

## Additional Problem II for Physics 102

If you drink cold water, it will soon warm up to body temperature (about  $37^{\circ}\text{C}$ ). This takes energy. Therefore, you ought to be able to keep your weight down even if you eat fattening food provided you also drink lots of cold water, right?

Estimate what volume of cold water you would need to drink to overcome the effect of eating one chocolate sundae. (A chocolate sundae contains about 500 Cal. Recall that 1 Cal, the “calorie” normally used in the U. S. to measure the energy content of food, is 1000 cal, or 1 kcal.)