

# Tri Sugar Shield™

## Three Nutrients to Support Healthy Blood Sugar Levels

### Item #01803 • 60 vegetarian capsules

Many aging individuals find themselves under assault from rising **blood sugar** levels.

Despite a healthy diet and exercise, blood sugar levels can rise due to a number of factors including excess *gluconeogenesis* ... that's how the liver produces glucose from protein. Another issue is the rapid conversion of any **starch**, including whole grains, into **glucose**. So even if you watch your diet and exercise, your blood sugar levels can still rise as you get older.<sup>1,2</sup>

An all-natural, *multi-pronged* approach has been designed to support the natural balance of key *glucose pathways!* **Tri Sugar Shield**<sup>TM</sup> provides three plant-derived nutrients that — through their *rich array of complementary mechanisms*<sup>3-18</sup> — offer an <u>unrivaled</u> level of optimal, broadspectrum support for healthy glucose metabolism within normal range in aging individuals.

**Life Extension® Tri Sugar Shield**<sup>TM</sup> contains the following three nutrients:

#### Sorghum Extract

Sorghum has long been cultivated in Asia (and now is grown in Africa, India, China, Australia, and the USA) and helps maintain healthy blood sugar levels, among those in the normal range, by modulating *four* different mechanisms:

- Balances the rate of sugar manufacture in the liver (*gluconeogenesis*).<sup>5</sup>
- Promotes insulin sensitivity.<sup>6</sup>
- Regulates *PPAR-gamma*, a metabolic thermostat controlling glucose metabolism.<sup>6,7</sup>
- Regulates the enzyme *alpha-amylase*, which in turn controls the release of sugar found in starch.<sup>3,4</sup>

### New look outside. Same quality inside.



The transition to this new look will happen over time.

#### Each vegetarian capsule contains:

Calcium (as dicalcium phosphate) 20	mg
Sorghum bran (Sorghum bicolor)	mg
extract [providing 270 mg proanthocyanid	ns]
White mulberry extract (leaf) 150	mg
[providing 7.5 mg 1-deoxynojirimycin]	
Phloridzin 50	mg
[from apple extract (root bark)]	

Other ingredients: vegetable cellulose (capsule), microcrystalline cellulose, maltodextrin, silica, vegetable stearate.

#### **Dosage and use**

 Take one capsule twice daily immediately before the heaviest carbohydrate or sugar containing meals/drinks, or as recommended by a healthcare practitioner.



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#### White Mulberry Leaf Extract

Mulberry leaf has been used in Chinese traditional medicine for centuries. Mulberry leaf extract targets *three* different mechanisms:

- Targets the *alpha-glucosidase* enzyme to regulate conversion of starch into glucose.<sup>8-10</sup>
- Supports glucose transporter *GLUT4* that moves glucose out of the bloodstream and into muscle and liver cells.<sup>11,12</sup>
- Promotes insulin sensitivity.<sup>13</sup>

#### Phloridzin

Phloridzin is a natural polyphenol found in various fruit trees.<sup>14</sup> Phloridzin helps maintain healthy blood sugar levels, among those in the normal range by:

- Targeting carrier protein *SGLT1*, in turn helping to block the absorption of glucose into the bloodstream.<sup>15,16</sup>
- Targeting carrier protein *SGLT2*, in turn supporting glucose elimination via urine.<sup>17,18</sup>

By targeting <u>all</u> of these diverse glucose pathways, Life Extension<sup>®</sup> Tri Sugar Shield<sup>TM</sup> delivers the <u>widest</u> <u>possible support</u> to help naturally stabilize already healthy glucose levels!

#### References

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<sup>18.</sup> Mol Biol Rep. 2012 May;39(5):5299-306.