Every morning, Kay Brown engages in a ritual similar to a heroin user or she sticks herself with a syringe. Only hers contains hCG, a pregnancy hormone. Ms. Brown, 35, is not taking hCG to help her bear a child. She believes that by combining the hormone injections with a 500‐calorie a‐day diet, she will achieve a kind of weight loss nirvana: fat in all the right places without feeling or being hungry. “I had a friend who did it before her wedding,” Ms. Brown said. “She looks great.”

Women like Ms. Brown are streaming doctors’ offices and weight‐loss offices across the country, paying upward $1,000 a month for a supply of the hormone and the syringes needed to deliver it.

More than 50 years after a doctor at a Roman clinic began promoting a dieting aid, it is as popular as ever, even though there is scant evidence that it makes any difference.

Roberta Lee, MD
Continuum Center for Health and Healing
Beth Israel Medical Center, New York

Dr. A. T. Simeons Founder of the HCG Concept
1900-1970

• Born in London and graduated in medicine (summa cum laude) at the University of Heidelberg.
• Beginning in 1931 he went to India and stayed for eighteen years. He discovered the use of injectable atebrin for malaria for which he was awarded a Red Cross Order of Merit.
• In 1949, he moved to Rome, where he worked on psychosomatic disorders at the Salvator Mundi International Hospital, until he died in 1970 and observed clinical phenomenon that resulted in the BHCG diet hypothesis

BHCG concept Genesis:
The Action of Chorionic Gonadotropin in the Obese

• Observation of the treatment of young boys with Fröhlich’s syndrome (Adiposogenital Dystrophy)
• Characterized by obesity, growth retardation, under development of the genital organs an association with tumors of the hypothalamus, w/↑ appetite and ↓secretion of gonadotropins.
• Their treatment: BHCG injections/ GH and caloric restriction w/ normalized body morphology

Simeons A. Lancet 1954;2:946-947
Simeons A. Pound and Inches – A New Approach to Obesity . Privately printed
Available from author Address: Salvator Mundi International Hospital, Rome, Viale Mura Gianicolensi, 77
**Original HCG Protocol**

- Injection of 125 units of HCG six days a week for 8 weeks (three injections a day)
- Diet: 500 calories per day
- Two meals permitted daily
- Consisting of one item from each of the 4 food groups: protein, vegetable, bread and fruit (very little carbs)
- The protein content is under 50 g/day and very lean
- Stopped treatment after 34# but could resume another sequence again to achieve wt goal.

_Simeons A. Pound and Inches – A New Approach to Obesity_. Privately printed Available from author Address: Salvator Mundi International Hospital, Rome, Viale Mura Gianicolensi, 77

**HCG protocol today- Many Forms**

- hCG Diet Drops - Oral hCG
- hCG Sublingual Drops
- Homeopathic hCG drops
- Kevin Trudeau hCG Diet
- Platinum hCG; hCG Protocol for multiple cycles
- Mediral hCG Drops
- hCG Diet Pills
- hCG True Diet
- hCG Cream

_HCG diet: Ultra low calories_

- 500 calories
  - Presumption is that body will use the fat for added energy rather than external food source
  - Note some variations in dietary revisions 500 cal – 1000 cal/day
- HCG daily (cream, drops, sub lingual, or homeopathic)
  - Hormone reduces hunger
- Food content: 50 g lean protein, little carbs and or fruit
- Claim: combination accelerates waist, hip, thigh, buttock fat deposition
Diet Claims

- Lose wt in waist, hips, thighs, buttocks because this is a different fat that responds to bhcg
- Increases libido and testosterone
- Bhcg appetite suppressor

Pro and Con : Studies In agreement with Simeons


Pro and Con : Studies attributing wt loss purely to low calorie intake


Meta –analysis

- 24 studies identified, 14 RCTs
- Only 6 used the simeons protocol
- One positive outcome on weight loss (w / high review score)
Meta-analysis

• Conclusion
  – No evidence that B HCG causes wt loss, a redistribution of fat, reduction in hunger in restricted caloric environment or feeling of wellbeing

Lijesen GK, Theeuwen I, Assendelft WJ, Van Der Wal G.

Human Chorionic Gonadotropin (HCG) Treatment of Obesity

After a nine-day control period, six hospitalized obese women were placed on 500 calorie diets and were given 125 IU of human chorionic gonadotropin (HCG) intramuscularly daily for 30 days.

Another five obese women received injections of diluent only and consumed identical diets for the same period.

Mean weight loss in the HCG-treated group was nearly identical to that achieved by women given the placebo. Reduction of triceps skinfold thickness or circumferential body measurements of the chest, waist, hips, and thighs were not different.

Kaup R. Shetty, MD; Ronald K. Kalkhoff, MD
Arch Intern Med 137:151-155, 1977

Commentary

An unfortunate resurgence of human Chorionic gonadotropin use for weight loss

• In a clinical trial of oocyte production a daily dose of 200 IU has been used for maintaining a late follicular phase as a GRH antagonist ❶
• LH /HCG receptors are found on a variety of tissues ❷ ❸
• Preliminary studies showed that BCG facilitated decidualization of stromal cells of human endometrium raising concerns of leiomyoma formation or exacerbation of endometriosis ❹

2 Rao CV Mol Cell Endocrin 2010;329:33-36

Human Chorionic Gonadotropin (HCG) Treatment of Obesity

• Patterns of change of a variety of plasma and urine substrates, electrolytes, and hormones were similar in the two groups and consistent with semi-starvation and weight loss.
• Results: HCG has no effects on chemical and hormonal parameters measured and offers no advantage over calorie restriction in promoting weight loss.

Kaup R. Shetty, MD; Ronald K. Kalkhoff, MD
Arch Intern Med 137:151-155, 1977
Commentary
An unfortunate resurgence of human Chorionic gonadotropin use for weight loss

• In males, animal prostate cells expressed HCG receptor gene upon stimulation w/ the authors concluding that LH/HCG receptors are lined to the development of prostatic hyperplasia and prostate carcinomas ₁

• LH/BHCG receptor mRNA was found in autopsy archival samples of benign gynecomastia and male breast carcinoma suggesting that hcg might have a role in the pathogenesis of male breast carcinoma ₂

$header_ref_caption_1$ ₁ Tao y x et al Biol Reprod 1997;56: 67-72.
$header_ref_caption_2$ ₂ Carlson HE et al J Coin Endocrinol Metab 2004;89:4119-4123
$header_ref_caption_3$ ₃ Liu PY et al J Clin Endocrinol Metab 2002;87:3125-3135

Commentary
An unfortunate resurgence of human Chorionic gonadotropin use for weight loss

• At sufficiently high doses hCG functions as growth hormone which modulates the anthropomorphic indicators of older men with partial age-related androgen deficiency ₃

<header_ref_caption_1 ₁ Tao y x et al Biol Reprod 1997;56: 67-72.
<header_ref_caption_2 ₂ Carlson HE et al J Coin Endocrinol Metab 2004;89:4119-4123
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