

# Approximately two thirds of adolescents with newly diagnosed eating disorders recovered within 5–11.5 years

Steinhausen HC, Seidel R, Winkler Metzke C. *Evaluation of treatment and intermediate and long-term outcome of adolescent eating disorders*. *Psychol Med* 2000 Sep;30:1089–98.

**QUESTIONS:** In adolescents with newly diagnosed eating disorders, how long does treatment last, and what is the course of the disorder?

## Design

Inception cohort with mean follow up periods of 5 and 11.5 years.

## Setting

A university department of child and adolescent psychiatry in Berlin, Germany.

## Patients

60 adolescents (95% girls) who had newly diagnosed eating disorders (anorexia nervosa [AN], restrictive type [80%]; AN, bulimic type [10%]; bulimia nervosa [8.3%]; and atypical AN, bulimic type [1.7%]) and had received inpatient treatment. The mean age of patients was 14.6 years at disease onset, 15.7 years at first admission, 20.9 years at first follow up, and 27.3 years at second follow up. 83% of patients were assessed at the first follow up and 77% at the second follow up.

## Assessment of prognostic factors

Predictors of treatment duration and outcome were assessed, but <80% of patients were included in this analysis.

## Main outcome measures

Treatment duration; body mass index (BMI); eating disorder diagnosis; and symptoms (5 eating disorder and 6 sexuality and psychosocial items rated on a 4 point scale [absent, slight, moderate, severe]).

## Main results

4 patients died during the first follow up period, and 1 patient died during the second follow up period (total mortality rate 8.3%). Causes of death were complications of severe and chronic eating disorders (n=4) or suicide (n=1). The mean duration of inpatient treatment in the follow up period was 143 and 185 days for first and second follow up, respectively; for outpatient treatment, the mean duration was 14 and 17 months. Patients were in treatment for a mean 33% of the first 5 years. The mean BMI increased from 14.2 kg/m<sup>2</sup> at first admission to 19.3 kg/m<sup>2</sup> at first follow up (mean increase 5.1 kg/m<sup>2</sup>, 95% CI 4.2 to 6.0) and 19.6 kg/m<sup>2</sup> at second follow up. The proportions of patients with eating disorders were 10% and 5% for AN, restrictive type; 4% and 2% for AN, bulimic type; 0% and 5% for bulimia nervosa; and 14% and 9% for atypical AN at first and second follow up, respectively. 68% of patients at first follow up and 78% of patients who were interviewed at second follow up had no eating disorder. The proportions of patients with moderate or severe symptom ratings on symptom scales for first and second follow up were 38% and 22% for avoidance of sexual behaviour, 27% and 7% for amenorrhoea, 20% and 4% for avoidance of sexual matters, 18% and 13% for unsatisfactory family relationships, 18% and 11% for anorexic eating behaviour, 12%

and 9% for vomiting, 12% and 4% for unsatisfactory social contacts, 10% and 11% for impaired vocational career, 8% and 7% for bulimia, 6% and 2% for laxative abuse, and 6% and 7% for dependency upon the family.

## Conclusions

Adolescents with newly diagnosed eating disorders were in treatment for approximately one third of the first 5 years after initial hospital discharge. Approximately two thirds of patients recovered after 5–11.5 years. The mean body mass index increased by approximately 5 kg/m<sup>2</sup>, but 8% of patients died.

## COMMENTARY

The long term cohort study by Steinhausen *et al* adds to a growing number of reports showing the variable long term outcome of adolescent eating disorders and the difficulty of predicting outcome in an individual case.

There are important service delivery implications here. Because this sample had been in hospital for an average of 3 months at the outset, it is clear that this did not usually result in a complete cure. Weight restoration in hospital has previously been shown to be a poor marker of progress, particularly when enforced.<sup>1</sup> Whether initial hospital admission acts as a help or hindrance to long term outcome is unknown.

Many patients required expensive treatment spanning many years, often into adulthood. This matches the experience in other Western countries. Therefore, well functioning liaison in the interface between child and adult services is crucial.

The outcome of normal weight bulimia nervosa is less clear. Results from the mixed diagnostic group are reported here, which makes comparison of the outcome and mortality rates with other series difficult and the interpretation of such outcomes as mean weight gain confusing. The reported mortality rate is in the middle range; other reported rates range from 0–22%.<sup>2</sup>

On a positive note, most patients eventually recovered fully. This finding is in keeping with that of Theander who found recovery occurred up to 12 years after first presentation but not beyond.<sup>3</sup> Although anorexia nervosa has often been considered to be a remitting and relapsing disorder, the interesting survival analysis graphs indicate that when full recovery occurs, it is usually lasting.

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