Healthy Eating for an Active Life

Nutrition for a Healthy Lifestyle
What do we mean by ‘healthy eating’?
Purpose of food

• Provide energy for normal body function and our daily activities
• Provide nutrition – vitamins, minerals, electrolytes, phytochemicals, etc.
• Provide the building blocks that allow the body to regenerate itself
Common interpretations of ‘good nutrition’

• Consuming less sugary foods and drinks
• Eating more fruits and vegetables
• Eating less red meat
• Eating fewer carbohydrates
• Balanced diet – what is a balanced diet???

But, alone, these are all incomplete
Four important criteria

• Good nutrition properly controls energy balance
• Good nutrition provides nutrient density
• Good nutrition achieves health, body composition and performance goals
• Good nutrition is honest and outcome-based
Good Nutrition and Energy Balance

- Energy in v Energy out
- Negative Energy Balance – more out than in
- Positive Energy Balance – more in than out
- Energy balance impacts metabolism, hormonal balance and even mood
- Excess positive or negative energy balance has severe consequences

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Good Nutrition and Nutrient Density

• Nutrient density - ratio of nutrients relative to the total calorie content of a food
• Aim for foods with a high nutrient content
• Calorie density – ratio of calories relative to the total weight of the food

• Ideal: diet comprising foods with high nutrient density and low* calorie density
• Benefits are:
  • Easily controlled calorie intake (without calorie counting)
  • Longer periods of satiation after meals
  • Difficulty overeating
  • A higher total essential nutrient intake
  • More essential nutrients per volume of food
Good Nutrition Summarised

Performance

Health

Body Composition

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Obesity and Overweight

- More than 2/3 of Americans are overweight or obese
- Obesity in Irish men increased from 8% to 20% between 1990 and 2000
- Obesity in Irish women increased from 13% to 16% in the same period
- Almost 30% of women over 50 years of age are obese
- Childhood obesity is on the rise
Implications of Obesity

The Medical hazards of obesity

- Increased risk of Stroke
- Major organs at increased risk - including heart, kidneys and liver
- Greater risk of damage to joints
- Likelihood of developing varicose veins

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Causes of Obesity

- Lack of physical activity
- Excess consumption
- Environmental factors
- Lobbies – food producers, etc.
- Fast food nation
- TV and the passive consumption of high calorie food
- Loss of the traditional family dinner
The Recent History of ‘Healthy Eating’

• In the aftermath of World War II, US government created the RDA
• Sometime later, fats were declared to be bad and carbohydrates were declared to be good – driven by cereal growers in the USA
• Overweight and Obesity issues exploded in the following decades
• 1992 – the USDA creates the Food Pyramid…
  …which turns out to be seriously flawed
2005 – the NEW Food Pyramid, called My Pyramid was created which added exercise.
• 2010 – My Plate
Essential message in all these plans

• Eat less
• Portion Control
• Eat less junk, including salt and salt-containing foods
• Exercise more
• Maintain a healthy body weight
• Understand that there is no ‘bad’ food but make ‘good’ food choices as much as possible
What are the barriers??

- Lack of knowledge
- Lack of motivation to change
- Life gets in the way too easily
- Insincere Government ‘support’
- Easy access to junk food
- Social aspect of food
- Loss of the family mealtime
So, where, as parents, do we start?

• Educating ourselves is key.
• We develop our taste preferences in the first 5 years of life – this time period is crucial
• Lead by example and teach the value of healthy eating
• Return to mother nature
• Learn to navigate around the supermarket
• Be innovative
• Make it interesting
So, what should we eat

• Protein - lean meat, fish, eggs, dairy
• Starchy carbohydrates – unprocessed grains, potatoes, vegetables that grow underground
• Fibrous carbohydrates – fruits and vegetables that grow over the ground
• Healthy fats – various oils, nuts, avocados
• Drink enough to satisfy your thirst
Note

• Concentrate on superfoods – i.e. foods that have a high nutrient density
• If it says ‘diet’ on the packet, don’t eat it
• Develop good eating habits
• Change your terminology – meals v snacks
Another note…. on hormones

• Insulin is an anabolic hormone
• Dramatically elevated by all forms of sugar
• Regularly spiking insulin levels can lead to insulin sensitivity
• Insulin sensitivity is associated with overweight and obesity
• ESSENTIAL TO CONTROL INSULIN LEVELS
  – So don’t eat diet foods
The 5 Habits Cheat Sheet

• Habit 1 – eat every two to four hours throughout the day
• Habit 2 – include complete protein at every feeding opportunity
• Habit 3 – eat vegetables and/or fruit at every feeding opportunity
• Habit 4 – eat starchy carbohydrates to suit your needs/goals
• Habit 5 – eat healthy fats every day
<table>
<thead>
<tr>
<th>Time</th>
<th>Meal</th>
<th>Food Type</th>
<th>Nutrient</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:00:00</td>
<td>Breakfast</td>
<td>2 scrambled eggs</td>
<td>Protein and healthy fat</td>
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<tr>
<td></td>
<td></td>
<td>Grilled tomato</td>
<td>Fibrous fruit or vegetable</td>
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<tr>
<td></td>
<td></td>
<td>1 - 2 slices wholegrain toast</td>
<td>Starch Carbohydrate</td>
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<td></td>
<td></td>
<td>Glass of orange juice</td>
<td>Fibrous fruit or vegetable</td>
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<tr>
<td></td>
<td></td>
<td>Tea/Coffee/Water</td>
<td>Fluid</td>
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<tr>
<td>10:00:00</td>
<td>Mid-morning</td>
<td>Yogurt</td>
<td>Protein (dairy)</td>
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<tr>
<td></td>
<td></td>
<td>Orange</td>
<td>Fibrous fruit or vegetable</td>
</tr>
<tr>
<td>13:00:00</td>
<td>Lunch</td>
<td>Chicken/Beef/Salmon</td>
<td>Protein</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large serving of raw or cooked vegetables</td>
<td>Fibrous fruit or vegetables</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apple</td>
<td>Fibrous fruit or vegetables</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tea/Coffee/Water</td>
<td>Fluid</td>
</tr>
<tr>
<td>16:00:00</td>
<td>Mid afternoon</td>
<td>Handful of nuts</td>
<td>Protein/Healthy Fat/Fibre</td>
</tr>
<tr>
<td>19:00:00</td>
<td>Dinner</td>
<td>Beef Casserole</td>
<td>Protein/Vegetables/Healthy Fat</td>
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<tr>
<td></td>
<td></td>
<td>Tea/Coffee/Water</td>
<td>Fluid</td>
</tr>
</tbody>
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If what you eat looks like this, you’re doing great
From growing teenager to young adult

• Your food choices become your responsibility
• Your lifestyle becomes your responsibility
• Taking care of your health becomes your responsibility
• What can YOU do to minimise the effects of your Haemophilia through a healthy lifestyle?
2 Vital Issues for the Adolescent/Adult

- A strong body is less likely to get injured
- A well nourished body will recover faster from injury
- So, sport/exercise and nutrition are essential for your wellbeing
My recommendations for the teenager/young adult

- Eat more protein
- Supplement with essential fatty acids
- Perform appropriate strength training, taking every joint through a full range of motion
- Develop superior flexibility
- Play a sport that you enjoy
Final remarks

• Superior nutrition is essential for maintaining a healthy body weight and minimising the risk of weight-associated joint injury

• Do not diet; instead make healthy eating a lifestyle change and make healthy eating a habit

• Combine nutrition, strength training and sport to protect your joints and improve overall health
Thank You!

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Support for Strength Training

- Hillberg, 2003: Sufficient muscular strength and proprioception lessen the risk of joint damage, however, both are impaired in haemophilic subjects. The aim of the study was to investigate proprioceptive performance and isometric muscular strength before and after a specialized training in haemophilic subjects (H) compared with two groups of control subjects (C). Nine subjects with severe haemophilia A, and eight 'active' C (AC) without haemophilia took part in a physical training programme over a 6-month period. Eleven 'passive' C (PC) were requested to avoid any additional training during this period. Proprioceptive performance and isometric strength were determined before and after the training programme. The maximal isometric muscular strength in the legs, bilaterally measured by knee extensor (and leg press) was increased (P < 0.05) by 34% (29%) after training in the H and by 20% (28%) in the AC groups while remaining unchanged in the PC group. The performance in one-leg-stand tests after training was increased (P < 0.05) in the H and AC groups. An improvement of angle reproduction of 20 degrees and 40 degrees (P < 0.05) in the H compared with the PC groups was seen in the tests. Quantitative sensory testing by the tuning fork showed an increase (P < 0.05) in performance of both H and AC groups.

The results of the present study confirm that specific sports therapy focused on proprioceptive function and accompanied by gentle strength training with low resistance and 20-25 repetitions is able to increase proprioceptive performance and muscular strength with a minimal stress to the joints. It is strongly recommended that specialized sports therapy be included as an integral component of the complete treatment regimen of haemophilic subjects.

- Beeton, K, 1998: Muscle Rehabilitation in Haemophilia; Musculoskeletal dysfunction is a common manifestation of haemophilia. This dysfunction may be associated with imbalances between muscle groups. Evidence emerging from the literature suggests that the rehabilitation of this dysfunction is very relevant for the patient with musculoskeletal problems. Treatment of muscle imbalance may be linked with a reduction in recurrence of symptoms. Further research is needed to establish the relevance of this area in patients with haemophilia but the clinical evidence supports the developing work in this field.

- Petellier, 1987: Isometric exercise for an individual with haemophilic arthropathy: The use of isometric exercise programs during rehabilitation and maintenance is a promising treatment component for the total care of the individual with hemophilia.

- Greene, W.B., 1983: A modified isokinetic strengthening programme for patients with severe haemophilia: A modified isokinetic strengthening program for the knee flexors and extensors was evaluated in 32 patients with severe hemophilia. The program was effective in significantly strengthening the knee flexors and extensors; it did not increase the number of knee hemarthroses; and it could be done at home without special equipment. The greater increases in extensor and flexor strength among adolescents and adults were associated with less severe arthropathy, a 1 cm increase in thigh girth, and a greater number of days on which the exercises were done.

- Gomis, 2009: Exercise and sport in the treatment of haemophilic patients: a systematic review: Physiotherapy, physical activity and sport are basic elements to improve quality of life and the physical condition, increase strength and resistance and to reduce the risk of musculoskeletal lesions and to prevent haemophilic atrophy. In general, professionals in haemophilia believe that regular exercise and rehabilitation with physiotherapy is fundamental, particularly in countries where replacement therapy is not readily available.