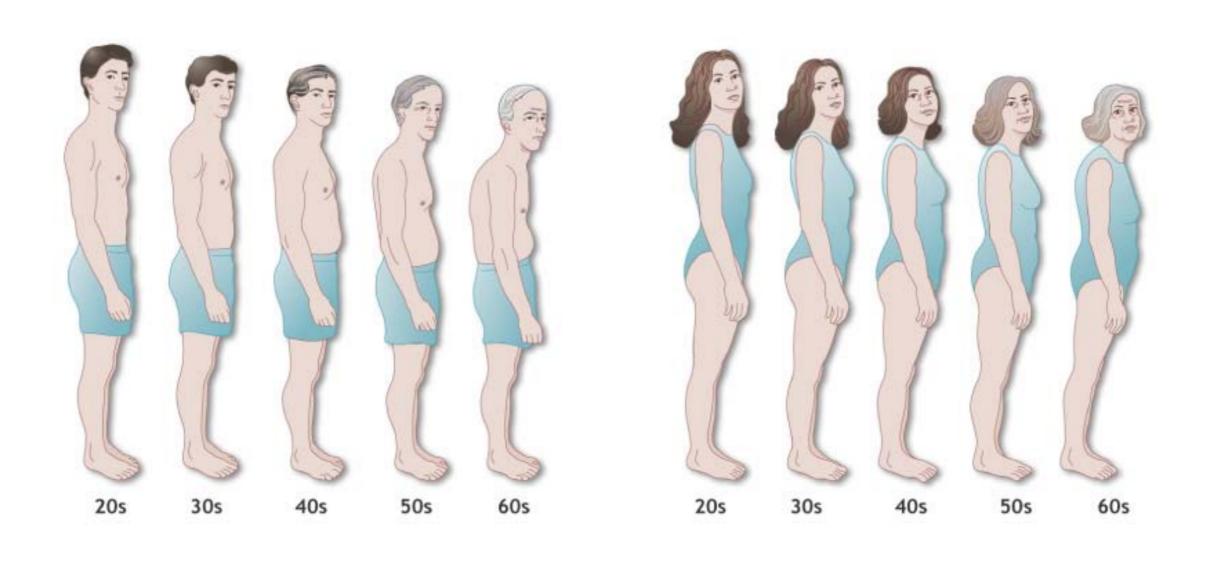
Innovation of beauty foods: from concept to product

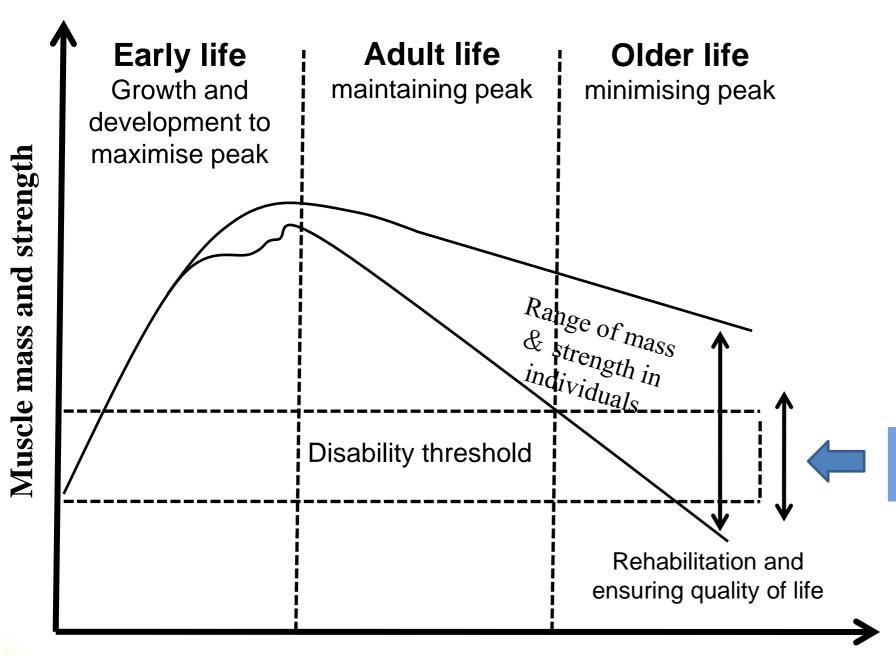
Jason Gu

2013 Nov

Changing in many ways



Life cycle: muscle





Environmental changes can lower the disability threshold.

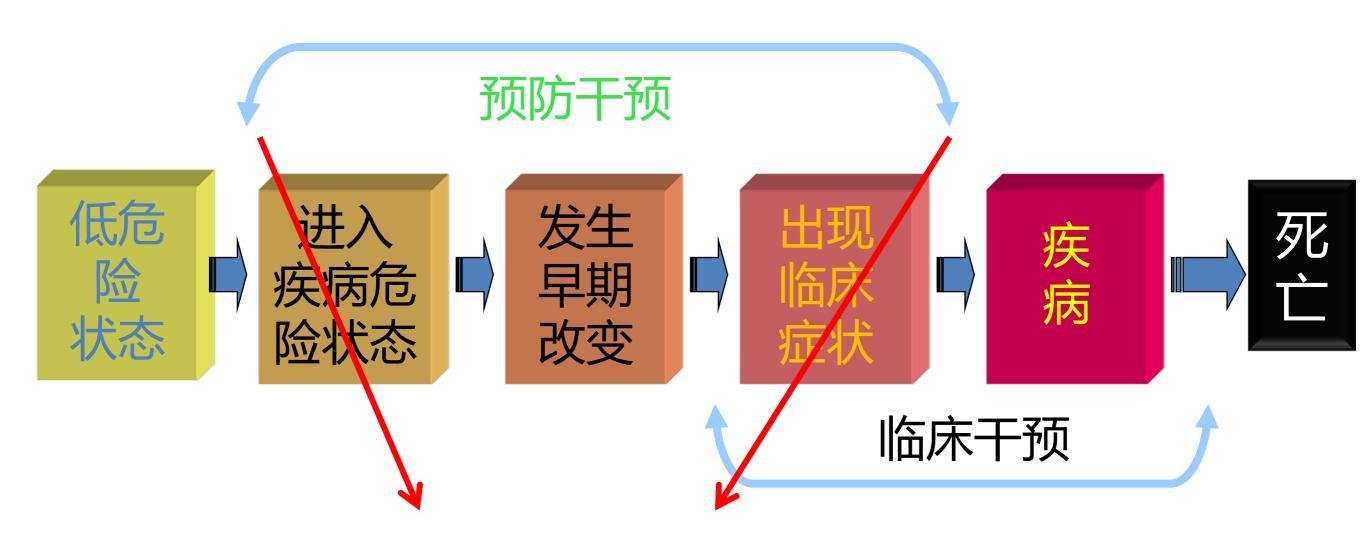
What women really want?



- From health to beauty
 - Beauty from within.
 - Beauty is the reflection of inner health.



疾病



生活方式管理+营养补充剂

功能食品在市场的定位

法规管理的严格程度 药品 **FSMP** 功能食品 普通食品

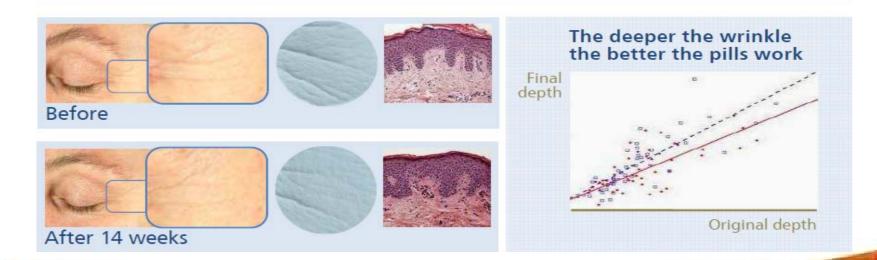
消费者需求的特定程度

Functional foods

- Most influential driver
 - A confluence between health benefits and being "naturally functional"
- Consumers' demanding
 - Fit naturally into their lifestyles
 - Convenient
 - Taste good

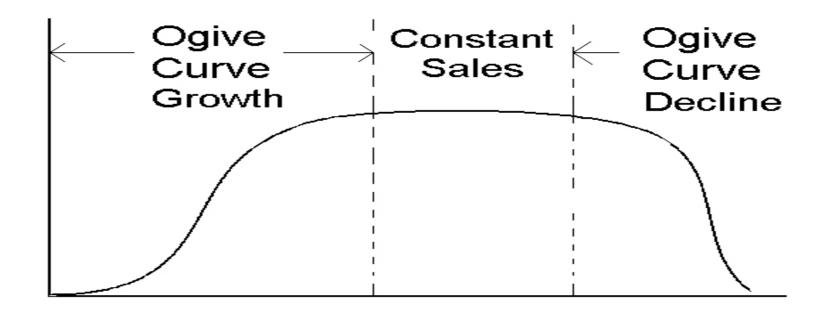
Beauty pills: anti-aging from within

Unique and potent blend of phytochemicals formulated and clinically proven to give unrivalled skin anti-aging benefits



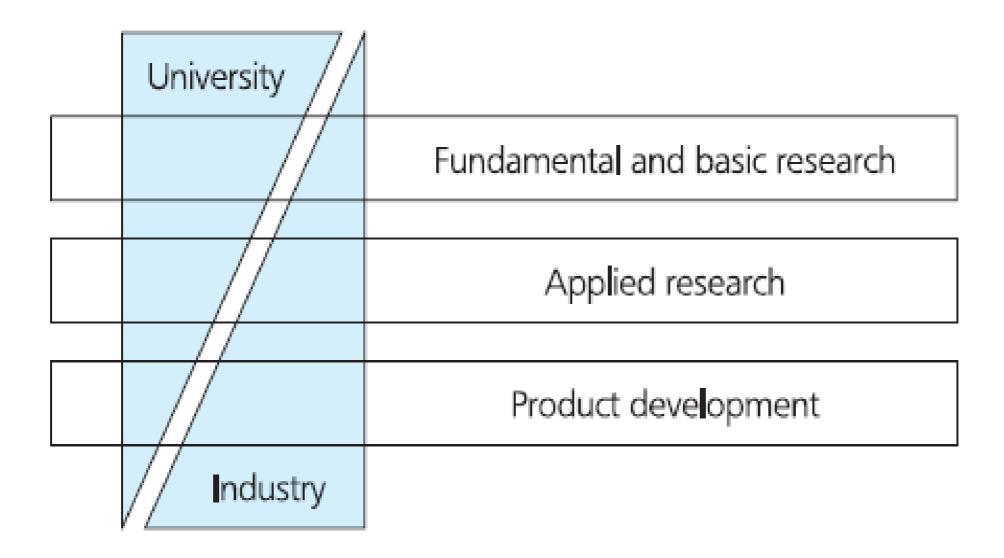
The importance of innovation

Almost all products follow a "life-cycle curve"



 If a company does not continue to introduce new products periodically, or at least significant improvements on existing products it will eventually be on a "going out of business" curve.

How to do innovation



Classification of areas of research emphasis in industry and university

Principles of weight management



Main weight-management products





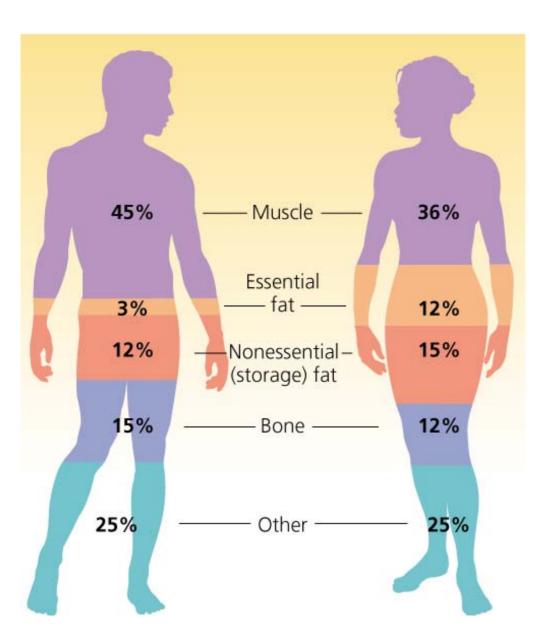
Help you stay in shape



Bring new concepts to market

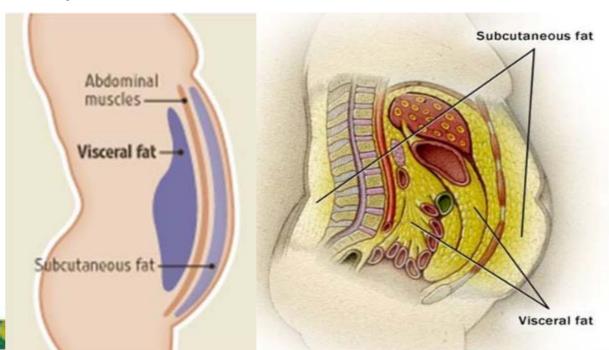
- 传统的减肥理论总是斤斤计较于摄取热量的多寡。
- 体型重塑新思维
 - -强调肌肉的重要性
 - 注重人体肌肉和脂肪的比例
 - 男性的体脂肪百分比要<25%, 女性的体脂肪百分比<30%
 - 增加肌肉在身体组成中的比例
 - 减脂不减肌

Concept of body composition (体成分)



Body composition

- Location of fat is important to health
 - Visceral fat
 - gain weight in the abdominal area = "apples;"
 - increased risk of coronary heart disease, high blood pressure, diabetes, and stroke
 - Subcutaneous fat
 - gain weight in the hip area= "pears"



The underappreciated role of muscle

- Range of muscle
 - Muscle mass
 - Strength
 - Metabolic function
- Importance of muscle
 - Central role in whole-body protein metabolism
 - Key role of altered muscle metabolism in the genesis and prevention of many common pathologic conditions and chronic diseases.
 - Skeletal muscle mass was correlated positively with bone mineral content and bone mineral density
- Loss of skeletal muscle with aging
 - After age 50, skeletal muscle mass is lost by 1%-2% per year on average.
 - Up to 30% of muscle loss, the normal function is adversely affected.

Am J Clin Nutr. 2006;84(3):475-82; Shanghai Journal of Preventive Medicine. 2011, 23 (3): 133-135

Communication with consumers

消费者认为自己得到了什么?



你愿意为这个单纯的"约束力"付多少钱?





对于仪器减肥、按摩减肥的机构,消费者会把消费点转嫁到仪器和人工身上。

Resistance exercise for weight management



- ▶ 科学锻炼全身各个部位的肌肉
- 双向阻抗,减少疲劳
- 液压设计,保护关节
- 重力刺激,增加骨密度
- 精密设计,简单易行
- 针对性指导
- 根据每个人不同情况灵活调控

雌激素和皮肤

- 亚洲女性皮肤老化特征
 - 皮肤皱纹和色素沉着
 - 一伴随皮肤萎缩和胶原含量的进行性下降,导致皮肤弹性降低,出现干燥 脱屑、暗黄沉着等症状
- 雌激素水平是影响女性皮肤老化的关键因素
 - 皮肤是一个雌激素敏感器官
 - 皮肤改变往往可以反映人体内部器官改变
 - -30岁后即出现雌激素水平逐年下降
 - 绝经后女性体内雌激素水平显著下降
- 雌激素对女性皮肤的影响
 - 对皮肤厚度和胶原含量的影响
 - 对皮肤湿度的影响
 - 促进角质形成细胞增殖并抑制其凋亡
 - 促进真皮透明质酸产生,提高真皮含水量
 - -减少皱纹的产生
 - 调节皮肤的色素沉着

理想的雌激素替代治疗应该是不仅改善皮肤外观,而且提高整个机体生命质量。

中国医药科学. 2012, 2(12): 184-185; 中国老年学杂志. 2010, 30(4)

Soy isoflavones: phytoestrogen

- 对雌激素的双向调节作用
 - 可以与雌激素受体结合,发挥弱雌激素效应
 - 当人体内雌激素水平过高时(如乳腺增生、子宫肌瘤等),雌激素活性微弱的大豆异黄酮占据雌激素受体,从而发挥抗雌激素的作用

Dosage daily	Target population
40毫克	绝经前女性及成年男性
60毫克	绝经后女性
25毫克	孕妇与婴幼儿童和青少年

- 中国人膳食摄入为15一25mg/d
- 大豆异黄酮的摄入量上限为75mg/d
- 高于150mg/d为过量摄入
- 作为保健食品的安全推荐量为 30mg/d

大豆异黄酮的摄入量及推荐量.《中国营养学会DRIs修订专家委员会第二次会议样板稿汇编》2011年

Intake of soy isoflavones

- Intake of isoflavones in Asian population
 - Formats of soy food traditionally
 - Nonfermented soy foods (tofu, sometimes known as bean curd, soybeans and soy milk),
 - Fermented soy foods (miso and natto)
 - Other soy products (fried, dried and pressed soy products),
 - The average intake is between 25 and 50 mg of isoflavones per day.
- Intake of isoflavones in Western populations
 - Usually less than 1.0 mg of isoflavones per day
 - Sources of soy isoflavones
 - From some legumes, sprouts and vegetables containing small amounts of isoflavones,
 - From soy flour and soy protein that are commonly added as extenders and fillers in different bakery and canned goods

J Natl Cancer Inst. 2006;98:1275-1284; Am J Epidemiol. 2001;154:434-441

Safety of soy isoflavonese

- Compelling evidence of the safety
 - Widespread historical exposure
 - Without adverse health effects
- 大豆异黄酮与乳腺癌发生风险
 - Soy food intake in the amount consumed in Asian populations (25 and 50 mg of isoflavones per day) may have protective effects against breast cancer.
 - 高剂量的异黄酮摄入在亚洲人群中可能降低乳腺癌的发生风险,尤其是在绝经后女性中。
 - 在西方人群中没有显著的差异,可能与异黄酮摄入量较低有关。

British Journal of Cancer (2008) 98: 9-14; Asia Pac J Clin Nutr. 2013,22(1): 118-27

How to enhance the effect of soy isoflavonese

S-equol

- Key metabolite of soy isoflavone
- Converted from daidzein by human gut bacterial flora
- Between 30–50% of the population is capable of converting daidzein to equol.
- The production depends on the types of bacteria present in the large intestine.

Equal producers vary around the world



Advantages of natural S-equol

- Natural, soy germ-based
- No impact on hormone status
 - Hormone levels remain normal in men after SE5-OH containing natural S-Equol ingestion.
- Well tolerance for longterm intake

http://esciencenews.com/articles/2010/05/03/hormone.safety.and.psa.men.taking.novel.soy.based.supplement.se5.oh.containing.natural.s.equol

Role of adrenal androgens

- As in men, levels of testosterone (睾酮) and DHEA peak in women in their twenties and decline thereafter.
- Androgenic effect
 - Bone formation
 - Increased sebum formation
 - Increased muscle mass
- Clinical application
 - Bone density after testosterone + estrogen better than estrogen alone.
- Manipulation of adrenal androgen levels
 - Exogenous hormone treatment
 - Herbal adaptogens
 - Bacopa, ginseng, licorice, skullcap, rhodiola, cordyceps
 - Resiliency training, heart rhythm biofeedback
 - Endocrine Reviews April 1, 2003 vol. 24 no. 2 152-182; Maturitas 21:227-236. 1995

Summary

Innovating beauty foods

Health oriented

Science based

Balance of self-feeling and scientific evidence

Match the consumer trends and needs

Thank you

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