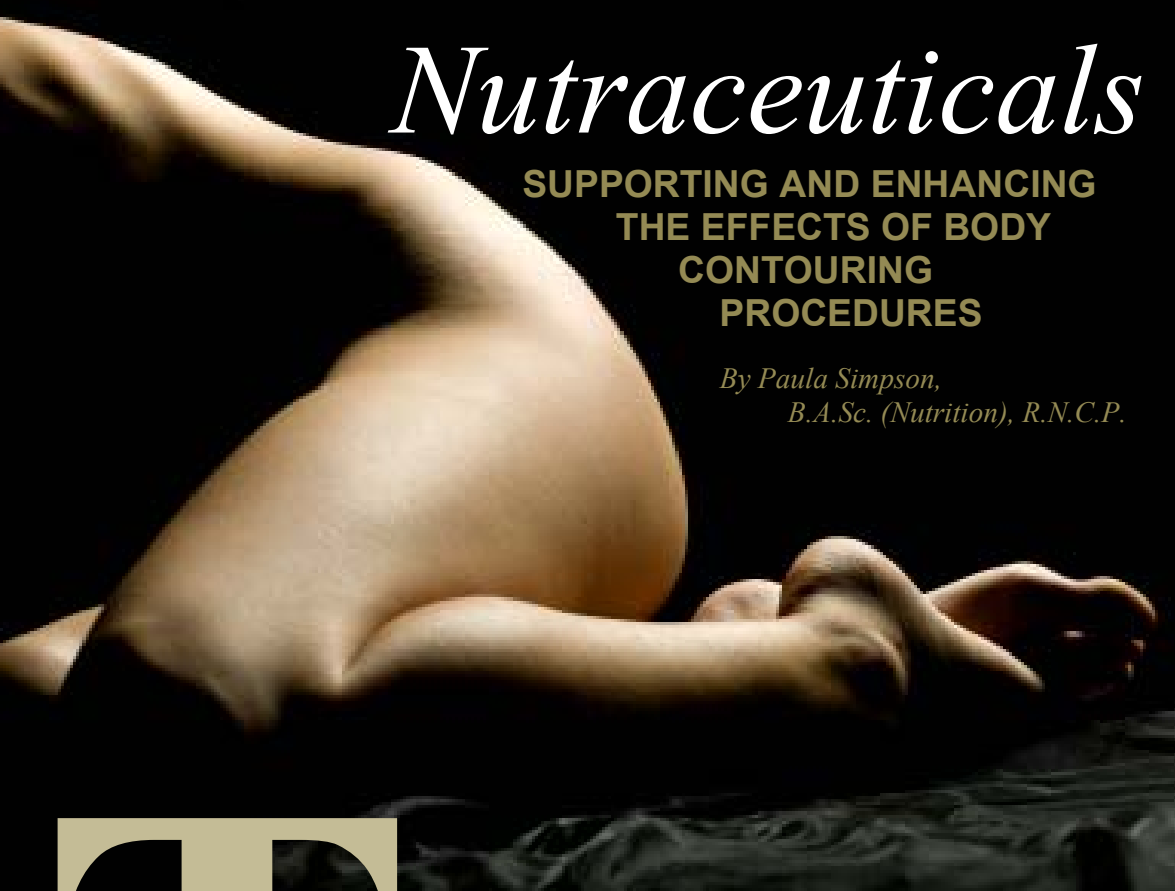


Nutraceuticals

wellness

SUPPORTING AND ENHANCING THE EFFECTS OF BODY CONTOURING PROCEDURES

By Paula Simpson,
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atnt wellness

The regulation of body weight involves complex signalling systems and changes in appetite and metabolic efficiency. Many studies point to the existence of a set point that makes weight loss or gain progressively difficult. However, there is likely to be an upper and a lower limit for how much metabolic efficiency can change. As long as energy expenditure exceeds that of intake, a decrease in body weight must occur.

According to the American Society of Plastic Surgeons, liposuction remains within the top 3 surgical procedures for both men and women.

Unfortunately, we are losing the battle to the bulge as statistics show 1 in 3 adults in the U.S. are obese. Cellulite, or otherwise known as “dimpling of the skin,” commonly occurs on the thighs and buttocks, affecting most post-adolescent women. While cellulite may not be potentially hazardous to

health, it remains nonetheless an issue of cosmetic concern for those suffering its consequences on their appearance.

According to the American Society of Plastic Surgeons, liposuction remains within the top 3 surgical procedures for both men and women. However, with technological advancements minimally invasive body contouring is an increasingly popular aesthetic application. There are many forms of non-invasive treatments from mechanical manipulation, thermally active application, and radiofrequency therapies.

With laser Liposuction (brand SmartLipo™) a very small cannula enters the body with an even tinier diode laser attached to it. This laser then zaps the surrounding fat cells safely, liquefying them enough to be removed by the body's natural processes. In Endermologie, a technique using a machine with two motorized rollers and a vacuum fold and unfold the skin to move connective tissue and fat cells near the surface.

The increased blood and lymph flows bring fresh oxygen and nutrients to all the layers of the

skin and even to the tissues below the skin. This improved circulation then flushes away the excess water, fats, and cell wastes freed up by the massage. Another form of treatment, VelaSmooth also uses lifting and rolling actions but combines them with infrared light and radio frequencies that warm the dermal layer and drain trapped fluids. The unique combination of light and bi-polar radio frequency (RF) energies and negative pressure deploy targeted heat to adipose tissue.

These mechanisms work synergistically to reduce the appearance of cellulite and facilitate new collagen deposition. TriActive LaserDermology uses a massage machine and cryogenic therapy to get rid of water

retention and swelling that might be aiding in the appearance of cellulite.

Ionithermie combines a hand-held device with conductive clay and uses electrical stimulation to encourage circulation and reduce water weight. In Mesotherapy herbs, vitamins, minerals, amino acids, enzymes, and other homeopathic medicines are actually injected into fat and connective tissue. This is purported to break down the weak connective tissue and stimulates it to repair itself, thus lessening the appearance of cellulite.

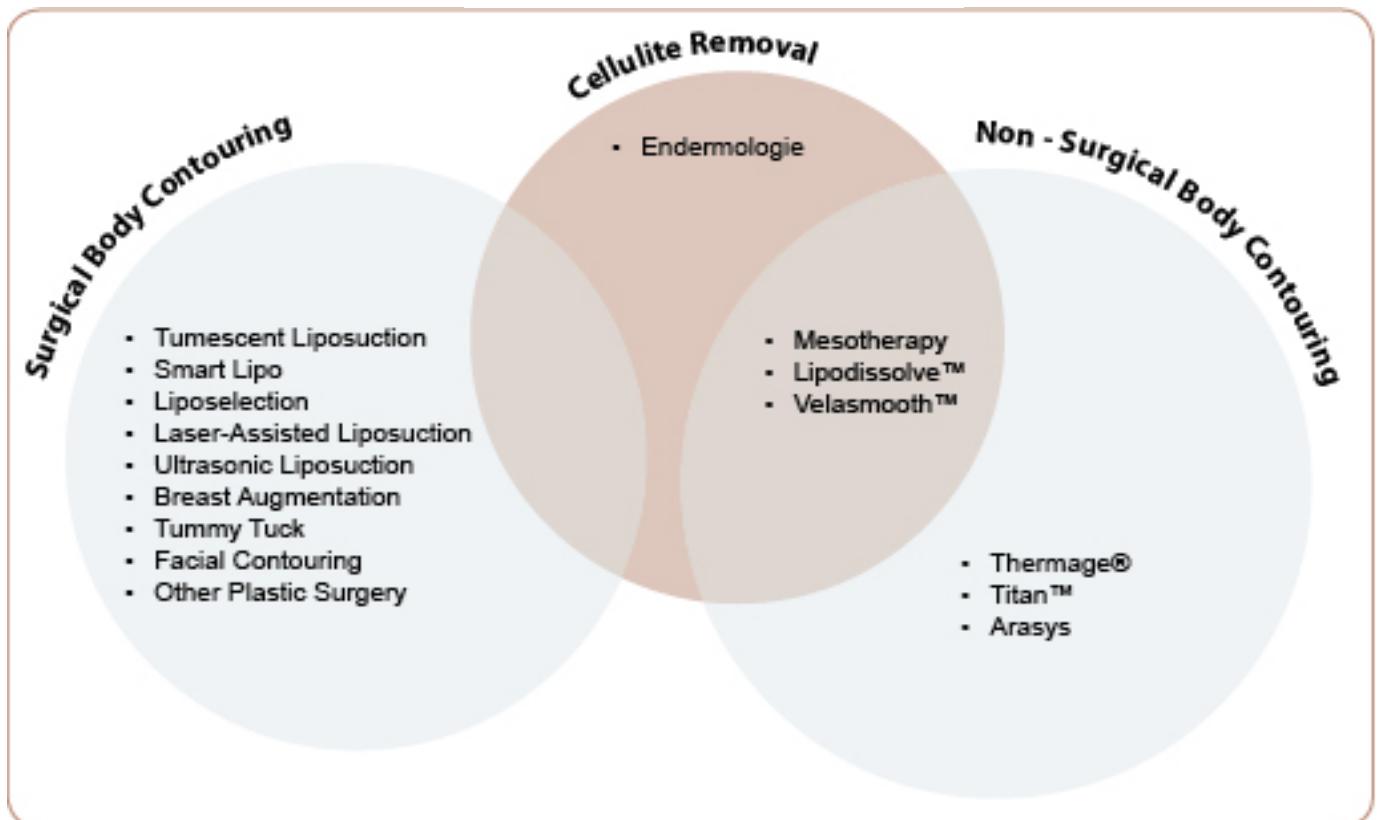
Although there are many options to choose from (see procedure chart below), one or a combination of these procedures

have a common aesthetic goal which includes:

- increase the metabolism of stored energy (lipolysis)
- increase lymphatic drainage/stimulate circulation to treated area to remove excess fluid and swelling
- circumferential reduction and smoothing appearance to treated area
- stimulate collagen remodeling and secondary skin tightening (caused by dermal insult during application)

In body contouring treatments, the patient's results may be enhanced when

PROCEDURE CHART



exogenous antioxidants and critical nutrients are complemented with treatment programs. If a patient's initial nutritional/health status is compromised, then the body's ability to repair (dermal remodelling) and encourage fat loss will be minimal.

NUTRACEUTICALS TO SUPPORT AND ENHANCE THE EFFECTS OF BODY CONTOURING TREATMENTS

It is well known that nutrition profoundly influences the process of wound healing,

stay, and morbidity and mortality rates in subjects receiving nutritional supplementation.

NUTRACEUTICALS CAN ENHANCE THE EFFICACY OF BODY CONTOURING PROCEDURES

Supporting Immunity & Detoxifying Pathways

(critical in detoxifying by products/toxins released from adipose tissue during treatments)

Practitioners of natural medicine believe that the

degenerative diseases.

Toxins accumulate in adipose tissue; and due to the mechanical and thermal stressors involved, the body may be exposed to increasing oxidative stress. Detoxification occurs through the skin, liver, intestines, and kidneys (the majority taking place in the liver and digestive system).

Neutralizing and excreting toxins from these vital systems is essential for normal function and well-being. Nutraceuticals can assist with detoxification by supporting those eliminative pathways and to help the patient achieve optimal results.

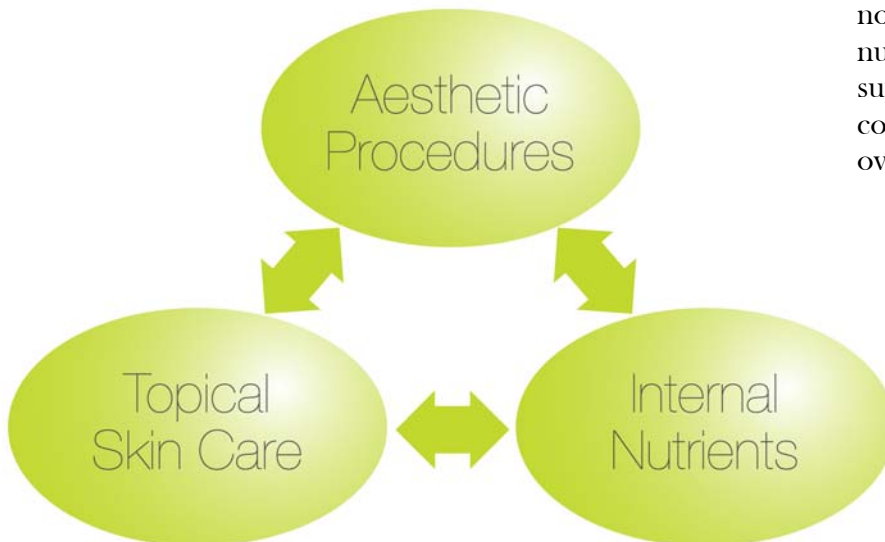
Promoting Lymphatic Drainage and Dermal Repair

Certain nutrients may help to support and strengthen the microcirculatory and stimulate collagen remodelling. It is the catabolic effect of treatments that will in turn stimulate collagen remodelling and improve skin laxity. Critical nutrients and antioxidants are essential for optimal remodelling and dermal repair. While supplements should not replace a healthy diet, nutraceuticals can effectively support and work along with body contouring treatments to optimize overall results.

Toxins accumulate in adipose tissue, and due to the mechanical and thermal stressors involved, the body may be exposed to increasing oxidative stress.

Multiple published studies in gastrointestinal surgery, cardiovascular surgery, and head and neck surgery have confirmed a significant reduction in post-operative infectious complications, length of hospital

accumulation of toxins in the body is a major cause of disease, and that a growing burden of toxins ingested into the body from the air, water, and food contributes to the growing prevalence of chronic and



With the plethora of research available, below are a few leading ingredients well documented in their benefit to combat oxidative stress, support detoxification, and favourably contribute to dermal rejuvenation.

Super Oxide Dismutase (SOD) from Cantaloupe Melon (*Cucumis melo*) GliSODin®

Manufactured in France, this unique combination of SOD extracted from cantaloupe melon



with the wheat gliadin biopolymer (GliSODin) has been shown in over 20 clinical studies to offer therapeutic means for the prevention and treatment of many conditions associated with increased oxidative stress and inflammation.

This antioxidant enzyme (SOD) has a distinct advantage

over the antioxidants consumed from the diet or nutritional supplements, like the vitamins A, C, and E, since it works as a biological catalyst rapidly and repeatedly reducing reactive oxygen species without being consumed itself. Because different antioxidants target certain biochemical pathways,

GliSODin can provide target free radical activity in the various cellular sites.

Polyphenolic Compounds (cocoa, green tea, red wine grapes, bilberry, blueberries)

Polyphenolic compounds are common in the diet and have been suggested to have a number of beneficial health effects, including potent antioxidant activity. Due to their relatively low bioavailability, they are best used in conjunction with other antioxidants.

Milk Thistle (*Silybum marianum*)

Well documented for its hepatoprotective effects, protection of glutathione depletion, inhibition of leukotriene and prostaglandin synthesis contributes to its anti-inflammatory properties. Most clinical studies of milk thistle's effectiveness have used a specific extract standardized to 70% to 80% silymarin.

Dandelion (*Taraxacum officinale*)

Traditionally used to detoxify the liver and gallbladder, stimulates diuresis.



Alpha Lipoic Acid

Increases the activity of glutathione-related enzymes, metal chelating capacity, regenerates endogenous antioxidants and its ability to repair oxidative damage.

Short Chain Fructooligosaccharides

Enhances mineral absorption (especially Calcium) digestive aid and helps regularity, enhances immune function, and inhibits pathogen growth.



NUTRACEUTICALS TO PROMOTE DERMAL REPAIR & HEALING

- **Horsechestnut (*Aesculus hippocastanum* L.) seed** - Strengthens venous system and improves vascular permeability. Efficacy shown at standardization to 20% aescin.
- **Hyaluronic acid** - Improves blood flow, regulates inflammatory processes, promotes formation of granulation tissue, improves hydration of the wound margins, and stimulates epithelial cell production.
- **Gotu kola seed (*Centella asiatica*)** - Stimulates collagen and glycosaminoglycan synthesis, increases hydroxyproline content, tensile strength, and collagen content of wounds, increases wound levels of antioxidants (superoxide dismutase, catalase, glutathione peroxidase).
- **French Maritime Pine (*Pinus pinaster* Aiton) Bark** - Anti-inflammatory, Antioxidant - Increases intracellular synthesis of anti-oxidative enzymes and by acting as a potent scavenger of free radicals, regenerates and protects vitamins C and E, supports the microcirculatory and venous system.
- **Zinc & Copper (gluconate)** - Enhancing trace element status and antioxidant defences, stabilizes the structure and function of a number of proteins and cell membranes, cofactor in critical enzymatic reactions required for the cross-linking of collagen and elastin.
- **L Glutamine** - Used as a source of energy and proliferation by fibroblasts, protein, and nucleic acids (all required for collagen deposition), enhances the function of stimulated immune cells, most abundant amino acid, regulates intracellular skeletal muscle amino acid pool, enhances net protein synthesis, buffering agent helps to reduce acidosis.
- **Vitamin C** - Required component in collagen deposition, protects endothelial cells, reduces lipid peroxidation, preserves intracellular glutathione concentration.

CONCLUSION

Although body contouring treatments vary in their intensity and mechanism of action, they all impose some level of stress on the body to heal, metabolize body fat, and neutralize by toxins. In order to obtain the best results, optimal nutrition coupled with specific nutraceuticals are critical to maximize treatment results and enhance overall effects. **77**



About the Author

Paula Simpson, B.A.Sc. (Nutrition), R.N.C.P. is the Executive Director of Isocell North America and holds a degree in Nutrition. She has over 15 years of experience in consulting, public relations, product formulation, and program development for the Nutraceutical and Medical Aesthetic Industry. Her role as a Scientific Evaluator and Regulatory Consultant for some of the top nutraceutical companies worldwide has solidified her reputation as a leader in research and development for innovative natural health products. As a Project Leader, Paula developed and guided an international weight loss program towards a successful launch in North America and Europe. As the Nutrition Director for a medical spa, she developed a weight management and longevity program that was the impetus for the company's overall commercial success. Ms. Simpson can be contacted directly at paula.simpson@glisodinskin.com. Visit their website on the worldwide web: www.glisodinskin.com.

Ingestible skin care for beautiful, healthy skin.

GliSODin Skin Nutrients, Professional Nutricosmetics enhances the results of your medical aesthetic treatments and beauty programs. Specially formulated by dermatologists and nutritionists, GliSODin Skin Nutrients is a professional line of ingestible skincare products, rich in antioxidants and bioactive nutraceuticals that help to nourish and beautify the skin.

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Oral supplementation with GliSODin has been scientifically shown to offer therapeutic benefits for many conditions associated with increased oxidative stress. GliSODin has 18 clinical studies and 2 US protected patents.

