

# Food, Energy and Body Weight

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1. Your body uses a lot of energy to run, dance or play a sport. How do your muscles get the energy to move? Include the terms ATP, cellular respiration and food in your answer.

2. Complete the chart to show how energy and matter change when a person runs, dances or plays a sport. (Hint: Think about your answer to the previous question.)

<u>Inputs</u>		<u>Outputs</u>
Type of Energy	~~~~~ >	Type of Energy
Matter (molecules)	<b>Person who is Running, Dancing or Playing a Sport</b>	Matter (molecules)
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3. The average American consumes almost 2000 pounds of food each year. Luckily, we do not gain 2000 pounds of weight each year! What happens to all the weight of the food we eat? Where do the atoms in the food molecules go?

4. If a person consumes more calories than needed for body activities, he or she will gain weight. Is energy (calories) converted into matter (weight)?  yes  no  
Explain why a person who eats too many calories will gain weight.

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<sup>1</sup> Teachers are encouraged to copy this student handout for classroom use. A Word file (which can be used to prepare a modified version if desired), teacher notes, comments, and links to additional activities are available at <http://serendip.brynmawr.edu/exchange/bioactivities>.