to several sectors of activity. This is the case, in particular, for office workers, in fields as varied as public administration, teaching, or banking and insurance.

### **Organisational constraints affecting all sectors of activity**

While known exposure to chemical, physical or biological stress is specific to the job carried out, all the multiple exposure profiles highlight exposure to **organisational and relational stress**. Often less well documented, this type of stress is inherent to any salaried activity, since it is specific to the way work is organised, to cooperation with other workers, as well as to interactions with customers or users.

### **Many healthcare professionals combine all stress categories**

Healthcare professionals – nurses, midwives, nursing assistants, paramedics, doctors and others – make up a group of activities that are particularly concerned by multiple exposure. They accumulate exposures to all five categories of stress. In this way, they are potentially exposed to biological agents of human origin, often combined with exposure to chemicals, particularly through medicines. They are also concerned by situations of tension, time constraints such as night work, a sustained pace of work and a lack of material and human resources, as well as physical constraints such as ionising radiation or difficult physical postures.

### **An original analytical approach to guide prevention and research on multiple exposure**

This global approach, based on multiple-exposure profiles, represents a real step forwards in its ability to shed light on multiple exposure in order to address it more effectively. It provides a basis for **approaching the different types of stress experienced by employees not in isolation but as a whole**, possibly accentuating the associated occupational risks. It sets out a preliminary identification of the sectors concerned by these forms of multiple exposure.

Following these studies, it would be useful to conduct a more detailed characterisation of the **occupations in which multiple exposure is highest**, such as healthcare professionals, for example. Studies are already under way on the working conditions of cleaning and sanitation workers and their impact on health, as well as the health risks for workers involved in collecting, sorting and processing household waste.

It would also be useful to step up research in order to better understand how the interaction between certain types of stress can lead to more serious health effects for workers. This will contribute to the implementation of the **exposome** concept, which aims to take account of cumulative exposure: over time and between exposure factors (with the contribution of this report). Looking beyond these aspects, it also addresses the cumulative impact of exposure in the workplace and in everyday life.

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