**E. EXCEL**

**G-ART™**

Questions & Answers

1. **What is glucosamine?**
   
   Glucosamine is an amino sugar produced naturally by the body from glucose (a sugar) and glutamine (an amino acid). Glucosamine is needed to produce glycosaminoglycans, which are major components of cartilage.

2. **What are the functions of glucosamine in the body?**
   
   Glucosamine is essential for healthy joints and bones. Cartilage and other body tissues use it as a building block. Glucosamine also helps to normalize cartilage metabolism, and reduce joint pain and inflammation.

3. **How can we stimulate the body’s production of glucosamine naturally?**
   
   As the body ages, it needs more antioxidants to help maintain healthy cell regeneration. A plant-based diet rich in glutamine and antioxidants provides the body with material to stimulate glucosamine production and help renew joint cartilage.

4. **What is glutamine?**
   
   Glutamine is a naturally occurring amino acid (a building block of protein) in the human body. It is needed by the body to produce glucosamine. Glutamine aids cartilage production, immune function and healing. It is important for the body’s chemical processes and is a major fuel for the body. Glutamine also promotes gastrointestinal health.

5. **What increases the body’s need for glutamine?**
   
   The human body may need more glutamine than usual in cases of heavy exercise, infection, surgery, and trauma, such as burn injuries. Vegetarians especially need a plant-based source for glutamine.

6. **What do glucosamine supplements use for glucosamine?**
   
   Supplemental glucosamine is either derived from animal sources or made in a laboratory. Glucosamine does not exist on its own in nature. Sources include glucosamine hydrochloride, glucosamine sulfate and chondroitin sulfate, which are extracted from chitin in the shells of shellfish, or from bovine or shark cartilage or made in laboratories using fermented corn as a partial material.

7. **What are some good plant sources of glutamine?**
   
   Good plant sources of glutamine include brown algae, parsley and spinach. However, cooking destroys glutamine in vegetables.

8. **What is chondroitin sulfate?**
   
   Chondroitin sulfate is a glycosaminoglycan that occurs naturally in the body. It is a major component of cartilage. It helps to keep cartilage healthy by absorbing fluid (water) into the connective tissue. Chondroitin sulfate may also block enzymes that break down cartilage, and it provides the building blocks for the body to produce new cartilage.

9. **What is Nutritional Immunology’s take on glucosamine supplementation?**
   
   Nutritional Immunology advocates eating plant foods rich in glutamine, manganese and antioxidants to stimulate the human body’s natural production of glucosamine.

10. **What is G-ART?**
    
    G-ART supports joint and bone health. Unlike manufactured glucosamine, G-ART helps to stimulate the body’s natural secretion of glucosamine with wholesome plant foods. The ingredients—brown algae, ginger, alfalfa, parsley, acerola cherry, spinach and cactus—are rich in nutrients including glutamine, manganese, chlorophyll, phytoestrogens, vitamin K, antioxidants, phytochemicals and polysaccharides.
These nutrients help balance immune function, reduce inflammation (necessary for healthy joints), enhance joint regeneration and promote healthy joints. G-ART is suitable for vegans, vegetarians and people who are allergic to shellfish.

**Who should take G-ART?**

- Growing children can take G-ART to support height growth.
- Athletes can take G-ART to promote joint health as their rigorous training can place a lot of stress on joints.
- Middle-aged individuals seeking to enhance joint functions.
- The elderly who seek to enhance joint function. As the body ages, it needs more antioxidants to help maintain healthy regeneration of cells. G-ART is naturally high in antioxidants, such as vitamin C.

**What is the recommended dosage for G-ART?**

Three capsules, two or three times daily as a food supplement.

**What is unique about G-ART?**

Replacing nutrients supposed to be secreted by the body can disrupt natural body processes, create imbalance in the body and cause dependence, just like how muscles waste away if they are unused. Other concerns about manufactured glucosamine include shellfish allergy, contamination, ecological harm, insulin resistance, effectiveness and possible adverse effects.

Unlike manufactured glucosamine, G-ART harnesses the body's natural ability to secrete glucosamine. It nourishes the body with a unique formulation of wholesome plant foods to stimulate glucosamine production.

**Can I take G-ART if I am allergic to shellfish?**

Yes. G-ART does not use any shellfish-derived ingredients.

**Is G-ART suitable for vegans and vegetarians and/or children?**

Yes. G-ART is made from wholesome brown algae, ginger, alfalfa, parsley, acerola cherry, spinach and cactus. Its capsule casing is made from hypromellose, a cellulose material derived from softwood trees. For children, G-ART stimulates production of glucosamine, which is important for children’s healthy bone and joint growth so they can grow tall.

**Why does G-ART use wholesome plant foods instead of manufactured glucosamine?**

Nutritional Immunology promotes a plant-based diet consisting of a variety of plant foods in their wholesome forms, not isolated nutrients, for joint health.

Wholesome plant foods present nutrients in natural and safe combinations. Each plant food is a unique and balanced blend of antioxidants, phytochemicals and polysaccharides to nourish the immune system and joints. Consuming plant foods rich in glutamine and antioxidants helps to stimulate glucosamine production.

**Some E. Excel products contain alfalfa. Do they contain L-canavanine sulfate?**

L-canavanine sulfate, an organic substance found in alfalfa seeds, can cause toxic side effects when large amounts are eaten over time. The alfalfa sprouts we usually consume are six to eight days old. At the sprout stage, L-canavanine sulfate in seeds is greatly decreased. E. EXCEL products contain alfalfa that is specially cultivated and grown for much longer than eight days. Plus, E. EXCEL uses only the alfalfa leaves. Hence, you can rest assured that E. EXCEL products are free of L-canavanine sulfate.