Pantethine is the metabolically active form of pantothenic acid, or vitamin B5. Pantethine is a vital component of coenzyme A, a cofactor involved in many chemical reactions in the body, especially those related to fat and carbohydrate metabolism and energy production. It helps to metabolize fatty acids by promoting carnitine transport in the mitochondria. It supports healthy lipid and cholesterol levels by modulating enzymes (such as HMG-CoA reductase) involved in cholesterol synthesis in the liver. It has also been shown to boost adrenal health and support healthy hormone and neurotransmitter production. Two soft gel capsules of this Pantethine formulation provide 900 mg of pantethine, the optimal clinical dose, delivered in a concentrated liquid delivery system.

Overview
Pantethine is an intermediate in the transformation of pantothenic acid to co-enzyme A, which helps in metabolizing amino acids, carbohydrates and lipids. As a result, this form of the vitamin plays a key role in supporting cardiovascular health. Pantethine increases cysteamine, a compound shown to promote healthy cholesterol levels and support adrenal and hormonal health. Cysteamine has also been shown to react with important hepatic enzymes, acetyl-CoA carboxylase and HMG-CoA reductase. In the liver, Pantethine helps support healthy cholesterol levels and healthy blood fats. Pantethine has also been shown to support platelet function, impart antioxidant effects and improve hepatic fat processing.

Research
Numerous small, double-blind studies have suggested pantethine may support cardiovascular wellness and healthy blood fats. A randomized, triple-blinded controlled study of 120 subjects gave either 600 mg pantethine from baseline to week 8, and 900 mg per day, weeks 9-16, or an identically labeled, non-biologically active placebo. In comparison to placebo, pantethine significantly promoted healthy cholesterol levels and markers of cardiovascular health. A 2014 randomized, triple-blinded, placebo-controlled study conducted a similar study using the National Cholesterol Education Program (NCEP) guidelines. Thirty-two subjects were given the same previously mentioned doses randomized or a placebo. Again, a significant influence on healthy total cholesterol levels was found.

Adrenal and Hormonal Health
Pantethine also supports healthy adrenal cortex function and hormone production, particularly during times of stress. Deficiency of vitamin B5 is known to result in adrenal atrophy, which is characterized by increased fatigue and sleep disturbances. Pantethine supplementation has also been shown to stimulate the ability of adrenal cells in animals to secrete corticosterone and progesterone. Recent research has found that pantethine has neuroprotective effects by enhancing brain-derived neurotrophic factor (BDNF) levels. This makes it a promising agent in supporting this pathway, as it is a naturally occurring compound with negligible side effects and easy metabolism.
Directions
2 capsules per day or as recommended by your health care professional.

Does Not Contain
Gluten, corn, yeast, artificial colors and flavors.

Cautions
If you are pregnant or nursing, consult your physician before taking this product.

References
4. From: http://umm.edu/health/medical/altmed/supplement/vitamin-b5-pantothenic-acid

Supplement Facts

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>2 Capsules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Servings Per Container</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pantethine</td>
<td>900 mg</td>
</tr>
</tbody>
</table>

* Daily Value not established