The Physical and Psychological Effects and Aspects of Intuitive Eating

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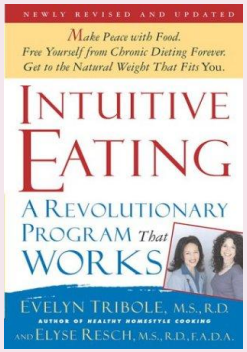
What is Intuitive Eating?

- A strong connection with, understanding of, and eating in response to physiological hunger and satiety cues, coupled with a low preoccupation with food.
- Also called non-dieting, undieting, or mindful eating.
- The three central features of intuitive eating:

  1) unconditional permission to eat when hungry

  2) eating for physical (not emotional) reasons

  3) reliance on internal hunger and satiety cues



Avalos LC, Tylka TL. *J Couns Psychol*. 2006;53:486-497.

Tribole, E. & Resch, E. (2003). *Intuitive Eating: A Revolutionary Program That Works*. New York: St. Martin's Press.

The Intuitive Eating Scale (IES)

- Used by many of the studies to follow
- A 21-item self-report questionnaire
- Response format is a 5-point Likert scale
  (1=strongly disagree to 5=strongly agree)
  - Higher scores indicate higher levels of intuitive eating.
- Assesses the three central features of intuitive eating (unconditional permission to eat; eating for physiological reasons; reliance on hunger/satiety)
- Participants rate statements such as:
  - I have forbidden foods.
  - I find myself eating when I‘m emotional.
  - I trust my body to tell me how much to eat.

Tylka TL. *J Couns Psychol*. 2006;53:226-240.

A Paradigm Shift

- As the prevalence of obesity, dieting, and eating disorders in this country continues to increase, it becomes apparent that new approaches to healthy weight management are needed.

- Critics of dieting suggest a paradigm shift that focuses on health behavior changes as opposed to weight loss alone.

- Intuitive eaters are intrinsic and unaffected eaters; these traits are hard to come by in our society where we encounter a constant stream of weight, food, and nutrition-related information on a daily basis.

- Intuitive eating has become popularized as a possible approach to healthy weight management.

- Should dieting be replaced with intuitive eating? What are the physical and psychological effects of intuitive eating?

Bacon L, et al. *J Am Diet Assoc.* 2005;105:929-936.

Outline

- What promotes intuitive eating?
- Physical effects
  - Weight/BMI
- Psychological effects
  - Depression
  - Self-esteem/Self-concept
- Conclusions/Implications for practice
- Questions

What promotes intuitive eating?

Acceptance Model of Intuitive Eating
Avalos & Tylka (2006)

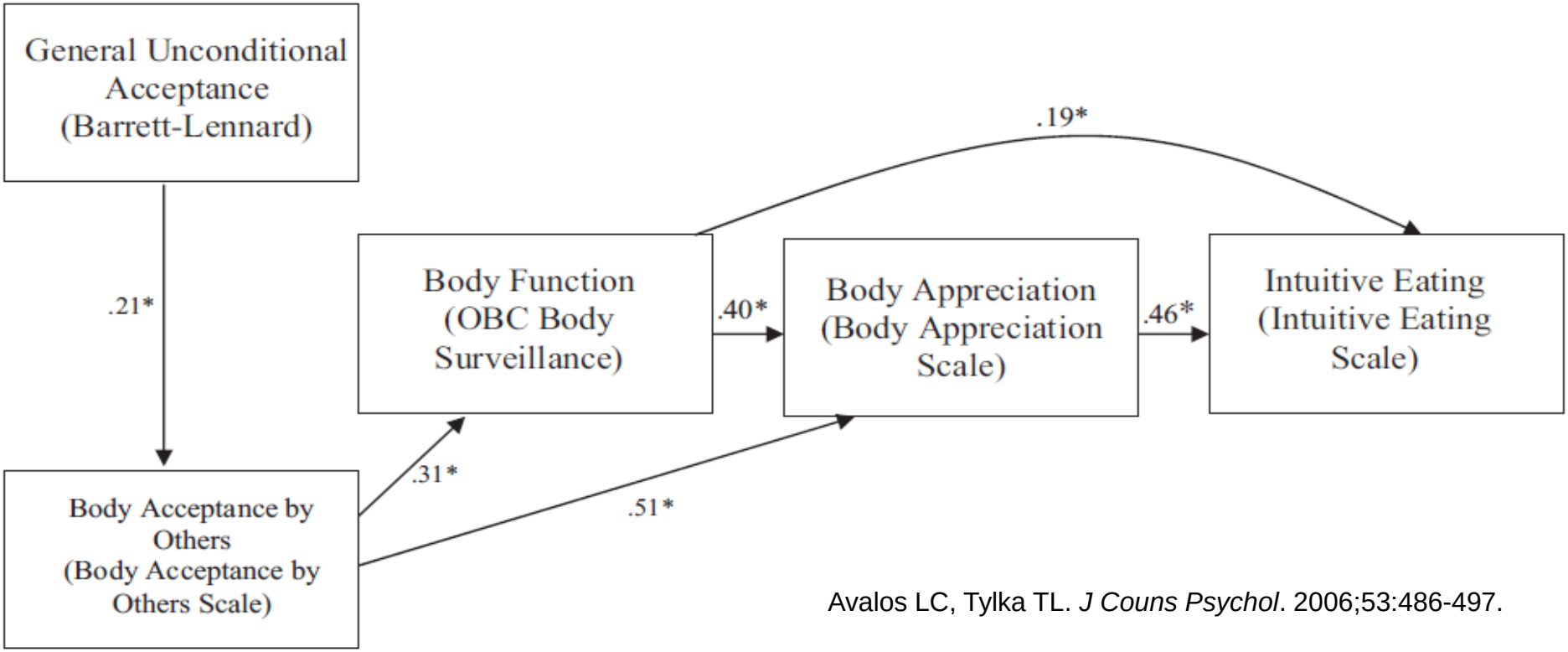
- Since there are already model frameworks to explain body dissatisfaction and ED symptomatology, they explored how variables might work together to predict *positive body image* and *adaptive eating practices.*
  - They created a model of intuitive eating based on a foundation of acceptance.

Acceptance Model of Intuitive Eating

Avalos & Tylka (2006)

- Variables:
  - **General unconditional acceptance**: total acceptance by the most influential significant other growing up
    - Measured by Barrett-Lennard Relationship Inventory
  - **Body acceptance by others**: perception that others accept your body, so less preoccupied with changing outer appearance
    - Measured by The Body Acceptance by Others Scale
  - **Body function**: focus on how body feels internally rather than on external appearance
    - Measured by the Body Surveillance subscale of the Objectified Body Consciousness Scale
  - **Body appreciation**: satisfaction with body; awareness and respect of body needs
    - Measured by Body Appreciation Scale

Acceptance Model of Intuitive Eating



Avalos LC, Tylka TL. *J Couns Psychol*. 2006;53:486-497.

All paths of the model were significant. The four proposed variables either indirectly or directly predicted intuitive eating.

Conclusions

- Acceptance by others, and positive self-body attitudes (body function and body appreciation) are associated with greater awareness of bodily signals and an increased tendency to honor these signals through intuitive eating.

Experimental Studies of Intuitive Eating

Physical Effect:
Weight/BMI

Relationship between BMI and IE score

Hawks et al., 2005

- 32 female college students
- eaters (P<0.01)
- A negative correlation found between total intuitive eating score and BMI (r=-0.576, p<0.001)

Smith and Hawks, 2006

- 343 male and female
- found between total intuitive eating score and BMI (r=-0.327, p<0.001)

The higher the intuitive eating score, the lower the BMI.

Weight/BMI: Diet vs Health at Every Size non-diet approach

Table 2. Weight-related measures of white, female, chronic dieters by treatment condition over time

Mean Values±Standard Deviation

The diet group had a significantly lower weight and BMI at post-treatment (24 weeks) and at post-aftercare (52 weeks). But, at follow-up (104 weeks), the diet group's weight was unchanged from their starting baseline.

The non-diet group's weight and BMI remained unchanged throughout.

[c]BMI=body mass index; calculated as kg/m^2.
[d]Significant within-group difference from baseline.
[e]Significant between-group difference.

Bacon L, et al. *J Am Diet Assoc.* 2005;105:929-936.

Weight: Restrictive dieters vs. “Undieters”

Table 1
Mean pre–post changes on weight and eating-related measures

	Week 0	Week 9

The restrictive dieters lost weight during the intervention (P<0.001).

The weight of the “undieters” remained unchanged.

Figures in parentheses are standard deviations.
* $P < .05$.
** $P < .001$.

Lowe MR, et al. *Addict Behav*. 2001;26:253-266.

Weight: Mindful Eating and Living (MEAL)

(contradictory results)

All participants followed the non-dieting MEAL program.

They all lost weight (P<0.01) and had a reduced BMI (P<0.01) at the 12 week follow-up.

Dalen J, et al. *Complement Ther Med.* 2010;18:260-264.

Conclusions

- Intuitive eating score is negatively associated with BMI.
- Intuitive eating and non-diet approaches do not appear to be reliably effective for achieving significant weight loss in overweight and obese individuals.

Experimental Studies of Intuitive Eating

Psychological Effect:
Depression

Depression: Mindful Eating and Living (MEAL)

Table 1 Treatment-related changes from baseline in eating and psychological variables.

Outcome variable	Baseline (week 0)	Post-intervention (week 6)			Follow-up (week 12)		
	Mean	Mean	*p*	*d**	Mean	*p*	*d**
Negative affect	23.9 (8.9)	16.8 (8.8)	0.001	0.8	17.8 (8.7)	0.03	0.7
Positive affect	32.8 (6.1)	35.5 (6.5)	0.21	NS	35.7 (6.5)	0.21	NS

Note: Data are reported as mean, standard deviation in parentheses.
* Interpretative ranges: 0.2 = small, 0.5 = medium, and 0.8 = large.

All participants followed the non-dieting MEAL program.

They all had decreases in depression at the end of the six-week program (P=0.002) as well as at the 12-week follow-up (P=0.05).

Dalen J, et al. *Complement Ther Med.* 2010;18:260-264.

Depression: Non-dieting with Relaxation Response

Table 2
Health outcomes by treatment condition over time for three non-dieting programs conducted in Dunedin, New Zealand 2002–2004

Measure	Program	Baseline mean (SD)[a]	Change from baseline mean (SD)[a]		Within-treatment comparison p-value[b]			Effect Size[c]
			Change at 1 year	Change at 2 years	Baseline to 1 year	Baseline to 2 years	1 year to 2 years	Baseline to 2 years
Diet quality score[d]	1	10.9 (2.9)	0.8 (2.5)	1.7 (2.8)	0.04*	<0.0001***	0.058	0.57
	2	11.0 (3.0)	1.4 (2.9)	2.4 (3.5)	<0.0001***	<0.0001***	0.077	0.82
	3	11.1 (2.7)	1.1 (3.0)	1.3 (3.1)	<0.0001***	<0.0001***	0.344	0.51
Stress management behaviors[e]	1	2.1 (0.4)	0.60 (0.55)‡	0.50 (0.61)†	<0.0001***	<0.0001***	0.497	0.93
	2	2.2 (0.4)	0.35 (0.40)	0.18 (0.41)†	<0.0001***	0.009**	0.050	0.41
	3	2.3 (0.5)	0.23 (0.47)‡	0.30 (0.55)	<0.0001***	<0.0001***	0.535	0.57
Eating self-efficacy scale[f]	1	101.1 (30.0)	−12.8 (28.9)	−11.1 (31.5)	0.005**	0.006**	0.941	0.44
	2	103.5 (30.9)	−12.8 (38.7)	−1.6 (38.0)	0.002**	0.123	0.241	0.26
	3	98.9 (28.8)	−12.6 (38.9)	−12.9 (36.4)	0.001**	0.002**	0.943	0.39
Global severity index (symptoms checklist-90-revised)[g]	1	0.50 (0.36)	−0.22 (0.26)	−0.15 (0.28)	<0.0001***	<0.0001***	0.250	0.41
	2	0.56 (0.44)	−0.19 (0.29)	−0.12 (0.37)	<0.0001***	0.022*	0.028*	0.27
	3	0.41 (0.30)	−0.09 (0.25)	−0.05 (0.21)	<0.0001***	0.159	0.070	0.13
Depression (symptoms checklist-90-revised)[g]	1	0.75 (0.62)	−0.41 (0.52)	−0.24 (0.52)	<0.0001***	0.002**	0.101	0.41
	2	0.76 (0.65)	−0.22 (0.41)	−0.08 (0.50)	0.001**	0.445	0.025*	0.10
	3	0.53 (0.46)	−0.06 (0.45)	−0.03 (0.40)	0.097	0.661	0.285	0.04
Frequency of medical symptoms[h]	1	21.4 (14.4)	−5.5 (10.5)	−5.7 (10.3)	<0.0001***	<0.0001***	0.948	0.40
	2	26.9 (19.3)	−2.1 (16.5)	0.6 (13.7)	0.086	0.310	0.622	0.12
	3	19.9 (12.6)	−3.4 (9.4)	−0.9 (9.8)	0.004**	0.259	0.130	0.10
Discomfort from medical symptoms[h]	1	26.2 (17.4)	−7.1 (17.0)	−9.5 (20.0)‡	0.003**	<0.0001***	0.469	0.51
	2	34.9 (22.4)	−0.2 (28.4)	−3.0 (15.1)	0.37	0.114	0.456	0.23
	3	24.8 (18.0)	−5.3 (12.4)	−1.1 (12.2)	0.010**	0.598	0.075	0.06
Interference of medical symptoms[h]	1	21.6 (20.1)	−4.8 (18.5)	−7.2 (19.6)	0.025*	0.005**	0.55	0.41
	2	30.0 (23.4)	−1.1 (28.1)	−4.7 (14.0)	0.160	0.078	0.632	0.27
	3	20.4 (17.2)	−4.1 (13.4)	−0.4 (16.7)	0.03*	0.720	0.115	0.04
Body weight (kg)	1	95.5 (15.7)	−0.9 (5.9)	−1.8 (6.2)	0.89	0.50	0.605	0.06
	2	93.2 (14.7)	1.2 (3.9)	−0.4 (5.8)	0.26	0.93	0.373	0.01
	3	93.9 (17.3)	−0.3 (4.9)	−2.0 (8.6)	0.71	0.082	0.186	0.12
Systolic blood pressure (mm Hg)	1	133.2 (14.3)	−2.2 (13.1)	−3.5 (10.4)	0.89	0.31	0.294	0.15
	2	136.0 (17.9)	−4.2 (16.4)	−9.3 (15.0)	0.096	0.005**	0.209	0.44
	3	134.0 (17.5)	−2.8 (15.6)	−5.7 (12.7)	0.086	0.009**	0.350	0.31
Diastolic blood pressure (mm Hg)	1	84.5 (9.7)	−3.2 (9.1)	−6.3 (8.8)	0.18	0.001**	0.065	0.53
	2	83.6 (11.2)	−2.1 (11.5)	−5.4 (10.1)	0.18	0.042*	0.429	0.34
	3	84.3 (10.4)	−4.6 (9.9)	−4.6 (10.1)	0.001**	0.002**	0.993	0.39

[a] Unadjusted mean and mean change score from baseline to each time point.
[b] *p*-values adjusted for cohort, age category, baseline smoking status, education, having a partner, having children and work status.
[c] Effect sizes calculated as: baseline to 2-year adjusted change score/sample baseline standard deviation.
[d] Higher scores indicate greater dietary quality.
[e] Stress management subscale of the Health-Promoting Lifestyle Profile Questionnaire (HPLP-II) was scored on a 4-point Likert scale from 0 'never' to 3 'routinely'.
[f] Eating self-efficacy scale (ESES), a 25-item scale from 1 'No difficulty controlling eating' to 7 'Most difficulty controlling eating'.
[g] Revised Symptom Checklist (SCL-90-R); a 5-point scale from 0 'not at all' to 4 'extremely' was used to derive scores for Global Severity Index and Depression subscale.
[h] The Medical Symptoms Checklist is comprised of three subscales: the frequency medical symptoms are experienced (9 point scale from 0 'never' to 8 'constantly'), the degree of discomfort (0 'no discomfort' to 10 'extreme discomfort') and the degree of interference in daily activities (0 'no interference' to 10 'extreme interference').
* $p<0.05$.
** $p<0.01$.
*** $p<0.001$.
† Significant between-treatment difference P1 and P2, $p<0.05$,
‡ Significant between-treatment difference P1 and P3, $p<0.01$.

Hawley G, et al. *Prev Med*. 2008;47:593-599.

Depression: Non-dieting with Relaxation Response

Both P1 and P2 subjects showed reductions in depression at one year (P<0.0001 and P=0.001 respectively), but only P1 subjects maintained this reduction at two years (P=0.002).

Hawley G, et al. *Prev Med*. 2008;47:593-599.

Conclusions

- Non-dieting approaches can lead to reductions in depression.
- However, there have been studies (although none presented here) that have found that *dieting* approaches can also reduce depression.

Experimental Studies of Intuitive Eating

Psychological Effect:
Self-Concept and Self-Esteem

Self-Concept: Bright Bodies Weight Management Program

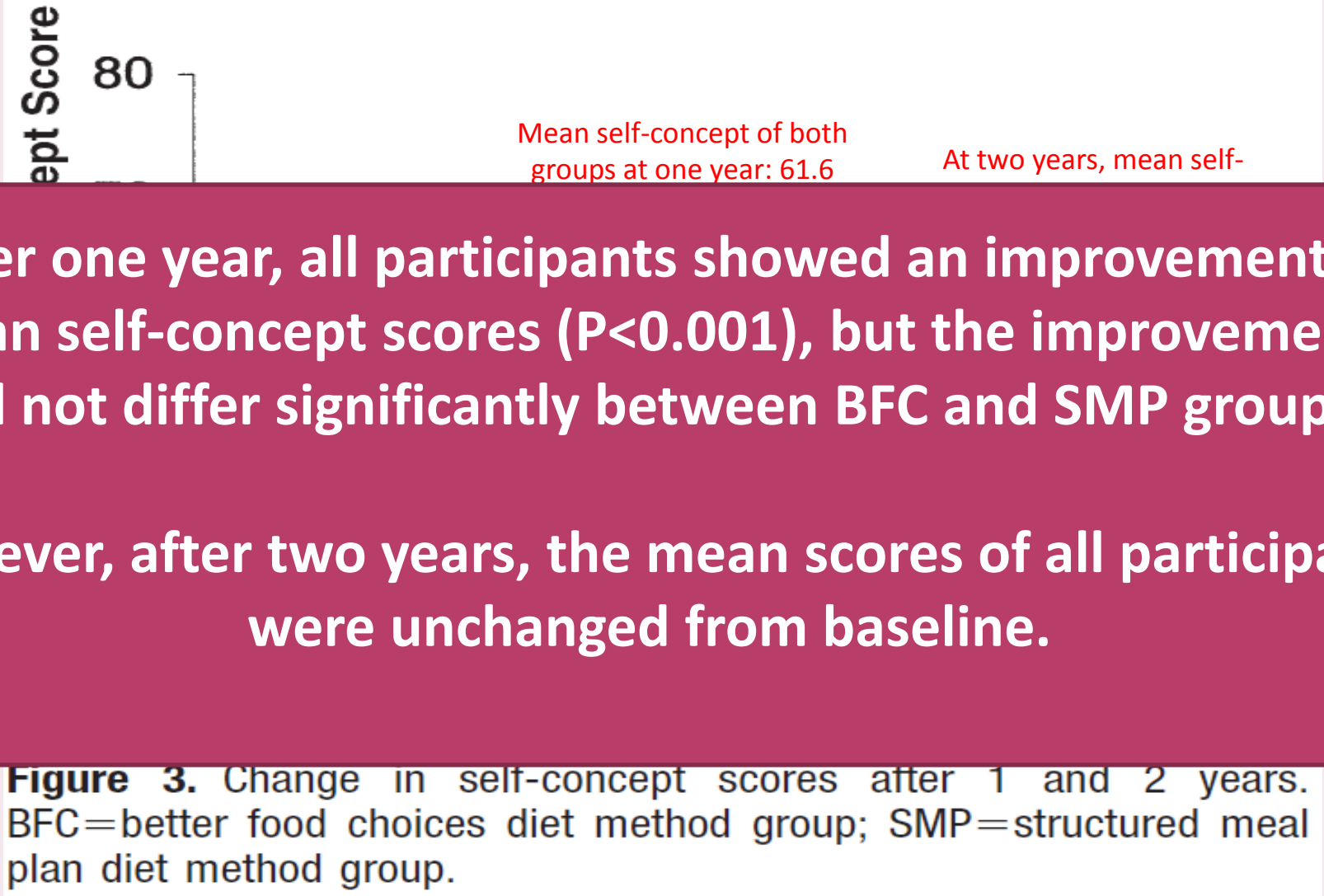


Figure 3. Change in self-concept scores after 1 and 2 years. BFC=better food choices diet method group; SMP=structured meal plan diet method group.

After one year, all participants showed an improvement in mean self-concept scores (P<0.001), but the improvements did not differ significantly between BFC and SMP groups.

However, after two years, the mean scores of all participants were unchanged from baseline.

Savoye M, et al. *J Am Diet Assoc.* 2005;105:364-370.

Self-Esteem: Traditional Weight Control vs Diet Free Forever

TABLE 3
Means and Standard Deviations for Psychological Variables

	Men		Women	

Increases in self-esteem occurred in both the dieters and non-dieters (P<0.001).

There was also an unanticipated increase in self-esteem in the control group (P<0.01).

Steinhardt MA, et al. *J Psychol*. 1999;133:495-513.

Conclusions

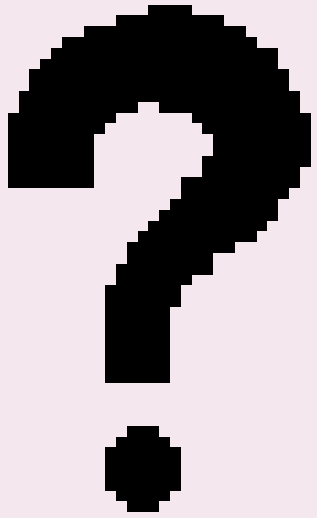
- Non-diet approaches can lead to improvements in self-esteem and self-concept.
- But, these improvements can also occur in traditional *diet* approaches.

Conclusions/Implications for Practice

- Research is somewhat mixed.
- Benefits of intuitive eating:
  - Reduces depression
  - Improves self-esteem/self-concept
  - Associated with lower BMI
- IE should not be recommended as a primary method for weight loss in overweight/obese individuals who need to lose weight for medical reasons.
- Recommend as a lifestyle to clients who are interested in weight maintenance or gradual weight loss, and are not looking for a quick fix.
- There are some concerns about IE: possibility of nutritional inadequacy if people eat in a non-restrictive, unregulated way.
- My recommendation: an eating lifestyle based on internal hunger satisfaction; to have moderation, variety, and balance in food choices; and to remove the “good” and “bad” stigmas associated with food.

Thank you!

Questions?



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