



# NEDC e-Bulletin

Issue Twelve | June 2013

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## Editor's Note:

Welcome to the June edition of the NEDC e-Bulletin. The e-Bulletin is now a year old and we endeavour to continue to highlight new and interesting research and information on eating disorders into our second year. In this edition we have a feature article on risk factors for prevention interventions as well as an interview with Professor Tracey Wade about the international Anorexia Nervosa Genetics Initiative study.

As always we hope you enjoy this edition and if you would like to suggest topics or events to be featured in future editions of the e-bulletin, please contact us at [info@nedc.com.au](mailto:info@nedc.com.au).

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## Feature Article: Obesity and eating disorders

### A consideration of shared risk factors for prevention interventions



Eating disorders and obesity are serious public health concerns. Both are increasingly prevalent and have significant adverse effects on physical and psychosocial health. While many focus on the perceived differences between the two health conditions, they share common risk factors, similar long-term consequences, and are both highly resistant to treatment.

Disordered eating is a shared pathway into both eating disorders and obesity. Up to

30% of people seeking treatment for obesity engage in binge eating and between 10 and 20% meet the criteria for binge eating disorder. There is also evidence that obesity can be a serious outcome for people with bulimia nervosa.

In fact, obesity and eating disorders may be viewed as occurring at the same end of a spectrum: at one end, health promoting beliefs, behaviours, and physical indicators, buffer against these conditions; at the opposite end, weight-related syndromes and eating disorders are potential outcomes ([NEDC, Healthy Weight Related Messages](#)).

Identification of appropriate, common risk factors is therefore essential to developing effective prevention interventions. While numerous interrelated factors have been implicated in the development of eating disorders and obesity, a comparison to distinguish specific, overlapping risk factors can be difficult due to discrepancies across study designs, samples, diagnostic procedures and risk measures.

In a recently published paper, [Krug and colleagues \(2013\)](#) attempted to overcome some of these methodological limitations by assessing risk and protective factors for different weight-related conditions within the same study. Specifically, they assessed early eating influences as well as individual, family and social eating patterns and attitudes to food in a sample of underweight eating disorder patients and obesity patients concurrently.

The eating influences found to be shared by the underweight eating disorders and obesity groups included:

- Teasing about body shape by friends
- Family weight/shape concerns
- Negative family environments

In view of these similarities and shared risk factors, recent research has called for the development of prevention programs that address common issues in the context of a broad range of eating- and weight-related problems.

In addition to addressing shared risk factors and preventing similar consequences, approaching prevention to these two health conditions simultaneously is economically efficient and reduces the risk of inadvertently causing one disorder while trying to prevent another ([Haines & Neumark-Sztainer, 2006](#)).

Health professionals, families, schools, peers and the mass media need to collaborate to provide consistent, reliable information about the complexities of weight-related disorders and the negative effects of ineffective weight regulation and weight loss attempts ([Krug et al., 2013](#)).

Despite the need for early interventions that can reduce the risk factors for both eating disorders and obesity, only two school-based programs have been evaluated for their efficacy:

- Planet Health is a 2-year interdisciplinary obesity prevention program with girls and boys in Grades 6-8. [Austin et al., \(2005\)](#) found that the program significantly reduced both obesity onset and growth of purging behaviours amongst girls in the program
- Healthy Buddies is a 21-week program pairing students in Grades 4-7 with a student in Kindergarten-Grade 3. [Stock et al., \(2007\)](#) found that the program led to significantly lower increases in body mass index (BMI) amongst the older students in the intervention condition, while no significant differences were found for the body image variables

In addition to these programs, [Wilksch and Wade \(in press\)](#) recently piloted Life Smart, an eight-lesson, school-based program that seeks to build on earlier interventions by not only including eating disorder risk factors and traditional obesity prevention targets, but also targeting several psychological risk factors that have rarely been addressed in combined prevention programs.

Results of the pilot study indicated that the program was well-received and valued by participants. Informed by the findings of the pilot study, the program has since been revised, and is now being evaluated in a randomised controlled trial.

For further reading on the shared risk factors for eating disorders and obesity, and integrated prevention interventions, take a look at some of the other articles included in the [NEDC Knowledge Hub](#).

## Interview: Professor Tracey Wade



*There is an exciting international research study currently underway, which will greatly contribute to our understanding of the biological basis for anorexia nervosa.*

*The [Anorexia Nervosa Genetics Initiative \(ANGI\)](#) is a global effort to identify genes that contribute to eating disorders. The study aims to transform our knowledge about the causes of eating disorders and work toward greater understanding of their prevention and treatment. ANGI involves investigators in Australia, the United States, Sweden and Denmark, including one of the NEDC's Steering Committee members Professor Tracey Wade.*

*We have asked Tracey to talk to us about the purpose and desired outcomes of this study.*

### **What do we currently know about the role of genetics in the development of eating disorders and what are the gaps in our knowledge?**

Twin studies consistently show that genes are an important and substantial contributor to the development of eating disorders, accounting for 30% to 76% of the cause for anorexia nervosa and 30% to 80% of the cause for bulimia nervosa. Since 2007 over 2,000 new genetic loci have been identified that are significantly and robustly associated with one or more complex traits. However, while multiple specific genes are being identified as being part of the causal pathway for various physical diseases (e.g., Crohn's disease) and a number of genes have been identified for schizophrenia, so far we have been unable to identify any genes for anorexia nervosa. This is simply because a better understanding of the genetic architecture of any disorder requires very large sample sizes, which have been collected for other diseases but not yet for anorexia nervosa.

### **What are the implications of this research?**

This research, known as a genome wide association study (GWAS), is a multi-site international collaboration that will collect blood samples from thousands of women who have had anorexia nervosa at some stage in their life – these samples can be added to already existing collections to help us reach that critical number required to start identifying the specific genes for anorexia nervosa.

**How will the outcomes of this study affect current treatment approaches? Will the outcomes lead to new treatment options?**

Progress in GWAS for other diseases indicates that genes previously unsuspected in having a role in causality are identified as being important. These genes include many known drug targets. Therefore one of the possible outcomes are the identification of new and novel drug targets for anorexia nervosa, that may allow people to find it easier to work on regaining nutritional and psychological health. An example from the anxiety disorders is the finding that a drug originally used for tuberculosis (oxytocin) can help people learn to cope more quickly with the situations that make them anxious.

**This study is focusing specifically on anorexia nervosa. Does this suggest that there are unique genetic factors implicated in the development of anorexia nervosa? Is it likely that a study of this nature will be done in the future into other eating disorders such as Bulimia and Binge Eating Disorder?**

The reason we focus on anorexia nervosa is because we think that results of GWAS will be particularly fruitful for anorexia nervosa as it is a very homogenous disorder and the defining characteristic is the observable maintenance of low body mass for a sustained period of time, thus ensuring the diagnostic criteria have high inter-rater agreement, in contrast to some other psychiatric disorders. In the future, it is highly likely that other eating disorders will become the focus of genetic studies.

To participate in or find out more about the ANGI study [visit the website](#).

To find out more about Australian research visit our [Current Australian Studies page](#).

## Article: New ways of thinking about anorexia nervosa



*Janet Treasure was recently in the country speaking to professionals and families about the cognitive-interpersonal maintenance model of anorexia nervosa much of which is summarized in a recent review article cowritten with Ulrike Schmidt for the Journal of Eating Disorders. This is an extract from an article which originally appeared on the [BioMed Central Blog](#).*

Anorexia nervosa (AN) has a lifetime prevalence of 1% in females with a 10-20% lifetime fatality rate.

The evidence-base for psychological treatment of adults with AN is extremely limited with only a handful of trials to date and a call for new approaches has been made.

In order to develop interventions that are of benefit for those with a more severe and enduring form of anorexia nervosa it may be helpful to understand and target the factors that maintain the illness. It was with this in mind that Schmidt and Treasure developed a theoretical structure, a cognitive and interpersonal “Valued and Visible” model – to explain the factors that interacted to cause anorexia nervosa to persist.

This [paper](#) revisits the model and synthesizes the new evidence related to the four postulated components of the model. It is now clearly established that obsessive compulsive traits and problems with social/emotional processing are causal and maintaining factors and contribute to the secondary interpersonal factors (familial and peer) that lead the individual to become isolated within the illness. Also the secondary effects of both starvation and irregular nutritional patterns on the brain as well as on the body are more clearly understood.

It is hoped that with this more clearly defined specificity within the model that new approaches to treatment can be defined. This will encompass the traditional top down approach of talking treatments that use processes such as cognitive control to introduce a

flexible change in behaviours, thoughts, attention and perception. In addition there may be more direct ways of targeting these processes within the model. For example it may be possible to modify negative biases in attention or directly stimulate in efficient circuits.

In addition to eating disordered behaviors, people with anorexia nervosa have problems in social and emotional functioning which are thought to be causal and maintaining factors (Treasure et al., 2012b). Research has identified enhanced sensitivity to punishment as one of these vulnerabilities (Harrison et al., 2011), with both food and social stimuli experienced as threatening (Treasure et al., 2012a, Treasure et al., 2012b) in a transactional pattern (Soussignan et al., 2010). In addition, insecure attachment and early adverse social experiences have been found to produce a learned vigilance to social judgment (Cardi et al., 2012) and difficulties engaging with positive social cues (Treasure et al., 2012b), increasing susceptibility to “fat talk”, teasing about weight and shape, and learned negative reactions to food, weight, and shape dominate behaviors (Treasure et al., 2012a). These findings suggest that social emotional factors relating to attachment, competition/cooperation, and self-representation should be a key part of treatment. Up to a point current talking treatments do this but a large proportion of people with eating disorders fail to respond. This suggests that psychotherapy may be strengthened by the addition of more brain-directed treatments which target the primary processes.

*Journal of Eating Disorders is the first open access, peer-reviewed journal publishing leading research in the science and clinical practice of eating disorders. To read the full review on the cognitive-interpersonal model of anorexia nervosa visit the [Journal website](#).*

## Opportunities to get involved

### Participate in a research study



*There are many **eating disorder research studies** currently occurring in Australia and researchers are frequently looking for participants to contribute to this research. The following is a list of current eating disorders research requiring participants. If you know of anyone who might be interested in participating in any of these projects it would be much appreciated if you could pass these along.*

#### **Healthy eating behaviours in male gym users**

**About:** It is anticipated that the data collected during this study will assist us in improving our understanding about the factors associated with the development of eating behaviours in adult males who use health and fitness centres.

**Looking for:** Males over the age of 18

**Participation involves:** Completion of a short questionnaire.

**Weblink:** <https://www.surveymonkey.com/s/eatingbehaviours>

#### **Investigating the neurobiological and cognitive features of Anorexia Nervosa**

**About:** The aim of this study is to investigate whether individuals diagnosed with Anorexia Nervosa use different strategies to complete certain tasks. The reason this study is being undertaken is that although there are high rates of Anorexia Nervosa in today's society, the psychological and neurological processes involved in the development and maintenance of the condition are still poorly understood.

**Looking for:** The research team are seeking right-handed females diagnosed with AN and healthy females who have never suffered an eating disorder.

Participation involves: If you agree to participate in this study, you will be asked to participate in three sessions. These involve a set of neuropsychological tests and 2 different types of brain scans, fMRI and MEG. The first session can be at The University of Melbourne or Swinburne University (Hawthorn), as you prefer. The second and third sessions will be at Swinburne. Each session is 2-3 hours. You will be reimbursed with a total of \$100. AN participants requiring assisted transportation will also receive taxi vouchers.

**Participate:** Contact Andrea Phillipou by emailing [ap@unimelb.edu.au](mailto:ap@unimelb.edu.au) or phoning (03) 9035 9947

### ***Placing the Focus on Perfectionism in Female Adolescent Anorexia Nervosa: Augmented Maudsley Family Based Treatment (FBT+CBT)***

**About:** The aim of the project is to examine the effectiveness of an intervention designed to target and subsequently reduce Anorexia Nervosa (AN) symptoms, improve family cohesion, and reduce perfectionistic thinking patterns through a combination of Maudsley Family Based Treatment (FBT) and components of Cognitive Behaviour Therapy (FBT+CBT).

**Looking for:** Female adolescents (14 – 17 years) with a diagnosis of Anorexia Nervosa, residing at home with their family. All participants will be recruited after they present to Child & Youth Mental Health Service (CYMHS) Gold Coast, PH: 56 35 63 92.

**Participation involves:** The Maudsley Family Based Treatment (FBT) model is structured into about 20 family sessions that take place during the course of a year. Treatment is broken up into three distinct phases. → Phase one involves weekly appointments. → Phase two involves fortnightly appointments. → Phase three is monthly appointments. Cognitive Behavioural Therapy (CBT) requires your daughter to participate in nine 45-minute individual meetings with a therapist targeting perfectionism during Phase two of FBT. In addition, there will be questionnaires to complete during treatment.

**Participate:** For more information contact Child & Youth Mental Health Service (CYMHS) Gold Coast, PH: 56 35 63 92 or Kim Hurst at [Kim\\_Hurst@health.qld.gov.au](mailto:Kim_Hurst@health.qld.gov.au)

More Australian research can be found on the [Current Australian Studies](#) page.



### **Coming up in July**

In the next edition of the e-Bulletin we will be featuring the recent changes to the eating disorders diagnostic criteria made in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). The next e-Bulletin is out 25th July.