

# Glossary

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### Homeostasis

Homeostasis, in physiological/biological systems, refers to the processes and mechanisms involved in the maintenance of a constant internal environment, in spite of fluctuations in environmental conditions.

### Diabetic microangiopathy

Diabetic microangiopathy describes the microvascular complications that are manifest in the diabetic state. These complications arise from hyperglycemia-induced damage to the microvasculature from (at least in part) the formation of advanced glycation end products; they include diabetic nephropathy, retinopathy, and neuropathy.

### Cardiac efficiency

Cardiac efficiency describes the relationship between cardiac work and myocardial oxygen consumption ( $mVO_2$ ) by the ventricle during the course of cardiac contraction, and is expressed as the work/ $mVO_2$  ratio.

### PPAR (peroxisome proliferator activated receptor)

The PPARs are a family of nuclear receptors that act as transcription factors controlling the expres-

sion of a number of genes involved primarily in fatty acid oxidation, fatty acid synthesis, and inflammation.

### AGE (advanced glycation end products)

Advanced glycation end products are the result of a chain of chemical reactions after an initial glycation reaction. They may be formed externally, such as heating of sugars with fats or proteins, or they may be formed internally within the body through normal metabolism and aging. AGEs have also been shown to have a role as proinflammatory mediators in disease states such as gestational diabetes.

### Myocardial stiffness

Myocardial stiffness is a term that often relates to diastolic function of the heart and is defined by the relationship between pressure and volume. People with heart failure with normal ejection fraction (diastolic heart failure) often have increased myocardial stiffness.