The heart is a vital organ that relies on specific nutrients and a continuous supply of energy to support and maintain a regular rate and rhythm, yet the role of nutrition in pets’ cardiac health is often overlooked.

The Purina Institute provides the scientific facts to support your nutritional conversations.

In focus

The heart can beat more than a billion times during the life of a dog or cat.1

Nutrition and heart health

Feeding a complete and balanced diet helps ensure that pets obtain the nutrients that play key roles in supporting heart health.

- Fatty acids for cardiac energy
- Omega-3s for cardiovascular benefits
- Minerals (e.g., magnesium) to support normal cardiovascular function
- Taurine for heart health
- Carnitine (or amino acid precursors) to aid cardiac energy metabolism

Maintaining dogs and cats at their ideal body condition can also contribute to optimal cardiac health.

Learn more about the power of nutrition at PurinaInstitute.com
Although obesity is not a primary risk factor for developing heart disease in dogs and cats, excess weight can affect the heart. Studies show that overweight dogs can have:

- Higher resting heart rates and higher systolic blood pressure
- More markers of inflammation in their blood – a condition associated with heart disease
- Abnormal thickness of the heart’s left ventricle

Similar data are not available for cats. However, obese cats are more than four times at greater risk of becoming diabetic, and feline diabetes has been linked with heart muscle dysfunction.

Both taurine and carnitine are nutrients that play key roles in heart health.

- The amino acid taurine helps maintain heart cell function and heart muscle contractility.
- Carnitine helps transport long-chain fatty acids into the mitochondria of heart muscle cells for energy production.

Dogs can produce enough taurine from other amino acids to satisfy their needs. Cats are unable to produce enough taurine themselves, so this essential amino acid must be obtained from their diet (from meat, shellfish or supplements). Taurine deficiencies, although rare, can occur in dogs if their diet is inadequate in the precursor amino acids used to make taurine. Taurine deficiencies can lead to heart disease in both dogs and cats.

Both dogs and cats can synthesize carnitine from the amino acids lysine and methionine.

### References