A combined guideline and research project on prevention of weight gain among employees

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Obesity prevalence across Europe

2000-2005

% Obesity

- < 5%
- 5-9.9%
- 10-14.9%
- 15-19.9%
- 20-24.9%
- ≥ 25%

Self Reported data
Obesity prevalence in the Netherlands

2002-2003

Ernstig overgewicht 2002-2003
per provincie

percentage volwassenen met ernstig overgewicht:
- 3 - 6
- 6 - 8
- 8 - 10
- 10 - 14,5

ernstig overgewicht: BMI > 30

Bron: CBS
Energy balance
Lifestyle interventions on physical activity and nutrition:

- could be effective in the Occupational Health setting
- feasible for Occupational Physicians (OPs) in the Netherlands (NVAB)
However...

Hardly implemented by OPs!

- Lack of knowledge, evidence-based methods, and strategies in work context
- No guideline(s) for OPs
- Interviews: a need for tools in daily practice

“Stop smoking, quit drinking, eat less, exercise more! Are you some kind of health nut?”
Aim

1. Develop
2. Evaluate
3. (Pre-)implement a weight gain prevention guideline for OPs.
# Development of guideline

<table>
<thead>
<tr>
<th>Netherlands Society of Occupational Medicine</th>
<th>Intervention Mapping protocol</th>
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<tbody>
<tr>
<td>1) Recruiting a project group</td>
<td>1) Needs assessment</td>
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<td>2) Context analysis and formulation clinical questions</td>
<td>2) Defining program objectives</td>
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<tr>
<td>3) Discussion of literature, existing evidence, and other considerations</td>
<td>3) Selecting theory-based intervention methods and practical strategies</td>
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<tr>
<td>4) First draft of a guideline</td>
<td>4) Design of the intervention program</td>
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<td>5) Commentary phase</td>
<td>5) Adoption and implementation plan</td>
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<td>6) Final test version of the guideline</td>
<td>6) Evaluation plan</td>
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Goals

Physical activity:

↑ At work and in leisure time
↑ Active transport
↓ Sedentary behavior

Nutrition:

↑ Fruit
↓ Snacks
Development of guideline

1) Evidence from literature
2) Meet needs of all stakeholders: interviews and focus groups with 3 employers, 33 employees and 7 OPs
3) Consensus: project group
4) Best practice: commentary phase
## The guideline, summarized

<table>
<thead>
<tr>
<th>A</th>
<th>Prevention at the environmental level (EM)</th>
<th>advice for the employer</th>
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<tbody>
<tr>
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<tr>
<td>1</td>
<td>Assess obesogenic risk factors in the work environment using the environment scan.</td>
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<td>2</td>
<td>Assess if current health policy is adequate.</td>
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<td>3</td>
<td>Inform and advise the employer and workers’ representative council.</td>
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<table>
<thead>
<tr>
<th>B</th>
<th>Prevention at the individual level (MIS)</th>
<th>advice for the employee</th>
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<tr>
<td>1</td>
<td>Identify individuals at risk for weight gain at the periodical health examination.</td>
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<tr>
<td>2</td>
<td>Set the agenda: which performance objective or other subject would the employee like to address.</td>
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<tr>
<td>3</td>
<td>Assess motivation for change and provide stage matched advice to change behavior:</td>
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<td>4</td>
<td>Plan next counseling session</td>
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<th>C</th>
<th>Evaluation and Maintenance</th>
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<tr>
<td>1</td>
<td>Evaluate prevention at the environmental level after 6 months using the environment scan.</td>
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<tr>
<td>2</td>
<td>Evaluate prevention at the individual level after 6 months using the employees action plan.</td>
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<tr>
<td>3</td>
<td>Maintain prevention at the environmental level by setting prevention of weight gain on the company agenda once a year and address relapse prevention.</td>
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<tr>
<td>4</td>
<td>Maintain prevention at the individual level by addressing the employees long term goals and provide permanent attention for weight gain prevention through active information.</td>
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Prevention at the Environmental level

• What are the environmental risk factors for unhealthy behavior and overweight? (e.g. commuting/transportation plan, use of stairs, sports stimulation, food/catering facilities)

• Is there a health policy aimed at prevention of weight gain?

• What is the advice to the employer?

→ Environment scan
Prevention at the Individual level

• Which employees are unhealthy (physical activity, dietary behavior, weight) according to norms/standards?

• What is the task of the OP in advising the employee?

• Is the employee motivated to change?

→ Counseling based on Motivational Interviewing
Evaluation and Maintenance

Evaluation
• Is the companies health policy adapted?
• Are the goals for individual employees reached?

Maintenance
• How is attention for health maintained in the organisation?
• How can the employees maintain their healthy behavior?
• Is there attention for relapse?
Intervention: an RCT among employees

- RCT: 26 OPs and 600 employees
- 4 Questionnaire’s during 1.5 years
- Measurements: waist circumference, PA, dietary behavior, absenteeism, productivity, cost-effectiveness
- Binder for OPs with tools en protocols
- Materials for employees
  - Pedometer, logbook, waist circumference measure, information brochures
Flowchart study population RCT

Willing to participate (38 OPs)

Excluded
- Not meeting inclusion criteria (7 OP)
- Company refused to participate (3 OPs)

Randomization (28 OPs)

Workers invited to participate (30 workers x 20 OPs = 600 workers)

Withdraw
- Lack of time (2 OP)
- Company withdraw (3 OP)
- Company delayed or cancelled HRA due to crisis (3 OPs)

Intervention group
Baseline measurement (10 OPs; 300 Workers)

Implementation of guideline

6 months follow-up

12 months follow-up

18 months follow-up (9 OPs; 175 Workers)

20%-40% Dropout during 1.5 years

Control Group
Baseline measurement (10 OPs; 300 Workers)

Usual Care

6 months follow-up

12 months follow-up

18 months follow-up (9 OPs; 175 Workers)
Discussion

Results………..? RCT in progress

— A substantial extension of the development period: 42 months

— Cost

+ In complex or relatively new topics this may be a feasible and valuable approach.

+ The time lost may be regained because of the gathered experience with (pre-)implementation of the draft guideline.
Reference