

Obesity Cost Calculator Worksheet

Directions: Please use the Obesity Cost Calculator Worksheet to collect information to better approximate the costs of obesity to your organization. If you do not have some of this data for your company, the Obesity Cost Calculator will provide default values from nationally representative datasets to calculate the cost estimates. The cost of obesity must be calculated before determining your return on investment. You will need to decide the appropriate inputs for this calculation based on your budgeted costs for the intervention, anticipated participation rates, employee co-payments, annual work days missed (current and anticipated post-intervention rates), and expected weight loss of employees.

CALCULATE THE COST OF OBESITY

Step 1: Company Profile

Describe your company

1. Identify your type of industry (choose one):
 - Multi-industry / Other
 - Agriculture
 - Construction
 - Education and Healthcare
 - Entertainment and Food Service
 - Finance, Insurance and Real Estate
 - Information
 - Manufacturing
 - Other Services
 - Professional, Management, and Administrative Services
 - Public Administration
 - Transportation and Utilities
 - Wholesale and Retail Trade

2. Identify your state or select multi-state if appropriate.
 - Multi state/United States.
 - State _____

Step 2: Employees' BMI

Your company's obesity prevalence is calculated based on employees' [Body Mass Index \(BMI\)](#).

1. Do you have Body Mass Index (BMI) information for your employees?

i If you have measured and documented each of your employees' BMI, answer "Yes" to this question. If not, answer No, and these values will be estimated for you.

- Yes, provide the following data (choose a, b, c, **or** d):
- No, skip to question #2 (allow the cost calculator to make an estimate).

a. Total

	Normal	Overweight	Obese 1	Obese 2	Obese 3
BMI	< 25	25-29.9	30-34.9	35-39.9	40+
Total:	_____	_____	_____	_____	_____

b. By gender only

	Normal	Overweight	Obese 1	Obese 2	Obese 3
BMI	< 25	25-29.9	30-34.9	35-39.9	40+
Males:	_____	_____	_____	_____	_____
Females:	_____	_____	_____	_____	_____

c. By age group only

	Normal	Overweight	Obese 1	Obese 2	Obese 3
BMI	< 25	25-29.9	30-34.9	35-39.9	40+
Ages 18-44:	_____	_____	_____	_____	_____
Ages 45+:	_____	_____	_____	_____	_____

d. Combination of employees by gender and age group

	Normal	Overweight	Obese 1	Obese 2	Obese 3
BMI	< 25	25-29.9	30-34.9	35-39.9	40+
Males, ages 18-44:	_____	_____	_____	_____	_____
Males, ages 45+:	_____	_____	_____	_____	_____
Females, ages 18-44:	_____	_____	_____	_____	_____
Females, ages 45+:	_____	_____	_____	_____	_____

2. The calculator provides default values from nationally representative datasets to assist with completing the cost estimates. Would you like these averages based on industry or state values?

- Industry
- State

3. Select the most detailed category for which you have an estimate of the number employees in your company (choose e, f, g, **or** h):

e. Total number of employees:

f. By gender only

Males:

Females :

g. By age group only

Ages 18-44:

Ages 45+:

h. By gender and age group

Males, ages 18-44:

Males, ages 45+:

Females, ages 18-

44:

Females, ages

45+:

Step 3: Wages and Benefits

The cost of increased absenteeism due to obesity is estimated based on the wages and benefits earned by your employees. You may enter different wage information for employees that receive health benefits and those that do not.

1. Do you know the average hourly wages of employees in your company?

i If you select "No" (and don't specify the percentage of employees who receive benefits), the estimated average compensation for employees in your company will be based on a weighted average of compensation amounts for employees who do and do not receive benefits in your industry. If you select "No" (and specify the percent of employees who receive benefits), hourly wages for employees in your company are estimated using industry-based averages of wages and benefits. The calculator assumes that wages for employees who receive benefits exclude pay for sick days, vacation time, and holidays.

- Yes, enter your employees' average hourly wages (choose a, b, c, **or** d)
- No, skip to question #2 (allow the cost calculator to make an estimate)

a. Total

Employees with no benefits

Avg. hourly wage

\$ _____

Employees with benefits

Avg. hourly wage

\$ _____

b. By gender only

	Employees with no benefits Avg. hourly wage	Employees with benefits Avg. hourly wage
Males	\$ _____	\$ _____
Females	\$ _____	\$ _____

c. By age group only

	Employees with no benefits Avg. hourly wage	Employees with benefits Avg. hourly wage
Ages 18-44:	\$ _____	\$ _____
Ages 45+:	\$ _____	\$ _____

d. By gender and age group

	Employees with no benefits Avg. hourly wage	Employees with benefits Avg. hourly wage
Males, ages 18-44:	\$ _____	\$ _____
Males, ages 45+:	\$ _____	\$ _____
Females, ages 18-44:	\$ _____	\$ _____
Females, ages 45+:	\$ _____	\$ _____

2. Do you know the percent of employees receiving health benefits?

i If you select "No", the percent of the employees in your company who receive benefits is estimated based on an industry-based average.

- Yes, enter the percent of employees receiving health benefits (choose e, f, g, **or** h):
- No, skip this question (allow the cost calculator to make an estimate).

e. Total

_____ %

f. By gender only

Males _____ %

Females _____ %

g. By age group only

Ages 18-44: _____ %

Ages 45+: _____ %

h. By gender and age group

Males, ages 18-44: _____ %

Males, ages 45+: _____ %

Females, ages 18-44: _____ %

Females, ages 45+: _____ %

CALCULATE THE INTERVENTION RETURN ON INVESTMENT

The cost of obesity must be calculated before determining your return on investment (ROI). You will need to decide the appropriate inputs for this calculation based on your budgeted costs for the intervention, anticipated participation rates, employee co-payments, annual work days missed (current and anticipated post-intervention rates), and expected weight loss of employees.

To analyze the return on investment of an intervention, you will be asked to enter the following:

Intervention Name

1. Enter your own name for an example scenario:

- ❗ For example, fitness center, bariatric surgery, weight management program, etc.

Participation

2. Target Population (choose one):

- o All Overweight and Obese = (BMI \geq 25).
- o All Obese = (BMI \geq 30)
- o Obese 1 = (BMI 30-34.9)
- o Obese 2 = (BMI 35-39.9)
- o Obese 3 = (BMI 40+)
- o Overweight = (BMI 25-29.9)

3. Expected participation rate of target population:

- ❗ The percent of the target population likely to participate in the intervention. For example, if the target population is Obese 3 individuals (BMI 40+), then an expected participation rate of 50 percent means that half of the Obese 3 individuals at the company will participate.

_____ %

Cost

4. Express costs (choose one):

- ❗ Select "Per participant" to enter into the "Annual Cost" field the average cost of implementing the intervention with each participant over one year for use in the calculations. Select "In total" to instead enter a value for the total cost of implementing the intervention with all participants. You typically want to choose "Per participant" if the intervention's costs depend heavily on the number of participants and "In total" if the costs don't tend to vary with participation level. Examples of interventions that

would fall in these categories, respectively, are a one-on-one weight loss counseling program and a fitness center.

- o Per Participant
- o In Total

Annual cost:

i Enter the direct cost of implementing the intervention each year either per participant or in total, depending on your selection for "Express Costs" above. These costs may be different over time; therefore, you may enter different costs for the first year of implementation and all following years. For example, if the intervention that you want to observe costs \$1000 in the first year and \$500 in subsequent years to implement with 50 participants, then you should enter \$1000 in Year 1 and \$500 in Subsequent years if "In total" is selected above **OR** \$20 and \$10, respectively, if "Per participant" is selected.

5. Year 1:

\$_____

6. Subsequent years:

\$_____

7. Intervention co-payment for employees (% of cost):

i Portion (0-100%) of the intervention cost that participants pay. The calculator uses this value to calculate the intervention costs paid by the employer, which are assumed to be equal to the remaining portion of the costs after participant copay.

_____ %

Annual workdays missed due to intervention (per participant)

i Average number of days that an intervention participant misses from work due to participation in the intervention. For example, if the intervention is a medical intervention such as bariatric surgery, this would include days for pre-op, surgery, and recovery. These values may be different over time; therefore, you may enter a different number of days for the first year of implementation and all following years.

8. Year 1:

_____ days

9. Subsequent years:

_____ days

10. Number of years cost incurred (1 - 20):

i The number of years the costs of the intervention are incurred can range from one to 20 years. The number of years will apply to both the direct costs of the intervention to the company as well as to the work days missed. It is assumed that the company has a stable cohort of employees.

_____ years

11. Annual discount rate on cost and benefits (0 - 8)

i The discount rate is used to convert the value of costs and savings in the future to current dollar values. It should equal the rate of return on investments after adjusting for inflation. Setting the rate to 0 will assume that the value of a future dollar and a current dollar are the same. Typically discount rates are set in the range of 3-5%.

_____ %

Effect

12. Enter effect in terms of (choose one):

i Expected weight loss resulting from participation in the intervention can be entered either as i) average pounds (lbs) or kilograms (kgs) or ii) average percent of body weight and is allowed to vary over time. Always express weight loss as relative.

- Lb loss
- Kg loss
- % of body weight loss

Expected weight loss (vs. baseline) from participation

i Enter the expected number of pounds, kilograms, or percent of body weight (depending on your selection for "Effect in terms of" above) that an individual can expect to lose due to participation in the intervention. For example, if on average participants lose 5 pounds in the first year, 3 pounds in each of the next 3 years, and no more weight after that, then you should choose "lbs" for "Effect in terms of" above, then enter "5" for Year 1 and "3" for subsequent years, and finally "4" in the "Number of years of weight loss" field below.

13. Year 1:

14. Subsequent years:

15. Number of years weight loss:

① Number of years that participants will lose weight due to participation in the intervention on average.

_____ years

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Center for Engineering & Occupational Safety and Health, and
Occupational Health Strategic Healthcare Group, Office of Public Health (10P3)
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www.publichealth.va.gov/employeehealth