### "The Healthy Ten

Ten Clinically-Validated Benefits of Natural Astaxanthin\*



#### **Brain Health**

- 9 Human Clinical Studies
- 83 Supporting Pre-Clinical Trials



### Skin Health & UV Protection

- 12 Human Clinical Studies
- 38 Supporting **Pre-Clinical Trials**



#### **Immune System** Modulation

- 5 Human **Clinical Studies**
- 28 Supporting **Pre-Clinical Trials**



#### Reproductive and Hormonal Health

- 5 Human Clinical Studies
- 23 Supporting Pre-Clinical Trials



### Joint, Tendon and **Muscle Support**

- 10 Human Clinical Studies
- 78 Supporting Pre-Clinical Trials

### Eye Health

- 15 Human Clinical Studies
- 29 Supporting Pre-Clinical Trials



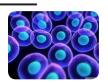
### **Cardiovascular** Support

- 11 Human Clinical Studies
- 56 Supporting **Pre-Clinical Trials**



### Anti-Aging & Cellular Health

- 62 Human Clinical Studies
- 334 Supporting Pre-Clinical Trials



### **Athletic Performance** & Energy Levels

- 18 Human Clinical Studies
- 35 Supporting **Pre-Clinical Trials**



### **World's Strongest** & Highest Quality **Natural Antioxidant**

- 13 Human **Clinical Studies**
- 114 Supporting Pre-Clinical Trials









### World's Strongest **& Highest Quality Natural Antioxidant**

#### **Clinical Trial Results**

- Reduces various oxidative stress markers
- Prevents oxidative damage
- Prevents peroxidation of blood lipids including LDL cholesterol
- Increases oxygen scavenging activity and suppresses peroxide production
- Dosage range 2mg to 4mg per day





#### In-Vitro Research Results

- Multiple times stronger than all other antioxidants tested in various head-tohead antioxidant experiments regardless of testing method
  - Generally at least 10X stronger than all other carotenoids
  - 800X stronger than CoQ10
  - 550X stronger than Vitamin E
  - 6000X stronger than Vitamin C
  - 18X stronger than Pycnogenol®
- 20X to 90X stronger than Synthetic Astaxanthin as an antioxidant in three separate tests from two peer-reviewed studies



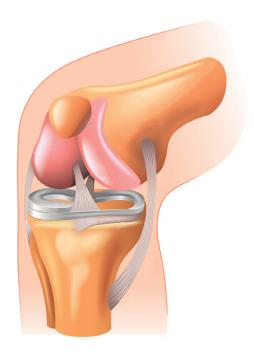




# Joint, Tendon and Muscle Support

### **Clinical Trial Results**

- Prevents muscle damage and inflammation in athletes
- Reduces pain in rheumatoid arthritis sufferers
- Decreases pain rate and pain duration in carpal tunnel syndrome sufferers
- Improves grip strength by 93% in sufferers of tendonitis (tennis elbow) with reduced pain and improved mobility
- Reduces joint and muscle pain in heavily-training athletes
- Decreases C-Reactive Protein (CRP) levels (key marker for systemic or "silent" inflammation)
- Dosage range 4mg to 12mg per day



#### In-Vitro Research Results

- Astaxanthin has been shown to support 8 different inflammatory response markers without side effects or contraindications
  - Tumor Necrosis Factor-A
  - Prostaglandin E-2
  - Interleukin 1-B
  - Interleukin 6
  - Nitric Oxide
  - Nuclear Factor Kappa-B
  - Cox 1 Enzyme
  - Cox 2 Enzyme



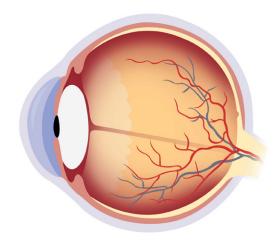




### Eye Health

### **Clinical Trial Results**

- Dose-dependently improves visual acuity (the ability to see fine detail)
- Improves depth perception
- Improves eye fatigue
- Also can prevent eye fatigue
- Increases retinal capillary blood flow
- Increases blood flow velocity to the eyes
- Prevents eye strain
- Improves eye accommodation (adiustment of the lens that allows it to focus)



- Reduces blurred vision
- Reduces eye soreness
- Prevents eve dryness
- Prevents diplopia (double vision)
- Dosage range 4mg to 8mg per day



### **Brain Health**

### **Clinical Trial Results**

- Prevents age-related decline in cognitive function
- Improves psychomotor function in elderly subjects
- Improves marker for dementia in middle-aged and senior subjects and may contribute to the prevention of dementia from aging
- Improves cognitive function in healthy middle-aged and elderly subjects
- Improves psychomotor speed and processing speed in patients with mild cognitive impairment
- Decreases mental fatigue and depression
- Dosage range 6mg to 12mg per day



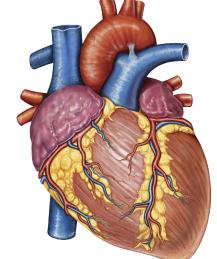




### Cardiovascular Support

#### **Clinical Trial Results**

- Improves blood lipid parameters in patients with mild hyperlipidemia
- Dose-dependently inhibits LDL cholesterol oxidation
- Decreases systolic and diastolic blood pressure
- Improves blood flow rate
- Decreases heart rate of athletes when doing endurance training
- Dosage range 4mg to 18mg per day



### **Key In-Vitro Study Result**

• Completely negates the pro-oxidant effects of Vioxx (prescription antiinflammatory that caused heart attacks in some consumers due to it becoming a pro-oxidant)

### Skin Health and **Beauty-from-Within**

### Clinical Trial Results



- Reduces fine lines and wrinkles
- Improves skin moisture and elasticity
- Prevents skin sagging
- Prevents skin deterioration due to UV and other environmental factors
- Prevents photo-aging of skin
- Rejuvenates facial skin
- Improves skin conditions in all layers of the skin (corneocyte layer, epidermis, basal layer and dermis)
- Dosage range 4mg to 6mg per day







**Athletic Performance** and Energy Levels

### **Clinical Trial Results**

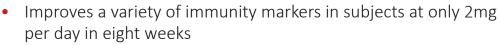
- Improves power output by 15% and reduces racing time by 5% in competitive cyclists
- Promotes recovery from exercise
- Prevents mental and physical fatigue
- Improves endurance
- Increases strength in healthy subjects
- Increases grip strength in sufferers of tennis elbow by 93%
- Decreases lactic acid levels
- Decreases respiratory parameters during exercise
- Helps prevent muscle damage and

inflammation in elite soccer players

- May be effective in preventing exercise-induced free radical production
- Improves oxidative status in athletes
- Prevents joint and muscle soreness after exercise
- Decreases heart rate in athletes doing endurance training
- Dosage range 4mg to 12mg per day

### Immune System Modulation

### **Clinical Trial Results**



- Increases the total number of antibody-producing B-cells
- Amplifies natural killer cell cytotoxic activity
- Leads to increased number of T-cells
- Stimulates white blood cell counts
- Significantly increases delay-type hypersensitivity response
- Dramatically reduces DNA damage
- Raises immunoglobulin levels in healthy athletes
- Suppresses lymphocyte activation in patients with allergic rhinitis and pollen-related asthma
- Leads to therapeutic improvement in patients suffering from auto-immune disease
- Dosage range 2mg to 4mg per day









## Reproductive and Hormonal Health

#### **Clinical Trial Results**

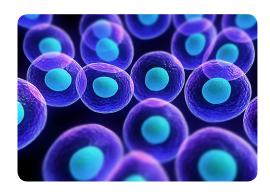
- Improves sperm functioning, sperm linear velocity, sperm quality and sperm motility
- Decreases reactive oxygen species in sperm
- May be used to decrease male idiopathic infertility
- Improves conception rate in infertile men
- Also improves sperm functioning and motility in normal men without any fertility issues
- In combination with Saw Palmetto, increases testosterone levels in healthy men
- Dosage 16mg per day



### **Anti-Aging and** Cellular Health

### **Clinical Trial Results**

- Skin Health and Beauty-from-Within
- Eye & Brain Health
- Joint, Tendon & Muscle Health
- Cardiovascular Protection
- Immune System Modulation
- Strength, Endurance and Energy Levels
- Dosage range 4mg to 12mg per day



### In-Vitro Research Results

- Mitochondria protection
- Prevention of damage to DNA
- Profound inhibition of oxidation
- Safe & natural anti-inflammatory activity







## Major Areas of Pre-Clinical Research



•	Support of Healthy Cell Lines	63 studies
•	Liver & Kidney Health	50 studies
•	Glucose Metabolism Management	32 studies
•	Gastrointestinal Health	19 studies

Respiratory Health

7 studies

<sup>\*</sup> Please note this document is available for various countries all over the world and hence it may contain statements not applicable to your country.





