

Guidelines for the Prevention of Obesity at the Workplace

Short Version

April 2009

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The long version of the Guidelines for the Prevention of Obesity at the Workplace is available to download from www.gpow.eu.

Introduction to the GPOW Project

Guidelines for the **P**revention of **O**besity at the **W**orkplace – the **GPOW** project is implemented under the DG –SANCO 2003-2008 Public Health Program co-funded by the European Commission. The project is also supported by Titan Cement Company. Project implementation is coordinated by the Institute of Preventive Medicine, Environmental and Occupational Health – PROLEPSIS, while the consortium comprises academic and research institutions from nine other European countries. The main goal of the project is the study of the relationship between work and obesity and how these interact. The end product of the project is a set of evidence based guidelines for the prevention of obesity at the workplace, the short version of which are presented here.

The guidelines presented define best practices for obesity prevention interventions at the workplace. They have been developed by the GPOW consortium through an extensive literature review analysis, an evaluation of workplace health promotion practices targeting obesity at the workplace and through original research. The complete guidelines are available at the GPOW website www.gpow.eu.

The purpose of the guidelines is dual. Firstly, they aim at raising awareness among a wide range of stakeholders about the effects of certain aspects of work on the development of obesity. Secondly, guidelines are proposed for the implementation of interventions for the prevention of obesity at the workplace which are directed to health professionals active in workplace settings.



Intended Users of the Guidelines

These set of guidelines are intended for the use of *employees* and *employers* of different occupational settings. More specifically, as the topic affects a wide range of stakeholders, intended users are the following:

Stakeholders and Intended Users	
• Employee associations	• European networks
• Employer associations	• Unions
• National ministerial and European policy makers involved in workplace health promotion and occupational health and safety	• University departments of public health, occupational health, occupational medicine, health promotion, etc.
• Ministries of Health	• Ministries of Labour
• Occupational physicians	• Human resource officers
• The scientific community	• NGOs and occupational organizations

Use of the Guidelines

The guidelines have been developed by the GPOW consortium through intensive evaluation and coordination among the key partners. Evaluation on identified policies and practices that target obesity at the workplace was conducted, taking into consideration the general principles of good workplace health practice. As a result, the guidelines tool offers suggestions on practices identified as the most successful and promising, and, thus, provides various stakeholders the framework to design and implement effective Workplace Health Promotion Programs (WHPP). Hence, the current report:

- **Briefly presents** the health problem of obesity and its consequences (p. 5)
- **Explains** why obesity should be addressed at the workplace – how can employers and employees benefit by counter obesity programs (p. 5)
- **Identifies** the most prominent workplace obesogenic factors (p.7)

- **Offers** recommendations for successful counter obesity interventions (p.9)
- **Outlines and provides per work sector** the most prevalent obesogenic factors and practical recommendations on specific evidence-based strategies (p.12):
 - ✓ Office workers: secretaries, clerks and senior managers, lawyers, executives (p.12)
 - ✓ Transportation employees, truck drivers, taxi drivers (p.14)
 - ✓ Firefighters and police officers (p.16)
 - ✓ Health care personnel, nurses, doctors (p.18)
 - ✓ Blue collar workers: industrial employees, construction workers (p.20)

Obesity and its Consequences

The prevalence of obesity has reached epidemic proportions worldwide ('globesity'), while overweight and obesity are increasing at an alarming rate in Europe as well. According to WHO Europe, 25 to 75% of adults are overweight, and 5 to 30% are obese. Obesity is one of the most serious public health problems in Europe. It is associated with an increased risk of many chronic health problems, such as type 2 diabetes, dyslipidaemia, sleep apnea and several cardiovascular diseases (hypertension, stroke, coronary heart disease, etc.). Currently, these illnesses and conditions represent a big burden of disease and are among the leading causes of mortality in Europe as well as worldwide. In addition to the health implications, obesity has a financial impact on the economy due to reduced work productivity, loss of working days/absenteeism and an increased risk of occupational accidents associated with obesity-related illnesses. Furthermore, treating the complications of obesity involves additional costs to the society. The consequences for both health and the economy are likely to be severe in the upcoming years if the prevalence of obesity continues to increase.

Why Address Obesity at the Workplace?

Workplaces represent a logical and natural setting to implement health promotion and prevention initiatives targeting overweight and obesity, as a large part of the adult population

is employed. Worksites are an environment in which a lot of people can be easily contacted for recruitment and programme implementation. Interventions in worksites could also assist in attracting individuals in need who would normally be unwilling or unable to seek professional treatment or engage in any weight-control programme. They may be more effective than interventions in other settings, because participants return repeatedly to the same site and can better incorporate them in their daily routine. Worksites also offer the potential of social support and positive influence from co-workers and the management, a key determinant in any behaviour modification attempt. They provide opportunities for environmental and policy changes to foster individual healthy practices. Therefore, the social and organizational characteristics of workplaces may act to enhance the effectiveness of an intervention programme.

Additionally, worksite interventions are relatively low-cost and can be less expensive compared to programmes offered elsewhere. They have the potential to reduce absenteeism and associated health care costs, as well as improve workers' productivity, all of which translate into savings for employers. This could act as an incentive towards the management for ongoing support of such measures. Well-designed and well-implemented worksite health promotion and disease prevention programmes can be cost-beneficial – they can save more money than they cost, thus producing a positive return on investment (ROI).

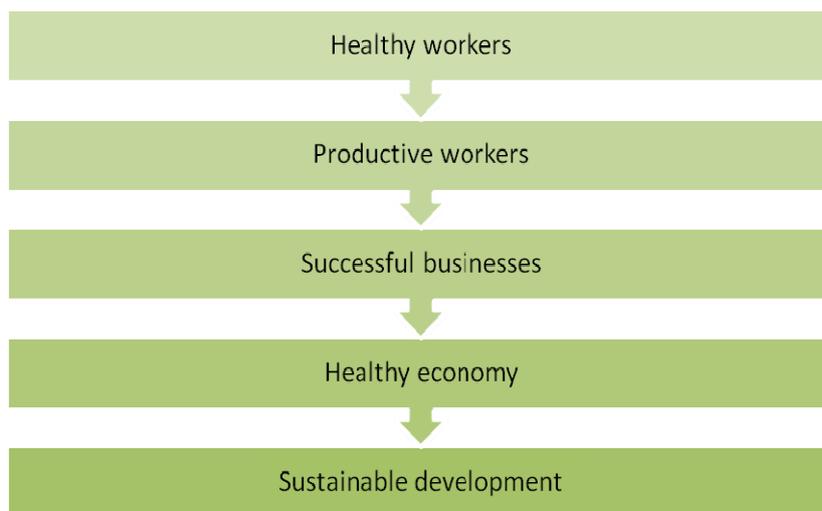
Table 1 summarizes the benefits of a healthy workplace for the organization and the employee.

Table 1: Benefits of a Healthy Workplace

To the organization	To the employee
A well-managed health and safety program	A safe and healthy work environment
A positive and caring image	Enhanced self-esteem
Improved staff morale	Reduced stress
Reduced staff turnover	Improve morale
Reduced absenteeism	Increased job satisfaction
Increased productivity	Increased skills for health protection
Reduced healthcare/insurance costs	Improved health
Reduced risk of fines and litigation	A healthier family and community

Like other settings that have been used as the basis to initiate health promotion programmes (schools, hospitals), worksites could serve as a gateway to improve the health and well-being of the employees, their families, communities and societies as a whole. Consequently, healthy workers could become the foundation for a growing economy and sustainable development (Table 2).

Table 2: Work, Health and Development



Which Workplace Factors Contribute to Obesity?

Modern workplaces have become increasingly obesogenic due to the changing nature of work (e.g. more sedentary type of work, even in industry and manufacturing jobs which have become highly automated), as well as working conditions, such as long working hours. The consequences of workplace obesogenic factors extend beyond the individual level. They may affect the everyday life of employees and their families, by allowing, for example, less time for cooking and eating at home, for family outings, etc.

Important factors which influence obesity among employees are:

1. Workplace environmental factors

The environment in which people work can directly or indirectly affect weight outcomes, including:

- Congested workplaces limiting any opportunities for movement during work hours
- Lack of facilities for storing healthy food – i.e. refrigerator

- Lack of break – lunch areas causing employees to eat at their workstations, desks, cars, etc.
- Lack of onsite healthy food options and physical activity facilities
- Limited availability of nearby (and safe) recreational areas, green spaces, parks, sports grounds, etc.

2. Occupational stress

Occupational stress and job insecurity may influence eating habits and activity patterns and contribute to obesity increase. More specifically, high job demands, low job control and high job strain have been associated with a higher BMI.

3. Long working hours

Long working hours is an important obesogenic factor applying to many different occupational categories, considered one of the main occupational stressors for most workers. Overtime and the associated fatigue are factors which have been shown to contribute to the increase of both BMI and waist-hip ratios.

4. Continuous sedentary working behavior – seating for a long time

Studies show a large decline in individual physical activity over the past century since computer-related occupations have become more common. Computer-related office occupations involve high levels of sitting time and lower demand for physical activity.

5. Other environmental and organizational factors

The following factors may also directly or indirectly lead to high obesity rates among employees:

- Lack of cycling paths or cycle storage facilities
- Active access to the workplace discouraged by inadequate public transportation system
- Long travelling distances to work
- Night shifts
- Lack of management commitment to promoting health and workplace wellness
- Lack of staff to implement workplace health promotion activities at the workplace

Implementing Interventions for the Prevention of Obesity at the Workplace

The following recommendations have been identified as important for successful obesity prevention activities at the workplace:

Recommendation 1:

Conduct needs assessment

A comprehensive needs assessment includes:

- (a) Examining the health status of employees and identifying the health problems which need to be addressed
- (b) Analyzing the specific workplace setting to determine how it may influence obesity outcomes among employees

Recommendation 2:

Aim for changing behaviors which influence weight outcomes

Besides activities aiming merely to raise awareness, it is necessary to address attitudes and behaviors related to physical activity and nutrition so as to accomplish behavioral change, such as interventions seeking to develop new skills. Such activities, which have been proven successful in achieving behavioral change, include self-help manuals and tailored information and materials, demonstration of the preparation of healthy foods, individual counseling and group trainings in diet, exercise and behavior modification, use of audiovisual materials, dietary assessment and behavioral feedback.

Consider also that some people are more ready to change compared to others and try to adjust activities to different stages of change.

Recommendation 3:

Implement both physical activity and nutrition methods to address weight control issues

Recommendation 4: **Include environmental and organizational change as part of the intervention plan**

Offer the support needed to make change of lifestyle behaviors plausible and easier:

- Address issues of work organization, work overload, long working hours, occupational stress, etc. and re-organize shifts
- Improve food selection in company cafeterias
- Offer onsite healthy food options – ticket restaurants, vending machines and provide food storing facilities or food preparation facilities
- Provide break areas
- Improve shower/change facilities
- Consider employee fitness centers or physical activity classes

Recommendation 5: **Negotiate with the management the possibility to carry out most of the planned interventions during work hours**

Recommendation 6: **Extend the intervention period over one year**

Behavioral change is a slow process. Thus, activities should extend over a long period of time, preferably over one year. Activities for the prevention of obesity at the workplace should be part of a general policy for the promotion of employee health and wellness.

Recommendation 7: **Allow participants to self monitor their progress against well defined and measurable objectives**

For example, offer pedometers to monitor physical activity progress and dietary cards to measure food intake, or give personalized feedback based on individual progress reports.

Recommendation 8:

Emphasize employee participation

- Establish a committee of employees to participate in planning and implementing the intervention
- Seek feedback from employees during implementation
- Monitor participation and investigate reasons for drop out

Recommendation 9:

Use simple and easy to read language, visuals or explore alternative dissemination methods

For instance, PCs and mobile phones could be successful for employees with low literacy skills or migrants.

Recommendation 10:

Establish incentives for employees to increase participation and employers to encourage commitment to workplace health promotion activities

Recommendation 11:

Conduct continuous evaluation

Evaluation is essential to examine how well the program is progressing and may include achievements and problems useful for redesigning the plan. It may use multiple data sources, be based on the same tools of the needs assessment and include direct feedback from participants.

Two types of evaluation often used are Process and Outcome Evaluation:

Process evaluation assesses if the intervention is implemented as planned, including employees' participation and satisfaction.

Outcome evaluation provides an assessment of middle and long-term effects of specific program activities through quantifiable indicators. Examples of middle-term effects (outputs) are awareness, knowledge, beliefs, skills and behaviour changes, and an example of long-term effects (outcome) is change in obesity rates.

Obesogenic Factors and Workplace Counter Obesity Activities for Different Occupational Sectors

1. Office workers: secretaries, clerks and senior managers, lawyers, executives

Obesogenic Factors:

- Continuous sedentary working position
- High work demand with little interruption for breaks - meals are often eaten at the office or skipped altogether
- Crammed work areas limiting movement
- Continuous access to the internet limiting face to face communication
- Frequent overtime, unplanned and unscheduled work
 - ✓ This considerably shortens available free time both for preparing healthy meals (often opting for fast food solutions) and for physical activity.
 - ✓ The majority of employees in this workplace sector are women, thus unplanned and unscheduled overtime often clashes with family responsibilities disrupting work - life balance.
- Employees in more senior type of office positions, such as senior executives, managers or lawyers are also prone to obesity because of frequent business dinners and trips



Preventing obesity among office job workers: secretaries, clerks, senior managers, lawyers

Authority Level Occupational Health and Safety	Individual Level	Management Level (Environmental/Organizational Issues)
<ul style="list-style-type: none"> • Emphasize the need and the importance of rest breaks and ensure that all employees have time to take their scheduled breaks • Ensure that workers have a rest or lunch area away from their offices • Provide days off, if overtime becomes very frequent 	<ul style="list-style-type: none"> • Apply nutrition and physical activity strategies, such as: <ul style="list-style-type: none"> ✓ Group sessions aiming at skills development ✓ Individualized counseling on eating strategies, recipes, barriers to eating healthy, eating habits, etc., including setting individual goals and a clear plan for monitoring success ✓ Access to an Information Center (virtual/electronic or printed) with the ability to obtain individualized information and support in the way of Quick Tips ✓ Use of the company email system to send newsletters, updates, reminders ✓ Other successful activities which can be part of an intervention targeting obesity in this setting: presentations, audiovisual materials, dietary assessment and behavioral feedback, self-help manuals and tailored written materials, mailings, telephone counseling and support, food preparation and cooking demonstrations, activities involving the whole family, supervised exercise, cooperation with cafeteria staff, so as to promote healthier recipes, dishes and portion sizes • Provide onsite physical activity training sessions or, if not possible, explore the possibilities of obtaining reduced rates for employees in nearby fitness centers • Allow participants to self-monitor progress against well defined and measurable objectives, i.e. use pedometers to monitor physical activity progress and dietary cards to measure food intake • Provide guidelines for healthy eating during business meetings 	<ul style="list-style-type: none"> • Provide water fountains to which workers need to walk to • Allocate a small area with fridge and microwave facilities • Ensure that vending machines have as many healthy options as possible • Promote the use of stairs ensuring that stairways are adequately lit and safe (some successful interventions have used music to encourage employees to take the stairs instead of the elevator) • Monitor overtime and distribute workload avoiding piling work on only few employees • Notify employees ahead if extra work or unavoidable overtime is foreseen • Consider alternative management style if overtime and work overload becomes too frequent

2. Transportation employees, truck drivers, taxi drivers

Obesogenic Factors:

- Long hours of sedentary type of work
- No physical activity opportunities along the transportation routes
- Limited access to healthy nutrition in transportation or truck terminals
- Shift work
- Lack of adequate rest areas
- Lack of scheduled breaks or meals
- Occupational stress
- Organizational factors, such as work overload and excess demand, leading to psychological strain

Obesity prevention among employees of this sector should be considered as an Occupational Health and Safety issue. Obesity is a primary risk factor for conditions, such as sleep apnea and cardiovascular disease, including strokes. Such health problems among employees of this sector while on duty could cause serious accidents and endanger theirs and others' lives. Hence, the prevention of obesity is as much a health and safety issue as it is a health promotion one.



Preventing obesity among transportation employees, truck drivers, taxi drivers

Authority Level Occupational Health and Safety	Individual Level	Management Level (Environmental/ Organizational Issues)
<ul style="list-style-type: none"> • Emphasize the need and the importance of rest breaks and ensure that all employees have time to take their scheduled breaks • Conduct periodic health checks among all employees (transportation drivers, truck drivers, taxi drivers) assessing risk factors for cardiovascular disease, diabetes, strokes, sleeping induced apnea, etc., including BMI measurements. Monitor high risk employees and provide individualized treatment and counseling • Ensure that workers have a rest area in bus or taxi terminals and truck depots • Monitor and regulate work shifts according to statutory OHS legislation • Monitor and regulate days off according to statutory OHS legislation 	<ul style="list-style-type: none"> • Involve statutory bodies, including unions, associations, employee representative organizations and statutory OHS bodies, to coordinate counter obesity interventions at workplaces, such as: <ul style="list-style-type: none"> ✓ Skills development sessions ✓ Individualized counseling on eating strategies, recipes, barriers to eating healthy, eating habits, etc., including setting individual goals and a clear plan for monitoring success ✓ Access to an Information Center – access to printed material - with the ability to obtain individualized information and support in the way of Quick Tips. ✓ Other successful activities which can be part of an intervention targeting obesity in this setting: tailored written materials, mailings, food preparation and cooking demonstrations, activities involving the whole family ✓ Explore the possibilities of obtaining reduced rates for employees in nearby fitness centers ✓ Allow participants to self-monitor progress against well defined and measurable objectives, i.e. use pedometers to monitor physical activity progress and dietary cards to measure food intake 	<ul style="list-style-type: none"> • Trucks could be equipped with small fridges for storing healthy food • Agreements with specific road side restaurants could be reached so as to include special menus with healthy options for truck drivers • Install vending machines with healthy food options in bus or taxi stations and truck depots • Reorganize working hours, run times, rest days, pauses and breaks • Establish a feedback system through which employees can identify possible problems and suggest solutions. This could be organized centrally by employee and employer associations.

3. Policemen, fire workers

Obesogenic factors:

- Long hours of sedentary activity in between emergency calls
- Shift work
- Occupational environmental factors: Lack of physical activity facilities, lack of onsite food canteens
- Individual lifestyle behavior

Firefighters and policemen are expected to perform on short notice responding to emergencies requiring high levels of energy. Obesity can limit their performance and jeopardize quick responses, thus endangering employees' health and safety as well as the safety of the wider public.

Obesity is a risk factor for coronary heart disease which is very high among the employees of this occupational group, thus needs to be addressed as a matter of priority.



Preventing obesity among firefighters and police officers

Authority Level Occupational Health and Safety	Individual Level	Management Level (Environmental/ Organizational Issues)
<ul style="list-style-type: none"> • Have occupational physicians conduct periodic health checks among firefighters and police officers, monitoring physical condition and BMI. Employees of these high risk categories need to be offered individualized treatment and counseling. • Monitor and regulate work shifts according to statutory OHS legislation • Monitor and regulate days off according to statutory OHS legislation • Establish a comprehensive policy for the health and safety of employees making it known to each of the stakeholders involved • Ensure that onsite canteens abide to statutory requirements 	<ul style="list-style-type: none"> • Health promotion campaigns for the prevention of obesity are highly needed in this occupational group. The involvement of statutory bodies, such as unions, associations, employee representative organizations and statutory OHS bodies is highly recommended in order to effectively implement and evaluate counter obesity interventions. Some examples are: <ul style="list-style-type: none"> ✓ Skills development sessions ✓ Individualized counseling on eating strategies, recipes, barriers to eating healthy, eating habits, etc., including setting individual goals and a clear plan for monitoring success ✓ Access to an Information Center – access to printed material - providing the ability to obtain individualized information and support in the way of Quick Tips ✓ Other successful activities which can be part of an intervention targeting obesity in this setting: tailored written materials, mailings, food preparation and cooking demonstrations, activities involving the whole family ✓ Allow participants to self-monitor progress against well defined and measurable objectives, i.e. use pedometers to monitor physical activity progress and dietary cards to measure food intake 	<ul style="list-style-type: none"> • Offer access to onsite physical activity facilities – one centralized facility could cover a number of smaller fire department or police stations • Ensure that onsite canteens offer healthy food options • Install vending machines with healthy food options • Include healthy options, such as vegetables, fruit and milk, in the food that is offered during emergency 24-hour duty

4. Health care personnel, nurses, doctors

Obesogenic factors:

- Shift work and especially night shifts
- Long working hours
- Occupational stress
- Occupational environmental factors:
 - ✓ Lack of healthy food options in canteen
 - ✓ Lack of onsite physical activity facilities
 - ✓ Limited availability of nearby (and safe) recreational areas, green spaces, parks, sports grounds, etc.
 - ✓ Lack of onsite food canteens
 - ✓ Not enough space at the workplace, high levels of congestion at the workplace



Preventing obesity among health care personnel, nurses and doctors

Authority Level Occupational Health and Safety	Individual Level	Management Level (Environmental/ Organizational issues)
<ul style="list-style-type: none"> • Monitor and regulate work shifts according to statutory OHS legislation • Monitor and regulate days off, especially after a night shift, according to statutory OHS legislation • Ensure that onsite canteens abide to statutory requirements 	<ul style="list-style-type: none"> • Health promotion campaigns for the prevention of obesity are highly needed in this occupational group. Some examples are: <ul style="list-style-type: none"> ✓ Skills development sessions ✓ Individualized counseling on eating strategies, recipes, barriers to eating healthy, eating habits, etc., including setting individual goals and a clear plan for monitoring success ✓ Access to an Information Center – access to printed material - providing the ability to obtain individualized information and support in the way of Quick Tips ✓ Other successful activities which can be part of an intervention targeting obesity in this setting: tailored written materials, mailings, food preparation and cooking demonstrations, activities involving the whole family ✓ Allow participants to self-monitor progress against well defined and measurable objectives, i.e. use pedometers to monitor physical activity progress and dietary cards to measure food intake 	<ul style="list-style-type: none"> • Seek managerial agreement for staff to use out of hours the physiotherapy gym used by patients during the day • Ensure that onsite canteens offer healthy food options, especially since they belong to health care facilities • Install vending machines with healthy food options • Advertise the number of steps needed to walk down each long hospital corridor or between different departments and areas, for example “x-ray to outpatients”, “emergency to the canteen” • Declare a ‘lift-free day’ when staff should only take the stairs • Encourage the setting-up of ‘weight clubs’ or ‘weight days’ in different departments to highlight the need for weight to be monitored regularly (by patients and staff) • Provide a basic set of scales in changing rooms to encourage weighing

5. Blue collar workers: industrial employees, construction workers

Obesogenic factors:

- Personal beliefs and attitudes towards physical activity and proper nutrition
- Lack of a workplace health promotion policy
- Lack of staff to implement workplace health promotion activities at the workplace
- Occupational stress
- Lack of control over one's work
- Inadequate legislation concerning eating areas and work cafeterias
- Easy access to unhealthy food options – i.e. fast food, takeaways, vending machines
- Occupational environmental factors:
 - ✓ Lack of healthy food options in canteen
 - ✓ Lack of onsite physical activity facilities
 - ✓ Limited availability of nearby (and safe) recreational areas
 - ✓ Green spaces, parks, sports grounds, etc.
 - ✓ Lack of onsite food canteens
 - ✓ Not enough space at the workplace, high levels of congestion at the workplace



Preventing obesity industrial employees, construction workers, etc.

Authority Level Occupational Health and Safety	Individual Level	Management Level (Environmental/ Organizational issues)
<ul style="list-style-type: none"> • Monitor and regulate work conditions according to statutory OHS legislation • Ensure that workers have access to rest areas • Ensure that statutory regulations concerning onsite provision of food and water are met • Ensure that workers have access to occupational physicians who conduct regular health checks 	<ul style="list-style-type: none"> • Health promotion campaigns for the prevention of obesity need to address individual beliefs and attitudes of blue collar workers concerning physical activity and nutrition. Interventions should follow a family approach. Some examples are: <ul style="list-style-type: none"> ✓ Skills development sessions ✓ Individualized counseling on eating strategies, recipes, barriers to eating healthy, eating habits, etc. including setting individual goals and a clear plan for monitoring success ✓ Access to an Information Center – access to printed material - with the ability to obtain individualized information and support in the way of Quick Tips. ✓ Allow participants to self-monitor progress against well defined and measurable objectives, i.e. use pedometers to monitor physical activity progress and dietary cards to measure food intake ✓ Information days and event days with the participation of workers’ families ✓ Excursions including the whole family 	<ul style="list-style-type: none"> • Seek cooperation with workers’ associations to provide large scale health promotion programs over a long period of time • Ensure that onsite canteens are able to offer healthy and cheap food options • Install vending machines with healthy food options • Explore the possibility of providing workers with reduced membership fees for fitness centers near their homes or worksite • Promote the use of bicycles, if feasible

For further information, as well as the long version of the Guidelines for the Prevention of Obesity at the Workplace, please visit www.gpow.eu.

The complete reference list is available in the long version of the Guidelines.