Management of obesity: Medical Approach

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Menu

- Therapeutic Patient Education
- Diets always work
- Cognitive behavioural therapy
- Pharmacologic treatments
- Cost benefit
- Tricks to lose weight
Patient Therapeutic Education

Psycho-social Educational models

Motivational Interviewing

Empowerment

Systemic multidisciplinary approach

Cognitive-behavioural therapy
Patient Education is a Tango

- Respect the rhythm of the patient
- Follow and guide the patient
- Listen to the inner music of the patient
From Communication to Attitude

Communication → Relationship → Attitude

- Intellectual
- Emotional
- Spiritual

- Acceptance
- Trust
- Compassion

- Empathy
- Respect
- Warmth
Attitudes for a good relationship

• Congruence (Feeling-Expression)
• Open-mindedness
• Independence (Self respect confidence)
• Acceptance (unconditioned)
• Empathy
• Readiness to let grow
• No roadblocks

Carl Rogers 1958
Average weight loss: with a minimum 1-year weight management

80 studies, N=26455, completers (69 %)

Marion J. Franz et al J of Am Diet Assoc 2007, 107:1755
Long-term weight loss after diet and exercise vs diet alone

6 trials, 10-52 weeks

Diet and Exercise vs. Diet alone

<table>
<thead>
<tr>
<th>Studies</th>
<th>Standardised Mean diff. (95% CI)</th>
<th>% Weight</th>
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<tbody>
<tr>
<td>Borg 2002</td>
<td>-0.11 (-0.57,0.34)</td>
<td>21.6</td>
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<tr>
<td>Fogelholm 2000</td>
<td>-0.24 (-0.70,0.21)</td>
<td>21.5</td>
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<td>Wadden 1999</td>
<td>-0.12 (-0.59,0.36)</td>
<td>19.7</td>
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<tr>
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<td>-0.10 (-0.72,0.52)</td>
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<td>-0.21 (-0.87,0.46)</td>
<td>10.1</td>
</tr>
<tr>
<td>Wing 1988</td>
<td>-0.44 (-0.97,0.10)</td>
<td>15.5</td>
</tr>
<tr>
<td>Overall (95% CI)</td>
<td>-0.20 (-0.41,0.01)</td>
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Diets with different compositions

- Low in carbohydrates:
  - Carbohydrates: 30%
  - Rich in fat: 45%
  - Proteins: 25%
  - Weight loss: 7.8 ± 0.5 kg

- Balanced:
  - Carbohydrates: 45%
  - Low in fat: 30%
  - Proteins: 25%
  - Weight loss: 7.2 ± 0.6 kg

- Dissociated:
  - Carbohydrates: 45%
  - Low in fat: 30%
  - Proteins: 25%
  - Weight loss: 6.7 ± 0.5 kg

How many calories?

Diet
- 700 kcal/j
- 1200 kcal/j
- 1500 kcal/j

Weight loss (kg) in 3 months
- -2.5 kg
- -3.5 kg
- -5.8 kg

Predicted weight loss (kg)
- 16 kg
- 10 kg
- 8 kg

Long-term weight loss maintenance after diet and exercise vs diet alone

Diet and Exercise vs. Diet alone

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<tr>
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<td>-0.17 (-0.45, 0.79)</td>
<td>11.6</td>
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<tr>
<td>Skender 1996</td>
<td>-0.43 (-1.11, 0.24)</td>
<td>9.9</td>
</tr>
<tr>
<td>Wing 1988</td>
<td>-0.66 (-1.20, 0.10)</td>
<td>15.1</td>
</tr>
<tr>
<td>Overall (95% CI)</td>
<td>-0.20 (-0.42, 0.01)</td>
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Diet associated with exercise produced a 20 % greater sustained weight loss

Body weight evolution
Five years with a patient education programme

N = 57, BMI 40.5 kg/m²; Weight loss program : 7.2 ± 0.8 kg

25.5% of patients lost more than 10% of their initial body weight five years later

Golay A et al. Eating Weight Disord 2004
Predictors of non successful weight management

- Predictors (84 %) p<0.001
  - More previous dieting
  - Poorer quality of life
  - Lower reported carbohydrate intake
  - Lower exercise
  - Binge eating disorder
  - Psychological health problems
  - Poorer body image
  - Higher waist hip ratio

Predictors of weight loss maintenance

- Low fat diet but watching total calories (24% fat, 56% CHO)
- Frequent self monitoring (Food, Activity, weight records)
- Eat breakfast (78% >5/7 days)
- Physical activity (2700 kcal/w)

Hill Wing, 2003
Physical activity is the best way to maintain weight loss. No diet can maintain the body weight loss.

Physical activity is the best predictor to maintain body weight loss.
Clinical aspects to detect an eating disorder

- Multiple diets
- Yo-yo phenomenon
- Feeling of restriction
- Confusion between hunger, satiety and anxiety
- Nibbling
- Link emotion-food
- 50% of obese subjects suffer from eating disorders
Stimuli inducing Compulsions

Food
• sight of food
• hunger
• forbidden food
• shopping
• preparation of meals

Emotions
• stress
• tiredness
• boredom, troubles
• anxiety
• loneliness
Strategies to avoid or delay a compulsion

- To take care of oneself
- To go for a walk
- To do physical activity
- To relax
- To make a phone call
- To sit down and breathe deeply
- To take a bath
Stages of behavioural change

- Precontemplation: Explore representations
- Contemplation: Discuss the ambivalence
- Action: Search for obstacles
- Maintenance: Reinforce benefits
- Relapse: Use the mistakes
- Preparation: Negotiate objectives
- Contemplation: Discuss the ambivalence
- Ongoing occasional activity
- Negative/Neutral: Explore representations

Prochaska JO, Di Clemente, Prog Behav Modif 1992 28:183-218
Cognitive-behavioural therapy

N = 68, 12 group sessions weekly

Cogni Behav Therapy + nutrition
-1.2 ± 0.2 kg

+ nutrition and + physical exercise
-3.5 ± 0.3 kg

-4.3 ± 0.5 kg

### Meta-analysis: Pharmacologic Treatment of Obesity

<table>
<thead>
<tr>
<th>Medication</th>
<th>Studies</th>
<th>Follow-up</th>
<th>Mean WL compared to placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orlistat</td>
<td>n=22</td>
<td>12 months</td>
<td>-2.9</td>
</tr>
<tr>
<td>Sibutramin</td>
<td>n=29</td>
<td>44-54 weeks</td>
<td>-4.5</td>
</tr>
<tr>
<td>Fluoxetin</td>
<td>n=9</td>
<td>6-12 months</td>
<td>-4.2</td>
</tr>
<tr>
<td>Bupropion</td>
<td>n=3</td>
<td>6-12 months</td>
<td>-2.8</td>
</tr>
<tr>
<td>Topiramate</td>
<td>n=6</td>
<td>6 months</td>
<td>-6.5</td>
</tr>
<tr>
<td>Phentermine</td>
<td>n=9</td>
<td>2-24 months</td>
<td>-3.6</td>
</tr>
<tr>
<td>Diethylpropion</td>
<td>n=13</td>
<td>6-52 months</td>
<td>-3.0</td>
</tr>
</tbody>
</table>

Meta-analysis: pharmacologic treatment of obesity

Adverse event by drug

<table>
<thead>
<tr>
<th>Drug</th>
<th>RR</th>
<th>Event</th>
<th>RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orlistat</td>
<td></td>
<td>Diarrhea 3.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flatulence 3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Abdo pain 1.5</td>
<td></td>
</tr>
<tr>
<td>Sibutramin</td>
<td></td>
<td>SBP 4.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DBP 2.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heart rate 5.9</td>
<td></td>
</tr>
<tr>
<td>Fluoxetine</td>
<td></td>
<td>Nervousness 6.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nausea, vomiting 2.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Asthenia, somnolence 2.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Insomnia 2.1</td>
<td></td>
</tr>
<tr>
<td>Bupropion</td>
<td></td>
<td>Dry mouth 3.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diarrhea 1.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Constipation 1.3</td>
<td></td>
</tr>
<tr>
<td>Topiramate</td>
<td></td>
<td>Taste perversion 4.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paresthesia 2.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cent nervous syst 5.9</td>
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</tbody>
</table>

XENDOS
Effect of Xenical on body weight

Change in weight (kg) vs placebo

-4.1 kg
-6.9 kg

p<0.001 vs placebo

Torgerson et al. Diabetes Care 2004, 27,155-61
XENDOS
Cumulative incidence of type 2 diabetes

Incidence of T2D (%)

Placebo + lifestyle
Xenical + lifestyle

$p=0.0032$

RR^ 37%

Torgerson et al. Diabetes Care 2004,27,155-61
Cost-effectiveness for orlistat treatment in obese diabetic patients

- Meta-analysis from 7 randomized controlled clinical trials in obese patients with T2 diabetes with orlistat (n=1249) and with placebo (n=1230). Markov Health Economic model for 11 years.

- Weight reduction –8.6 kg, 23 % with > 5% weight loss, HbA1C –1.16 %, cholesterol –5.3%, SBP –5.2 mmHg.

- The base-case economic analysis revealed cost gain of Euros 13’600/year in Switzerland and Euros 14’000/year in Sweden. 

<table>
<thead>
<tr>
<th>Medical costs induced by physicians</th>
<th>During 9 months before</th>
<th>During 9 months after</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>€ 64 101</td>
<td>€ 56 253</td>
<td>- € 7 848</td>
<td></td>
</tr>
<tr>
<td>Medical direct costs</td>
<td>€ 18 341</td>
<td>€ 16 686</td>
<td>- € 1 655</td>
</tr>
<tr>
<td>Paramedical direct costs</td>
<td>€ 10 005</td>
<td>€ 9 142</td>
<td>- € 863</td>
</tr>
<tr>
<td>Indirect costs: days out of work</td>
<td>12 649</td>
<td>5 377</td>
<td>- 7 272</td>
</tr>
<tr>
<td>TOTAL Save</td>
<td>€ 115 101</td>
<td>€ 87 458</td>
<td>€ 17 638</td>
</tr>
</tbody>
</table>

The total save is: € 480 per patient per year (17%)

Sanguignol F, Golay A et al, 2009
Weight loss and mortality

Prospective study in 15,069 obese patients with complications
Effect of > 9,1 kg weight loss maintained 10 years

Mortality

<table>
<thead>
<tr>
<th>Category</th>
<th>Reduction of mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>total</td>
<td>~ 20 %</td>
</tr>
<tr>
<td>cardiovascular</td>
<td>~ 10 %</td>
</tr>
<tr>
<td>cancers</td>
<td>~ 30 %</td>
</tr>
</tbody>
</table>

A « 80/20 » lifestyle

To avoid the « all or nothing » attitude

• 80 % of control
  (amount and type of food in real life)

• 20 % of less control on special occasions
  (weekends, holidays, etc.)
Avoid a relapse

Look for a warning system which informs of the loss of control:

- No more than 3 red flags
- 3 times in a row
- 3 days in a row
- 3 days of holiday
No Forbidden food

Rare

Occasional

Every Day
Look for external support

Unsupportive

Mostly supportive

Always Supportive

Careful with sabotaging environment!
Summary

• Patient centered approach
• Diets always works
• Combination of low fat diet, daily physical activity and behavioural modifications to maintain a weight loss
• A modest weight loss induces a major benefit
• Propose a 80/20% lifestyle
Conclusions

- Patient education with and cognitive-behavioural therapy can be applied by all Health Care Providers.

- These approaches combined with physical activity and low fat diet are effective in long term weight loss/maintenance for obese patients suffering from eating disorder.
Thanks to all my collaborators

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