

HEALTH AND SAFETY IN THE WORKPLACE

G4 indicators: G4-DMA, G4-LA5, G4-LA6, G4-LA7, G4-LA8

I. BACKGROUND

The men and women of Sanofi are the real drivers of our business performance, and their well-being is essential to our success. We are committed to ensuring the health and safety of all our employees and independent contractors.

We care about our employees' health and safety, and we know it is an essential component in the success of our business. Limiting the occurrence of diseases and injuries has a direct positive impact on productivity and costs by avoiding repeated absences, medical expenses and insurance premiums.

To provide a safe environment and healthy conditions for our workforce as well as outside contractors, we implement measures designed to limit the risk of disease and injury that cause pain and suffering and affect employees' quality of life. We take a preventive approach by seeking to avoid accidents and minimize exposure to hazardous agents. At the same time, we focus on stress management and employee fitness programs to encourage individuals to improve their own health and well-being.

1. Safety in the workplace

Creating a safe working environment is first and foremost a matter of reducing workplace accidents and injuries to the lowest possible level. Our safety approach includes:

- Conducting risk assessments as of the initial phases of our activities
- Applying risk minimization methods in all situations, for all processes and projects
- Using the hazard vetting method each time manufacturing or equipment is scaled up
- Focusing on organizational and human factors in safety management
- Providing continuous employee awareness and training programs about prevention and protection systems

- Providing support for managers while taking specific steps to ensure the safety of independent contractors
- Making constant progress on our road safety record with the support of the Sanofi Road Safety Committee
- Developing initiatives to improve employees' health and safety during business travel by providing dedicated training sessions

The Sanofi Road Safety Committee determines our global road safety program by analyzing worldwide road safety results and setting objectives for our affiliates. Each site then implements a program to address its specific road and motor vehicle safety issues, based on the committee's guidance and its own risk assessments. Proven success factors to improve road safety include: strong support from management, sufficient resource allocation, clear objectives, and regular reviews. Fleet safety and driver training programs are also important, as are the accurate reporting and analysis of all motor vehicle accidents and work-related injuries.

For all Sanofi employees including independent contractors and temporary employees, the most frequent injuries which occurred at Sanofi in 2016 were related to fall-slip-trips, which represent almost 40% of our global injuries, followed by motor vehicle accidents (approx. 25%) and ergonomics-related injuries which represent around 15% of lost time injuries.

2. Health and well-being in the workplace

Ensuring the physical and mental health of each employee consists of minimizing exposure to chemical, biological, and physical risk factors and taking measures to enhance employees' well-being at work. It also involves occupational hygiene assessments and engineering technologies to protect employees' health.

Our approach to health in the workplace is based on:

- Identifying and evaluating occupational hazards
- Organizing assessments of work situations and employee medical surveillance

- Developing methodologies for risk prevention and the protection of employees at their workstations

Our pro-active initiatives also include health programs and ways to share best practices among our key medical doctors, who provide leadership for the network of occupational physicians working at Sanofi sites around the globe.

Where appropriate, we use biomonitoring technologies to track occupational exposure and improve knowledge of chemical agents and their effects. Training sessions organized for employees and managers are designed to enhance well-being at work. We also rely on the guidance of two important in-house expert committees, the **TRIBIO committee** and **COVALIS committee**.

The **TRIBIO committee** is in charge of classifying all biological agents to which Sanofi employees may be exposed by looking at several criteria: pathogenicity, biological stability, means of transmission, infection routes, and the existence of preventive measures or effective treatment. Employees receive information and training about the types of risks and prevention, personal protective equipment, and personal hygiene. Each site implements dedicated occupational hygiene programs based on company standards and local regulations, with an emphasis on collective protection measures, as opposed to relying exclusively on personal protective equipment.

The **COVALIS committee** is responsible for the hazard determination and classification of all active pharmaceutical ingredients and synthesis intermediates handled at Sanofi facilities. This covers all active ingredients handled in production at company sites or in processes sub-contracted for manufacture. Any important issues involving raw materials or other substances that lack established occupational exposure limits may also be reviewed. The COVALIS committee determines the occupational exposure limits required within the company.

Our central Industrial Hygiene Laboratory is responsible for developing methods and performing sample analysis of active ingredients. This laboratory is located in France and is available for Sanofi sites worldwide. Since 2014 it has been certified according to NF EN ISO/CEI 17 025 by the *Comité Français d'Accréditation* (COFRAC).

Our approach is built on a solid foundation, Sanofi's Health, Safety and Environment (HSE) management system.

For more information, see in our [Download Center](#):

- *HSE Management System Factsheet*
- *HSE Policy*
- *Implementation of REACH regulation Factsheet*

3. Our goals

- 2015-2020: Achieve a 15% reduction in total lost time injury frequency rate (LTI-FR).
- 2016-2020: For the sales fleet, aim to improve safety features of cars and safe behaviors among drivers.

- 2011-2016: Achieve a 15% reduction in recognized musculoskeletal disorders (MSDs): This goal has been more than achieved, with a 90% reduction. The recognition of the occupational nature of a disease in France can take more than six months, which may impact the evolution of this figure without changing the very positive trend described above.
- Continue efforts to maintain the low level of MSDs achieved in 2016.
- Protect employees' physical and mental health.

II. ACTIONS

1. Safety

We maintain a safe working environment for our employees and seek to reduce as far as possible the occurrence of workplace accidents by monitoring injury rates and developing a wide range of initiatives.

Overall lost time injury frequency rate (LTI-FR)

In 2016, the LTI-FR for Sanofi employees is 1.7 (with or without Merial) and has remained stable compared to 2015 with Merial included (+6.3% excluding Merial), but has decreased compared to 2010 (-19% without Merial).

The LTI-FR in France has decreased compared to 2015 (-13.2% including Merial and -8.1% excluding Merial) and 2010 (-22.7% excluding Merial).

These figures are far below the national average of 22.9¹ (2015 data), meaning that about one Sanofi employee out of 190 had an occupational injury while the French national average is about one out of 30 employees (2015 data).

Compared to 2015, the LTI-FR improved for Support Functions, Genzyme, Merial, and Vaccines as well as for independent contractors. An increase may be observed for R&D, Industrial Affairs and Global Operations, but the figures remain low.

No fatalities were reported in 2016 among Sanofi employees, independent contractors or temporary personnel.

¹ *Risque accident du travail : Statistiques sur la sinistralité de l'année 2015 suivant la nomenclature d'activités française (NAF), p. 9 publié en Septembre 2016 par la Caisse Nationale de l'Assurance Maladie des travailleurs salariés, disponible en cliquant sur ce lien : [http://www.risquesprofessionnels.ameli.fr/fileadmin/user_upload/document_PDF_a_telecharger/etudes_statistiques/AT_2015/AT%202015-%20par%20NAF%20\(n-2016-100\).pdf](http://www.risquesprofessionnels.ameli.fr/fileadmin/user_upload/document_PDF_a_telecharger/etudes_statistiques/AT_2015/AT%202015-%20par%20NAF%20(n-2016-100).pdf)*

Table 1: Lost time injury frequency rate, 2014-2016

Lost time injury frequency rate (LTI-FR) ⁽¹⁾	2014	2015	2016
LTI-FR worldwide (Sanofi employees)	1.9	1.7	1.7
LTI-FR worldwide (Sanofi employees) – Excluding Merial	1.8	1.6	1.7
LTI-FR France (Sanofi employees)	4.2	3.8	3.3
LTI-FR France (Sanofi employees) – Excluding Merial	4.0	3.7	3.4
LTI-FR for temporary employees worldwide	1.7	1.7	2.0
LTI-FR for temporary employees worldwide – Excluding Merial	1.6	1.6	1.4
LTI-FR for independent contractors worldwide	3.0	2.8	2.5
LTI-FR for independent contractors worldwide – Excluding Merial	2.8	2.7	2.4
LTI-FR by function for Sanofi employees	-	-	-
Research and Development	1.7	1.4	1.8
Industrial Affairs	1.9	1.6	1.9
Global Operations	1.6	1.5	1.6
Vaccines	3.2	2.7	2.0
Support Functions	0.8	1.8	0.8
Genzyme	1.2	1.3	0.8
Merial	3.2	3.0	1.7

¹ The lost time injury frequency rate (LTI-FR) is defined as the number of injuries resulting in lost time of one day or more within a 12-month period, per million hours worked. For stationary personnel, accidents occurring during the home-workplace commute are not included in this indicator. However, they are included for medical sales representatives in accordance with the reporting rules. Frequency rates of previous years have been adjusted in 2016 based on the following factors: eliminating injuries dismissed by regulatory authorities, including injuries reported late, and changes in the scope of reporting.

Severity rate for Sanofi employees

Sanofi has chosen to disclose the total reportable injury frequency rate as a severity indicator, as this takes into account all injuries with a significant severity level (with and without lost time). This indicator avoids the impact of a local regulatory context on the classification of accidents and hence enables a consistent approach. In 2016, the total reportable injury frequency rate decreased by 17.9% (Merial included) and by 11.5% (Merial excluded) compared to 2015.

Table 2: Total reportable injury frequency rate, 2014-2016

Total reportable injury frequency rate (TRI-FR) ⁽¹⁾	2014	2015	2016
TRI-FR worldwide (Sanofi employees)	3.1	2.8	2.3
TRI-FR worldwide (Sanofi employees) – Excluding Merial	2.8	2.6	2.3

¹ The total reportable injury frequency rate (TRI-FR) is defined as the number of LTI (see previous definition) plus the number of injuries without lost time (IWLT) within a 12-month period, per million hours worked. IWLT fulfill certain severity criteria defined by the company to distinguish them from simple first aid cases which are not counted as reportable injuries. Frequency rates from previous years have been adjusted in the same way as described under the previous definition.

In addition, Sanofi defined criteria for the potential severity of occupational accidents in 2013 to better target the types of actions to be implemented to reduce the number of potentially serious injuries and to integrate human and organizational factors into the in-depth analysis of these events. Our target is to focus the company's efforts on actions to pro-actively prevent potentially serious accidents rather than limiting efforts to post-accidental corrective measures. PSI have been systematically characterized, reported and analyzed in-depth since January 2014.

2. HSE management and leadership training

Since 2015, Sanofi employees performing HSE audits may participate in a specific training program to obtain certification from the International Register of Certified Auditors (IRCA). All lead auditors have already obtained the certification. In 2016, 21 pool auditors obtained the certification and 90 are in the process of being certified.

The HSE Culture Training aims to promote the HSE culture amongst the employees of all Sanofi entities. In total, almost 8,630 employees have participated in the program since its launch in 2003.

Site heads and members of the site management committees have taken the Safety & Leadership cycle at the Centre Européen d'Education Permanente (CEDEP). Since the training began, 201 employees have participated.

In 2016, the "Achieve Culture of Excellence in HSE and Quality" or ACE training (following the redesign of the Human Organizational Management of Safety, or HOMs, training sessions, which started in 2012) was deployed worldwide on all Sanofi sites. This program was dedicated first to site management committees and then to managers and site directors. In 2016, 730 people were trained in Germany, Belgium, Canada, Colombia, Spain, the United States, France, Great Britain, Hungary, Indonesia, Mexico, Singapore and Vietnam. The program will be deployed over three years.

3. Improved monitoring and analysis of potentially serious injuries (PSIs)

In 2016, prevention measures for serious and potentially serious injuries have been strengthened by developing a methodology to analyze the root causes of serious or potentially serious injuries. The aim is to avoid any recurrence of these events and to gradually develop a safety culture for all Sanofi staff, outside company personnel and temporary workers.

To this purpose, a training program has been designed to create a network of experts worldwide specialized in the in-depth analysis of events. Two pilot training programs took place in France and Germany in 2016. In 2017, this training program will be rolled out to include one to three experts at each Sanofi site, depending on the size of the site.

4. Promoting road safety

In 2016, Sanofi pursued its commitment to road safety with the launch of a dedicated communication plan. A video featuring the two sponsors of the Road Risk Committee was shared with Commercial Operations teams around the world. This plan is completed by a communication kit covering twelve key road safety topics, ranging from speed, the dangers of phone usage while driving, and risks for pedestrians. Composed of posters and PowerPoint presentations, this kit is available in English, French and Spanish. The affiliates are gradually translating it into other languages (i.e., German, Russian). The goal is to empower local management in the deployment of these twelve modules. With one module per quarter, sales forces will be exposed to safety messages and will be reminded of the commitment they are expected to uphold. Practical training cycles, which are renewed every three years, continue to allow sales forces to improve their emergency braking technique, assess safety distances and drive on slippery roads on a closed and fully secured circuit. On-line training completes this system in order to keep the focus on the key principles of road safety. Sanofi's HSE Direction has worked closely with affiliates to carry out in-depth analysis of serious or potentially serious accidents in order to improve prevention policies. The Road Safety Committee awarded trophies to medical visitors from Brazil, the Philippines and the United States as well as to regional directors from Australia, India, the Philippines and Vietnam and to HSE managers from Brazil, Finland and the United Kingdom for their exemplary road safety behavior. Trophies were distributed at an awards ceremony held at the Carrousel du Louvre in Paris in April 2016.

Table 3: Motor vehicle accidents involving medical sales representatives, 2014-2016

Motor vehicle accidents (MVA)	2014	2015	2016
Number of MVA	4,194	4,409	4,676
Total number of medical sales representatives' vehicles including: - Total number of motorcycles	24,436 4,101	25,282 4,437	24,652 4,242
MVA rate in percentage	17.2	17.4	19.0
MVA-related lost time injury frequency rate ⁽¹⁾	1.1	1.2	1.4

⁽¹⁾ Number of motor vehicle-related lost time injuries per one million hours worked.

The increase in the MVA-rate and the MVA-related lost time injury frequency rate in 2016 should be balanced against the fact that accidents were less serious in 2016 and there were zero fatalities.

5. Health and well-being in the workplace

The broad range of initiatives to ensure our employees' health and well-being includes a wellness program to promote healthy living and prevent diseases, programs to prevent psychosocial risks, training for occupational hygienists and biosafety officers, and monitoring of occupational health.

Occupational health

Occupational diseases and their causes are grouped according to the classification of the European Council of Federations of Chemical Industry (CEFIC). It's possible to declare several occupational diseases for one person.

With a focus on prevention, each year the number of occupational diseases is consolidated at company level with the aim of improving, year by year, the level of available information according to local regulations, which may differ from one country to another.

The recognition of the occupational nature of a disease in France may take quite long (over six months).

As of December 31, 2016, 30 occupational diseases had been declared worldwide: 28 in France and two in North America, where recognition and declaration systems are well established.

In 2016, six occupational diseases in France were recognized out of 28 diseases that had been declared as of January 20, 2017. In North America, two were recognized out of two declared.

The new medical monitoring program related to occupational risks in the US exceeded 2016 expectations, covering 98% of targeted employees. This is significant and contributes to solid results because visits to the occupational health centers avoid lost time (employees return to work sooner, avoid spending time away from work to seek external medical help, etc.) and result in better knowledge of risk in the workplace to promote the implementation of preventive measures.

Table 4: Number of recognized occupational diseases¹ (data in brackets excluding Merial), 2014 - 2016

Cause of the disease	Category of disease	2014	2015	2016
Chemical agent	Respiratory disease	1(1)	0	1(1)
	Skin disease	0	0	0
	Cancer or malignant blood disease	0	1(1)	1(1)
	Other illnesses caused by chemical agents	0	0	0
Physical agent	Upper limb disorder(*)	40(34)	14(12)	6(6)
	Neck, back, lower limb disorder(*)	0	1(1)	0
	Ear disorder	0	0	0
	Other diseases caused by a physical agent	0	1(0)	0
Biological agent	Disease caused by a biological agent	3(2)	2(0)	0
Other (including nervous breakdown and anxiety)		0	0	0
TOTAL		44(37) cases	19(14) cases	8(8) cases

(*) indicates musculoskeletal disorders

¹ Occupational diseases presented here refer to cases recognized by regulatory authorities each year.

Recognizing professionalism in occupational hygiene training

Sanofi continued to strengthen employees' skills on site with respect to occupational hygiene thanks to training modules offered by the Occupational Hygiene Training Association (OHTA).

Five modules are now available:

- W201 (basic principles on occupational hygiene)
- W505 (control of hazardous substances)
- W506 (fundamentals of ergonomics)
- W501 (measuring chemical exposure)
- W503 (noise)

Since 2012, Sanofi employees have attended 346 weeks of courses and examinations (+41 weeks by Merial employees) worldwide. Thanks to these multi-year training sessions, employees are eligible for an internationally recognized diploma in occupational hygiene.

Employee wellness and disease prevention

The health and prevention program for Sanofi employees Take Care & Bwell was initiated in 2012 with the objective of promoting health and preventing or delaying the onset of chronic diseases by focusing on three key pillars: balanced nutrition, regular physical activity, and prevention of non-communicable diseases thanks to interventions developed with the help of internal and external experts.

In 2015, an assessment of the impact on interventions related to employee behavior was carried out with the help of academic experts for the pilot launched in 2013 at the Sanofi headquarters, showing significant changes in employee behavior (making better food choices, using the stairs more, etc.). This pilot helped identify the most effective interventions for further deployment on other sites.

At the end of 2016, the program had already been deployed in 40 countries in Europe, Asia-Pacific, Africa, South America and North America. In France, it was implemented at R&D, industrial and corporate sites.

Sanofi's objective is to continue the expansion of this program by helping sites implement good practices and to monitor changes in employee behaviors by promoting the use of e-health tools. In September 2015, the program was selected by EIT Health (European Institute for Innovation and Technology) and received financial support in 2016 for the development of e-health tools which have been recognized for their scientific value and the quality of their impact on employee education. This pilot program was rolled out in four countries (UK, France, Spain and China) and enrolled 1,000 employee volunteers who agreed to have their lifestyle choices and cardiovascular risks monitored using the e-health tools. This study is being carried out in collaboration with Oxford University. The results will be available in 2017.

Sanofi also demonstrated its wellbeing commitments in 2016 by developing innovative interventions to help employees modify their lifestyle choices, especially by supporting them to stop smoking.