

Best Evidence Statement (BEST)

Date: 3/24/2011

Best Care Environment for Adolescent Patients with Eating Disorders

Topic and/or question as originally asked

What environment is best for treating adolescent eating disorder patients on an inpatient medical unit? Does a strict or lenient environment improve patient compliance? Which is better for weight gain?

Clinical Question

P(population)	Among adolescent patients diagnosed with an eating disorder, acutely admitted to the hospital for treatment of the eating disorder
I(intervention)	does a strict environment at admission
C(comparison)	versus a lenient environment
O(outcome)	improve patient compliance with the plan of care and/or weight gain

Target Population

Adolescents - age 13 to 21, with an eating disorder, including anorexia nervosa, bulimia nervosa and eating disorder NOS (not otherwise specified), excluding binge eating and overeating.

Definitions:

A Strict environment is rigid, limiting patient's freedoms. A strict program contains a standard set of restrictions for each patient (examples: bed rest, close monitoring by a patient attendant, bathroom door locked) and behavioral consequences.

A Lenient environment of care is individualized, flexible, allows for patient choices and limits the use of negative reinforcers. A behavioral contract is negotiated with the patient (for compliance, completion of meals or weight gain).

Compliance is adherence to the plan of care, including cooperation, decreased defiance and decreased manipulation.

Recommendations (See Table of Recommendation Strength following references)

1. It is recommended that for adolescent patients with eating disorders, acutely admitted to the hospital, a lenient environment be used to improve patient compliance with the plan of care. (Colton & Pistrang, 2004 [2b], Touyz, Beumont, Glaun, Phillips & Cowie, 1984 [2b], and Touyz, Beumont & Dunn, 1987 [4b]).
2. There is insufficient evidence and lack of consensus to make a recommendation on whether a strict environment or a lenient environment contributes to weight gain (Bhanji & Thompson, 1974 [4b], Bossert, Schnabel, Krieg & Berger, 1988 [4b], Dalle Grave, Bartocci, Todisco, Pantano & Bosello, 1993 [4b], Halmi, Powers & Cunningham, 1975 [4b], Kreipe & Kidder, 1986 [3b], Nusbaum & Drever, 1990 [4b], Solanto, Hertz, Jacobson, Golden & Heller, 1994 [4b], Touyz et al., 1984 [2b], Touyz et al., 1987 [4b], Treat et al., 2005 [4b], Vandereycken & Pieters, 1978 [4b].)

Discussion/summary of evidence

For Compliance:

Three studies in the literature review touched on the effect of the environment of care on compliance with the plan of care (*Colton & Pistrang, 2004 [2b]*, *Touyz et al., 1984 [2b]*, and *Touyz et al., 1987 [4b]*).

In a clinical controlled trial that compared a lenient to a strict program, (N=65, which included adolescents and adults in a general hospital setting), staff rated 24% of the patients in the lenient program as cooperative, as opposed to 10% in the strict program (*Touyz et al., 1984 [2b]*). There also was a “general consensus among staff members that patients on the lenient programme were better motivated towards other aspects of the treatment than those on the strict programme” (*Touyz et al., 1984 [2b]*). In a descriptive follow up study (N= 68, including adolescents and adults in a general hospital setting) under a lenient program patients only spent a fifth of their time restricted to the unit as a consequence of not meeting weight gain goals (*Touyz et al., 1987 [4b]*). A qualitative study using interpretive phenomenology highlighted the importance of addressing the individual needs of the patient, and found that when “the unit was experienced as supportive and encouraging, patients felt more able to cooperate; conversely, when treatment was experienced as punishing and disempowering, they tended to rebel” (*Colton & Pistrang, 2004 [2b]*).

For compliance, the grade for the body of evidence: moderate.

For Weight Gain:

Eleven studies in the literature review focused on the effect of the environment on weight gain (*Bhanji & Thompson, 1974 [4b]*, *Bossert et al., 1988 [4b]*, *Dalle Grave et al., 1993 [4b]*, *Halmi et al., 1975 [4b]*, *Kreipe & Kidder, 1986 [3b]*, *Nusbaum & Drever, 1990 [4b]*, *Solanto et al., 1994 [4b]*, *Touyz et al., 1984 [2b]*, *Touyz et al., 1987 [4b]*, *Treat et al., 2005 [4b]*, *Vandereycken & Pieters, 1978 [4b]*).

Three descriptive studies favored a lenient environment (*Dalle Grave et al., 1993 [4b]*, *Touyz et al., 1987 [4b]*, *Vandereycken & Pieters, 1978 [4b]*), two were statistically significant. Under lenient conditions, patients had a weight gain of 33.4kg (SD 4.5kg) to 43.5kg (SD 4.9kg), $p=0.001$ (*Dalle Grave et al., 1993 [4b]*). In another study comparing two programs, the stricter program showed an average weekly weight gain of 1.30kg, while the more lenient program showed an average weekly weight gain of 1.75kg, $p<0.05$ (*Vandereycken & Pieters, 1978 [4b]*). Two descriptive studies favored a strict environment (*Halmi et al., 1975 [4b]* and *Treat et al., 2005 [4b]*). Two additional studies were equivocal in their findings for weight gain (*Touyz et al., 1984 [2b]* and *Nusbaum & Drever, 1990 [4b]*). The remaining four studies contained elements of both a strict and lenient environment, and therefore could not help answer the question (*Bhanji & Thompson, 1974 [4b]*, *Bossert et al., 1988 [4b]*, *Kreipe & Kidder, 1986 [3b]* and *Solanto et al., 1994 [4b]*).

For weight gain, the grade for the body of evidence: grade not assignable.

Supporting Information:

Multiple guidelines and articles were reviewed for this project. Guidelines favor a lenient environment (*American Psychiatric Association [APA], 2006 [5a]*, *Ebeling et al., 2003 [5b]*, *Hay, 2004 [5b]* and *National Collaborating Centre for Mental Health [NICE], 2004 [5b]*).

Expert opinion is mixed. Three articles favored a lenient environment (*Attia & Walsh, 2009 [5a]*, *Holyoake & Jenkins, 1998 [5b]* and *Vandereycken, 1989 [5b]*). One suggests a more restrictive

environment as the best way to prevent or expose patient "subversive behaviors" (Ammerman, 1996 [5b]). However, several expert opinions describe programs that contain elements of both a strict and lenient environment (Rome et al., 2003 [5a], Sylvester & Foreman, 2008 [5a], and Wolfe & Gimby, 2003 [5b]).

There is no consensus or empirical data on what type of treatment program yields overall best results (NICE, 2004 [5b], Sylvester & Foreman, 2008 [5a] and Hay, 2004 [5b]).

Health Benefits, Side Effects and Risks

Non-compliance with a plan of care can represent a hazard to the patient's health and a waste of health resources (Stone, 1979 [5b]). A lenient environment is more acceptable to patients and less likely to impair self-esteem (Hay, 2004 [5b]). It supports the patient's ability to take care of themselves (Ebeling et al., 2003 [5b]). When patients can collaborate in decisions, feel listened to rather than presided over, and are offered rationale for practices, they are less confused and frustrated (Offord, Turner & Cooper, 2006 [2b]).

The risk of a lenient program is that it places a high burden of adherence on the adolescent patient, and some patients may engage in deceptive or self-destructive behaviors.

References (evidence grade in []; see *Table of Evidence Levels following references*)

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- Bhanji, S., & Thompson, J. (1974). Operant conditioning in the treatment of anorexia. *British Journal of Psychiatry*, 124(579), 166-172. [4b]
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- Colton, A., and Pistrang, N. (2004). Adolescents' experiences of inpatient treatment For anorexia nervosa. *European Eating Disorders Review*, 12(5), 307-316. [2b]
- Dalle Grave, R., Bartocci, C., Todisco, P., Pantano, M., & Bosello, O. (1993). Inpatient treatment for anorexia nervosa: A lenient approach. *European Eating Disorders Review*, 1(3), 166-176. [4b]
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- National Collaborating Centre for Mental Health. (2004). Eating disorders: Core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related eating disorders; National Clinical Practice Guideline Number CG9. London, UK: British Psychological Society and Gaskell. [5b]
- Nusbaum, J. G., & Drever, E. (1990). Inpatient survey of nursing care measures for treatment of patients with anorexia nervosa. *Issues in Mental Health Nursing*, 11, 175-184. [4b]
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- Solanto, M., Hertz, S., Jacobson, M., Golden, N., & Heller, L. (1994). Rate of weight gain of inpatients with anorexia nervosa under two behavioral contracts. *Pediatrics*, 93, 989-991. [4b]
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- Sylvester, C. J., & Forman, S. F. (2008). Clinical practice guidelines for treating restrictive eating disorder patients during medical hospitalization. *Current Opinion in Pediatrics*, 20, 390-397. [5a]
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Wolfe, B.E. & Gimby, L.B. (2003). Caring for the hospitalized patient with an eating disorder. *Nursing Clinics of North America*, 33, 75-99. [5b]

Note: Full tables of evidence grading system available in separate document:

- [Table of Evidence Levels of Individual Studies by Domain, Study Design, & Quality](#) (abbreviated table below)
- [Grading a Body of Evidence to Answer a Clinical Question](#)
- [Judging the Strength of a Recommendation](#) (abbreviated table below)

Table of Evidence Levels (see note above)

<i>Quality level</i>	<i>Definition</i>
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5 or 5a or 5b	Other: General review, expert opinion, case report, consensus report, or guideline

†a = good quality study; b = lesser quality study

Table of Recommendation Strength (see note above)

<i>Strength</i>	<i>Definition</i>
“Strongly recommended”	There is consensus that benefits clearly outweigh risks and burdens (or visa-versa for negative recommendations).
“Recommended”	There is consensus that benefits are closely balanced with risks and burdens.
No recommendation made	There is lack of consensus to direct development of a recommendation.

Dimensions: In determining the strength of a recommendation, the development group makes a considered judgment in a consensus process that incorporates critically appraised evidence, clinical experience, and other dimensions as listed below.

1. Grade of the Body of Evidence (see note above)
2. Safety / Harm
3. Health benefit to patient (*direct benefit*)
4. Burden to patient of adherence to recommendation (*cost, hassle, discomfort, pain, motivation, ability to adhere, time*)
5. Cost-effectiveness to healthcare system (*balance of cost / savings of resources, staff time, and supplies based on published studies or onsite analysis*)
6. Directness (*the extent to which the body of evidence directly answers the clinical question [population/problem, intervention, comparison, outcome]*)
7. Impact on morbidity/mortality or quality of life

Supporting information

Introductory/background information

Eating Disorders refer to a group of debilitating conditions (Anorexia Nervosa, Bulimia Nervosa and Eating Disorders NOS) affecting both mind and body (*Attia & Walsh, 2009 [5a], NICE, 2004 [5b]*). “Weight preoccupation and excessive self-evaluation of weight and shape are primary symptoms in both disorders, and many patients demonstrate a mixture of both anorexic and bulimic behaviors” (*APA, 2006 [5a]*). Patients experiencing serious medical compromise often require hospitalization (*Sylvester & Foreman, 2008 [5b], Treat et al., 2005 [4b]*). In the short term, inpatient treatment can be successful in restoring patients’ weight and removing imminent physical danger (*Colton & Pistrang, 2004 [2b], Dalle Grave et al., 1993[4b]*). Most inpatient treatment programs incorporate some form of behavior modification (*Touyz et al., 1987 [4b]*).

Currently, adolescents acutely admitted to our hospital are treated on a medical unit. Patients are placed on bed rest, cardiac monitors, a strict diet regimen and most are observed during meals or for their entire stay on the unit. Patients and families expressed frustration about the restrictions and lack

of consistent information. Many patients have been caught hiding food, purging or exercising in their rooms. Nursing staff was often caught in power struggles with patients over rule violations. Concern regarding the effectiveness of our current nursing care, as well as patient, family and staff satisfaction, led to this project.

Group/team members

Team Leader: Kathleen Hautman BS RNII, A6N, adolescent medical surgical unit, Cincinnati Children's Hospital Medical Center

Support Personnel: Barbara K. Giambra, MS, RN, CPNP, Center for Professional Excellence-Business Integration/Research and Evidence based Practice, Cincinnati Children's Hospital Medical Center

Search strategy

Databases: Ovid Medline, PubMed, Cinahl, Psychinfo, Nursing Reference Center, Google Scholar and hand search.

Keywords: Anorexia, Eating Disorders, inpatient, compliance, nursing interventions, practice guidelines, guidelines, treatment guidelines, strict, lenient

Limits: English language and adolescents, all dates included

Retrieved: July 29, 2010 – November 22, 2010

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Note

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Reviewed against quality criteria by 2 independent reviewers.