THE CARLAT REPORT CHILD PSYCHIATRY

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UNBIASED INFORMATION FOR CHILD PSYCHIATRISTS

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Editor-in-Chief

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IN THIS ISSUE

Treatment of Anxiety Disorders

Learning objectives for this issue:
1. Determine the most appropriate pharmacological treatment for anxiety, when needed. **2.** Explain the most effective psychotherapies for anxiety disorders. **3.** Effectively diagnose and treat anxiety disorders in children and adolescents. **4.** Understand some of the current findings in the literature regarding psychiatric treatment.

The Psychopharmacology of Anxiety Treatment in Children and Adolescents

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Dr. Fisher has disclosed that she has no relevant relationships or commercial interests in any companies related to this educational activity.

Anxiety disorders are common in young people, affecting 4%–7% of children (Ipser JC et al, *Cochrane Review* 2010;Issue 6), and can cause a plethora of symptoms and impairments—from aggression and suicide to social withdrawal, school failure, and poor physical health. While OCD and PTSD have been addressed in previous issues (see *CCPR,* June 2011 and *CCPR,* November 2011), there are still plenty of disorders left to discuss, and a review of the literature for medication interventions for anxiety is in order. Indeed, most children who present with some form of anxiety meet criteria for several formal disorders (Rienblatt SP and Riddle MA, *Psychopharmacology*

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Effective Psychotherapies for Childhood Anxiety

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Dr. Brewer has disclosed that she has no relevant relationships or financial interests in any commercial company pertaining to this educational activity.

Anxiety disorders are prevalent and heterogeneous. They include generalized anxiety—characterized by excessive worry; panic disorder—characterized by an exaggerated physical and emotional fear response; and the various phobias of social interaction (social phobia), of being separated from a caregiver (separation anxiety), of speaking (selective mutism), and other specific phobias. In this article, I will summarize the latest thinking on the use of psychotherapy for childhood anxiety. Because recent issues of *CCPR* have explored OCD and PTSD in detail, these will not be included in this review.

While there are many different anxiety disorders, the mainstay of treatment for nearly all of them is the same: cognitive behavioral therapy (CBT). The wealth of empirical evidence supporting the use of CBT for childhood anxiety disorders is impressive. A recent Cochrane review documented a 56% remission rate, compared to 28% for controls, for all of the previously mentioned anxiety disorders with the exception of simple phobias, which were not included in the review. The number needed to treat (NNT) was three. (For a reminder on NNT, see the article on psychopharmacology in this issue.) These results were consistent across all CBT formats, including individual psychotherapy, group-based interventions, and protocols that include significant family involvement (James A et al, *Cochrane Review* 2005;Issue 4). Various meta-analyses have come to the same conclusion. In fact, the term "empirically-supported treatment" is virtually synonymous with CBT when it comes to the treatment of childhood anxiety (Silverman W et al, *J Clin Child & Adolesc Psychology* 2008;37(1):105–130).

Despite its singular position among empirically-supported treatments, there are a wide range of CBT protocols for children. The most popular of these is probably the Coping Cat, developed by Philip Kendall at Temple University, which is used in an individual, group-based, and family format for social phobia, generalized anxiety disorder, and separation anxiety disorder. This 16-session method offers a mix of psychoeduca-

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The Psychopharmacology of Anxiety Treatment in Children and Adolescents

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2007;191(1):67–86).

It appears that the majority of "adult" anxiety disorders begin in childhood and are stable and often chronic conditions (Ipser op.cit), so an effective intervention can have lifelong benefits. To this end, psychotherapy has been the traditional treatment, and for good reason: it is safe and it works…most of the time. However, therapy doesn't work for everyone or in every situation.

Is Medication Effective for Anxiety?

Looking at pharmacological treatments for DSM-III or IV anxiety disorders, Ipser et al found an overall response rate to medication of 58.1%, a statistically significant difference from the 31.5% response rate for placebo. The number needed to treat as compared with placebo was a respectable four. Put simply, this means you need to treat four patients with medication to get one patient effectively treated. (For a good review of NNT and number needed to harm (NNH) see *CCPR,* September 2010.) The majority of medications studied were SSRIs and venlafaxine (Effexor XR). The review found little evidence of difference among them. Behavioral side effects and activation were common.

In a meta-analysis by Hidalgo et al, effect sizes were calculated for several classes of anxiolytics for the treatment of GAD in adults (19 studies) and children (2 studies). The spectrum of research was limited a bit by the fact that all studies had the Hamilton Anxiety Scale as the outcome measure. Two surprising findings were revealed: first, pregabalin (Lyrica) and hydroxyzine (Atarax, Vistaril) had the highest effect sizes overall, at 0.50 and 0.48 respectively; and second, the effect sizes were higher for children than adults in the two studies that included children (Hidalgo RB et al, *J Psychopharmacol* 2007;21(8):864–872).

Which Medications are Best?

Buspirone (BuSpar) has some evidence of helping focus (Davari-Ashtiani R, *Child Psychiatry Hum Devel* 2010;41(6):641–648) and so may have some benefit for the anxious ADHD sufferer, as the SSRIs are generally not helpful and may actually impair focus. Many patients find Buspirone difficult to take, both because of the frequency of dosing (TID) and because it can make kids feel dizzy. There is evidence in both adults and children to support its use, but the effect size is not large (Hidalgo op.cit).

Antipsychotics are probably too risky to use as first or second line for anxiety, although there is evidence for their use as an augmentation agent in OCD and PTSD.

Benzodiazepines have remarkably little evidence of effectiveness in children (Witek MW et al, *Psychiatric Quarterly* 2005;76(3):283–296). In addition, there is concern that they may cause cognitive impairment with long term use, as well as disruption of short term memory. They can be quite effective for individual patients, however, especially in the situations where an immediate fix is required. They are probably best left as short term medications.

Gabapentin (Neurontin) and pregabalin (Lyrica) have small RCTs in the adult literature that suggest benefit, and the risks of adverse events are fairly low. Further, they may be tolerated in kids who can't tolerate SSRIs, either because of comorbid bipolar disorder or because of serotonin induced anxiety or activation. They tend to act relatively quickly as well. Lyrica is the more promising of the two.

Diphenhydramine (Benadryl) and hydroxyzine (Atarax, Vistaril) have some evidence of effectiveness for both acute and longer term treatment of anxiety in children and adolescents. However, chronic use can cause side effects such as dry mouth that leads to dental cavities—a problem for a number of different medications—and they often have a "hangover effect" the next morning.

What's on the Horizon?

As Dr. Moira Rynn points out in her interview in this issue, there are some interesting approaches in development. D-cycloserine is under study as a means of enhancing cognitive behavioral therapy for OCD, specific phobias, social phobias, and panic. Specifically, it is to be dosed an hour before the therapy session (given its short half life) and appears to increase the exposure-based learning that happens during therapy (Hofmann SG et al, *CNS Drug Rev* 2006;12(3–4):208–217). Dosing in this study was a single 50 mg dose prior to each session—much lower than the dosing for tuberculosis.

The glutamatergic agent rizulole (Rilutek) has shown promise in case reports and small open-label studies of adults with OCD, trichotillomania, disordered eating, skin picking, and GAD and one open-label study of children with OCD (doses to 120 mg daily) (Grant P, *J Child Adolesc Psychopharmacol* 2007;17(6):761–67). It was well tolerated and is under study by the NIMH for use in children with OCD (Clinical Trials identifier: NCT00251303). See the table on the next page for a review of meds most commonly used to treat anxiety in children and adolescents.

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This CME/CE activity is intended for psychiatrists, psychiatric nurses, psychologists and other health care professionals with an interest in the diagnosis and treatment of psychiatric disorders.

Medications Used to Treat Various Anxiety Disorders in Children and Adolescents			
Medication (brand name)	Recommended dose (if available)	Notes	Evidence
First-Line Treatments (reasonably good evidence)			
Fluoxetine (Prozac)	10–60 mg daily		Ipser JC et al, *Cochrane Review* 2010;Issue 6
Fluvoxamine (Luvox)	Up to 150 mg BID	One RCT in children/adolescents	Hidalgo RB et al, *J Psychopharmacol* 2007;21(8):864–872
Citalopram (Celexa)	10 mg daily	Recent warning re: QTc prolongation with doses over 40 mg	Ipser op.cit
Escitalopram (Lexapro)	5–20 mg daily	No current warning but as the active enantiomer of citalopram, expect QTc prolongation	Ipser op.cit
Sertraline (Zoloft)	20–200 mg daily		Rynn RA et al, *Am J Psychiatry* 2001;158(12):2008–2014
Paroxetine (Paxil)	10–60 mg daily	Some patients experience discontinuation syndrome: taper slowly to discontinue	Ipser op.cit
Venlafaxine (Effexor)	Up to 300 mg daily	Some evidence that this causes suicidality at higher rates than other antidepressants, and may have cardiac side effects including hypertension, tachycardia, and high cholesterol; may cause discontinuation syndrome	Ipser op.cit
Second-Line Treaments (some evidence, mostly in adults)			
Diphenhydramine (Benadryl)	50 mg daily	Causes dry mouth that facilitates dental cavities	
Hydroxyzine (Vistaril)	Children under 6: 50 mg daily, BID or TID; children over 6: 50–100 mg daily, BID or TID		Hidalgo op.cit
Pregabalin (Lyrica)	No established dose for children	Not studied in children; highest effect size identified in meta-analysis comparing SSRIs, venlafaxine, benzos, pregabalin, buspirone, and hydroxizine	Hidalgo op.cit
Buspirone (BuSpar)	Up to 30 mg TID	TID dosing can be cumbersome; some patients do okay on BID dosing	Hidalgo op.cit
Clonidine (Catapres)	0.1 mg up to 4 times daily	May cause irritability; frequent dosing required in younger patients; may cause orthostasis; available as controlled release formula and transdermal patch	
Guanfacine (Tenex, Intuniv)	1–2 mg daily, BID or TID	Available as 24 hour controlled release but many patients do fine on qD dosing	
Mirtazepine (Remeron)	15–30 mg qHS		
Benzodiazepines	Varies	Appears to cause decrease in functional IQ, likely due to impairment in memory formation	Barker MJ et al, *CNS Drugs* 2004;18(1):37–48
Third-Line Treatments (little evidence, some community use)			
Duloxetine (Cymbalta)	Adult dose: 60 mg daily	Approved for GAD in adults in 2007; carries suicidality warning	Kahn AY, *Neuropsychiatr Dis Treat* 2009;5:23–31
Atypical antipsychotics	Varies	Limited evidence for effectiveness	Frazier JA, *Evid Based Ment Health* 2011;14(3):76
Beta-blockers	Varies	Evidence is limited to public speaking-type performance anxiety	Davidson JR, *J Clin Psychiatry* 2006;67 Suppl 12:20–6
Omega 3s	No established dose for children	Study showed reduced anxiety in healthy (not clinically anxious) young adults	Kiecolt-Glaser JK, *Brain Behav Immun* 2011;25(8):1725–34
Gabapentin (Neurontin)	Dose for seizures is: ages 3 to 12: max of 50 mg/kg/day; over 12: max of 3600 mg/day	One small placebo controlled trial showed improvement in social anxiety for adults	Pande et al, *J Clin Psychopharmacol* 1999;19(4):341–348

Q&A With the Expert

Expert Interview

Treating Anxiety in Children and Adolescents

Moira Rynn, MD

Associate professor of psychiatry
Deputy director of research
Division of child and adolescent psychiatry
Columbia University/New York State Psychiatry Institute

Dr. Rynn has received grant and research support to study duloxetine HCL (Cymbalta), venlafaxine (Effexor), and asenapine (Saphris), from Eli Lilly, Pfizer, and Merck. Dr Carlat has reviewed this article and has found no evidence of bias in this educational activity.

CCPR: Dr. Rynn, your work is focused on the treatment of children with anxiety disorders. What can you tell us about generalized anxiety disorder? Is this a big problem among children and adolescents?

Dr. Rynn: Anxiety disorders, in general, for children and adolescents, can be a very big problem. A big issue is that anxiety disorders are often not the first diagnoses considered and they are often overlooked. During my time of working with anxiety disorders, I am always struck by how long a child suffers before getting the diagnosis and targeted treatment.

CCPR: So what should tip clinicians off that they should be thinking "anxiety disorder"?

Dr. Rynn: It depends on the child, but for some children it may seem like more of a medical problem because they are having multiple somatic complaints, like headaches, gastrointestinal problems and so forth. Other children with anxiety disorders may behave in a very oppositional manner, causing problems for them in school and with family members. In my experience this can be particularly true of boys.

CCPR: So a kid may seem aggressive or like he has ADHD, when in fact it's anxiety.

Dr. Rynn: Yes. You might have a boy where the situation escalates to the point he throws the chair across the classroom because he doesn't like to be called on and/or be asked to talk in front of people. Sometimes these children can't verbally describe the experiences that they are having—the anxiety they are feeling—and so some of the behaviors may be viewed as a different disorder.

CCPR: Depression and anxiety are so often comorbid. Do you have any good ways of separating out kids who are fundamentally depressed and have comorbid anxiety, versus kids who are fundamentally anxious and have comorbid depression?

Dr. Rynn: I wish I had a great method, but really the best thing is a very careful history and to be sure to get information from all the adults who are in that child's life. When a child is able to articulate what she is feeling—does she isolate herself from other kids because she's sad or because she's shy or afraid of saying something stupid—we can better understand what is driving the behavior.

CCPR: Why is it with kids that it seems that they either come in with no anxiety disorders or a bunch of them, not just one?

Dr. Rynn: We call this the anxiety triad, which includes separation anxiety, social phobia, and generalized anxiety disorder together. They exhibit strong association comorbidly over time. Fortunately, they respond similarly to the same treatments, like cognitive behavioral therapy (CBT) and medication treatment. When you look at some of the major clinical trials that have been done on childhood anxiety, you see that close to half of the sample will have, in addition to the primary anxiety diagnosis, another diagnosis, and often a secondary anxiety diagnosis (Kendall, PC et al, *J Anx Dis* 2010;24:360–365).

CCPR: What is the first-line treatment for generalized anxiety disorder?

Dr. Rynn: In terms of psychotherapy, CBT is considered a first-line treatment option. Numerous studies have shown CBT is effective for pediatric GAD. The Child-Adolescent Anxiety Multimodal Study (CAMS) is the largest pediatric anxiety study to date. It compared either 1) CBT alone, 2) sertraline (Zoloft) alone, 3) sertraline in combination with CBT, or 4) pill placebo for the anxiety triad. All three active treatments clearly separated from pill placebo. Among the active groups, the combined treatment showed an 80.7% response rate; 59.7% for CBT alone; and sertraline alone, 54.9% (Walkup JT et al, *New Engl J Med* 2008; 359(26):2753–66). So you can see that combined treatment—CBT plus medication—is very successful; however the two monotherapies were efficacious as well.

CCPR: You have done some work on attachment-based CBT. Can you tell us about that?

Dr. Rynn: I had the opportunity to work with colleagues (Drs. Siqueland and Diamond) at the Department of Psychiatry at the University of Pennsylvania who were looking at a modified combination of cognitive behavioral (CBT) and attachment-based family therapy (ABFT) in the context of working with the parent/child relationship for anxiety disorders. When a child has a problem with anxiety, there are often other family members stuggling with the child's symptoms of anxiety as well as their own (Siqueland L et al, *J Anx Dis* 2005;19:361–381). We also found that when parents have the disorder themselves and are untreated, our treatments don't work as well.

CCPR: So this would be therapy for both the child's anxiety and the parent's?

Dr. Rynn: Yes, by targeting the parent's response to the child's anxiety. It targets how families model management of the child's anxiety in certain situations, and how these reponses may lead to the development and maintenance of childhood anxiety. In addition, it examines how a family problem-solves stressful situations together, and how that may reinforce the anxiety symptoms

that the child is experiencing. There are types of family patterns and responses that are not helpful to the anxious child, such as being overprotective, overcritical, not allowing children to experience failure, not allowing children to venture out on their own, or making children feel insecure about their abilities. This comes about partly because parents are experiencing so much anxiety on their own, including fear that the child will not succeed.

CCPR: What medications work for anxiety in kids?

Dr. Rynn: The first line of medications that we recommend is the serotonin reuptake inhibitors. A substantial number of studies show that they are safe and efficacious for the treatment of anxiety disorders. (For review see Rynn MA et al, *Depression Anxiety* 2011;28:76–87.) And other studies have examined and shown the efficacy of an SSRI and CBT (Pediatric OCD Treatment Study Team, *JAMA* 2004;292:1969–1976).

CCPR: What about SNRIs?

Dr. Rynn: There have been some studies looking at SNRIs—three looking at venlafaxine extended release (Effexor ER). Two of these had generalized anxiety disorder as the primary diagnosis. In one, there was a distinct separation between drug vs placebo. In the second, venlafaxine did not separate from placebo, but the placebo rate in the study was high (Rynn MA et al, *Am J Psychiatry* 2007;164(2):290–300). The third study was of social anxiety disorder, and again, there was a clear separation between the medication and the placebo (March JS et al, *Biol Psychiatry* 2007;62(10):1149–1154). So, yes, venlafaxine works. But it is not recommended as a first line of treatment because it also requires monitoring of vital signs.

CCPR: So you might reserve SNRIs for a child who has failed a trial of an SSRI.

Dr. Rynn: I think it is a compound to consider if a child has failed *at least* one trial of an SSRI, potentially even a second trial of an SSRI because we have some evidence to suggest switching a child to another SSRI may produce a response (Research Unit on Pediatric Psychopharmacology Anxiety Study Group, *J Child Adolesc Psychopharmacology* 2002;12:175–188).

CCPR: What else do you recommend? What about benzodiazepines?

Dr. Rynn: I actually think benzodiazepines can be helpful for children with anxiety disorders, particularly for children who are suffering from significant physical symptoms. These are the children whose parents say, "He is grabbing the side of the door so I can't get him out the door; he has stomach aches; the nurse is constantly calling me telling me to pick him up." And there are times when the a psychotherapist will contact me saying, "The child is unable to do the psychotherapy piece because the he/she is so preoccupied with these physical symptoms that I can't begin to start to teach any of the tools." So for these children I will actually use benzodiazepines in the initial treatment phase.

CCPR: Which benzos in particular and at what dosages?

Dr. Rynn: Generally I use clonazepam (Klonopin) due to its long half-life and because there are different dosing options. Depending on the child, I may start with 0.25 mg, give a test dose in the morning, and have the parent call me to see how the child tolerated the dose. If it seems not to help, I increase to 0.5 and might use a couple of doses during the day as we are initiating treatment, whether it is cognitive behavioral therapy or starting the antidepressant. This is a helpful way to alleviate some of the suffering that the child and the family are experiencing.

CCPR: What about the problem of disinhibition on these medications?

Dr. Rynn: The few clinical trials of benzodiazepines show that there have been reports of activation or disinhibition (Rynn MA et al, *Depression and Anxiety* 2011;28:76–87). So you do need to watch for those side effects, but in my experience, it has not been a huge problem.

CCPR: What about some other agents? What would you say second-line medications are?

Dr. Rynn: If you do not have success after trying the SSRIs and then SNRIs, there are not a lot of data to support what is the best next option. Whenever possible CBT should be added if it has not already been instituted. Buspirone has some evidence, and I have had some children respond well to buspirone (Simeon J et al, *J Child Adolesc Psychopharmacology* 1994;4(3):159–170). The adult literature supports the combination of a benzodiazepine with the SSRI as another approach (Goddard AW et al, *Arch Gen Psychiatry* 2001;58:681–686).

CCPR: What else? How about clonidine?

Dr. Rynn: I have not used clonidine (Catapres) or guanfacine (Tenex), but there is off-label use for these compounds to treat anxiety sleep problems and the somatic symptoms. Children with anxiety have difficulty with focusing and this leads to difficulty in many areas. In the adult literature there is limited information about the use of these compounds to treat GAD and Panic Disorder (Hoehn-Saric R et al, *Arch Gen Psychiatry* 1981;38(11):1278–1282).

CCPR: Are there any meds you recommend we stay away from?

Dr. Rynn: I am aware of open label and case studies using mirtazapine (Remeron) for social anxiety disorder in children (Mrakotsky C et al, *J Anxiety Dis* 2008;22:88–97). I would not say to *never* use gabapentin (Neurontin) or pregabalin (Lyrica), but these compounds are not well-studied in children and I would be sure I exhausted all the treatments that have evidence to support their use. And then I would reassess to be sure I have the correct diagnosis and/or did not miss a comorbid diagnosis.

CCPR: Is there anything new on the horizon for treating anxiety disorders?

Dr. Rynn: I am hopeful as neuroscience advances that new medications will be developed from the identification of specific brain targets and that might actually enhance psychotherapy through complimentary mechanisms. For example I think the work with D-cycloserine is very interesting. And in the field we now have preliminary data that it may work in pediatric OCD. A study

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Research Updates IN PSYCHIATRY

ADHD

Are Omega-3s Effective for ADHD?

Omega-3 fatty acids have been extolled as a treatment for everything from depression to high blood pressure. But how do they stack up for ADHD? A recent meta-analysis set out to answer this, compiling the results of 10 randomized placebo controlled trials of omega-3 supplementation involving close to 700 children. Nine of the 10 trials examined omega-3 monotherapy compared to placebo; one trial compared omega-3 augmentation of traditional medication therapy to placebo.

Omega-3 supplementation showed small but significant improvement in ADHD severity, based on improvement on a number of standard rating scales (effect size 0.31). There were no significant differences in efficacy between omega-3 as a monotherapy and omega-3 augmentation.

Omega-3 supplements come in a variety of doses, with many different balances of eicosapentaenoic acid (EPA) and docosahexanoic acid (DHA). Researchers found that EPA dose within the supplement had a strong correlation with improved ADHD symptoms. The greatest effect size was seen with doses of EPA between 450 and 600 mg (Bloch MH and Qawasmi A, *JAACAP* 2011;50(10):991–1000).

CCPR's Take: Omega-3s certainly don't have the same effect size as our usual treatments for ADHD—methylphenidate, 0.78; clonidine, 0.58; and atomoxetine, 0.64 (Schachter HM et al, *CMAJ* 2001;165:1475–1488; Connor DF et al, *JAACAP* 1999;38:1551–1559; Cheng JY et al, *Psychopharmacology* (Berl) 2007;194:197–209). In addition, it's well established that omega-3s can be helpful in treating depression, so we are left to wonder if some of the effect here was seen in kids whose ADHD was exacerbated by depression. Regardless, for some kids who either have trouble with traditional meds or whose parents are opposed to them, you might want to suggest omega-3 fatty acids. They have hardly any side effects, and they may help. Just be sure to recommend that patients or their parents look for higher doses of EPA for the best results.

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Effective Psychotherapies for Childhood Anxiety

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tion and "real life" practice to help kids recognize and appropriately respond to their anxiety triggers.

Because of the differences among the anxiety disorders, protocols vary and typically include elements that address the particular characteristics of each disorder. For example, the treatment of generalized anxiety has more of an emphasis on cognition, the treatment of phobias center on exposure, the treatment of social phobia contains social skills practice, and the treatment of panic disorder contains a heavier dose of psychoeducation about the physiology of panic symptoms. Still, all CBT protocols contain the same basic elements: psychoeducation, cognitive examination and restructuring, exposure, and relapse prevention.

End of story? Not quite. A closer look at the CBT research does raise at least one question: is CBT a singularly effective treatment for anxiety or does it merely have the good fortune to be the subject of multiple, well-designed studies? Moreover, do we really know how CBT holds up against alternate treatments?

A striking feature of the 2005 Cochrane review is that all included studies but one used a wait-list control (the remaining study had control subjects keep diaries): none were compared with an active psychotherapy. Surprisingly, studies including active controls are hard to find.

One recent study compared CBT to "usual care": a group that received an eclectic set of treatments including psychodynamic, client-centered, and family-based therapy. This very interesting study not only randomized youths with various anxiety disorders to the two treatment arms, but also randomized the therapists, providing specific training in the CBT protocol to those therapists assigned to that group.

The findings? Both treatments were equally efficacious—CBT did not outperform usual care on any measure. Both groups did well, with 67% remission in the CBT group versus 74% in the usual care group for treatment completers (both numbers dropped about 10 percentage points when treatment dropouts were factored into the analysis). There were also no differences between the groups in the use of psychotropic medications (Southam-Gerow M et al, *J Am Acad Child and Adolesc Psychiatry* 2010;49(10):1043–1052). This study brings up the possibility that CBT is helpful in a non-specific way. There have been few studies evaluating non-CBT therapies for childhood anxiety.

Studies of psychodynamic treatments for anxiety are sparse. A retrospective chart review was conducted at the Anna Freud Centre in London. While these cases included a diagnostic mix of children with various internalizing disorders, the authors concluded that about 75% of children who participated in treatment for at least six months showed improvement, with simple phobias the most likely to remit (Target M and Fonagy P, *J Am Acad Child and Adolesc Psychiatry* 1994;33(3):361–371).

A more recent study compared an 11-session structured psychodynamic psychotherapy protocol to community care, a heterogeneous group that received either no treatment, individual psychotherapy at another facility, or school-based services. The effects for anxiety disorders are again somewhat difficult to tease out because the children had anxiety, depression, or oppositional defiant disorders. However, the treatment group showed more improvement on the internalizing subscale of the CBCL (Child Behavior Scale) after six months and again after two years, as well as fewer externalizing problems or need for additional treatment (Muratori F et al, *J Am Acad Child Adolesc Psychiatry* 2003;42:331–339). These results are difficult to compare with the CBT studies, most of which use more diagnostically

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CME Post-Test

CME Notice: The test below is intended to be for **practice only.** All subscribers must take their tests online at www.thecarlatchildreport.com. If you cannot take your test online, please call 866-348-9279 or email info@thecarlatreport.com.

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Below are the questions for this month's CME post test. This page is intended as a study guide. Please complete the test online at www.TheCarlatChildReport.com. Note: Learning objectives are listed on page 1.

1. According to a 2010 Cochrane review, how many children are affected by anxiety disorders (Learning Objective #1)?
   [ ] a) 2% to 5% [ ] b) 4% to 7%
   [ ] c) 7% to 10% [ ] d) 9% to 11%

2. Fluoxetine (Prozac) can be given in what dose range to treat anxiety in children and adolescents (LO #1)?
   [ ] a) 5 mg to 20 mg [ ] b) 50 to 100 mg daily, TID or BID
   [ ] c) 60 mg [ ] d) 10 mg to 60 mg

3. According to a 2005 Cochrane review, what was the remission rate of children with anxiety disorders treated with cognitive behavioral therapy (LO #2)?
   [ ] a) 28% [ ] b) 56%
   [ ] c) 65% [ ] d) 82%

4. According to Dr. Moira Rynn, close to half of children with a primary anxiety disorder will also have a second diagnosis, often another anxiety disorder (LO #3).
   [ ] a) True [ ] b) False

5. What did Bloch MH and Qawasmi A find to be the most effective concentration of EPA (eicosapentaenoic acid) in omega-3 supplements for the treatment of ADHD (LO#4)?
   [ ] a) 200 mg to 400 mg [ ] b) 300 mg to 450 mg
   [ ] c) 450 mg to 600 mg [ ] d) 600 mg to 900 mg

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Effective Psychotherapies for Childhood Anxiety

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focused patient populations and more anxiety-specific outcome measures.

Unlike psychodynamic psychotherapy, PCIT (parent-child interaction therapy) has strong empirical support as a treatment for externalizing disorders such as ADHD, ODD, and CD, in young children. In this technique, parents are taught the principles of play therapy in addition to authoritative and positive parenting techniques by receiving remote coaching through a wireless earphone from the therapist who watches from behind a two-way mirror. To date, only small pilot studies exist, one for separation anxiety (Choate M et al, *Cog Behav Pract* 2005;12(1):126–135) and the other for a heterogeneous anxiety disorder sample (Comer J, *J Anx Dis* 2011;online ahead of print). Both studies found benefit for PCIT, although neither included a control group. However, in reading these studies more closely, the original PCIT treatment has been modified to include CBT elements including psychoeducation and exposure, after early work found a lack of benefit when these components were absent.

CCPR'S VERDICT: Even when approached with an open, non-CBT biased perspective, the literature brings us back to CBT as the most well-supported treatment for childhood anxiety. The effectiveness of commonly practiced therapies in child psychiatry such as traditional play therapy, psychodynamic psychotherapy, and supportive psychotherapy is essentially unknown.

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was done with D-cycloserine used to enhance cognitive behavioral therapy for children and adolescents with OCD and the results provide evidence for the clinical benefit to this approach (Storch EA et al, *Biol Psychiatry* 2010;68:1073–1076). However, a larger study needs to be completed. Also, D-cycloserine in combination with CBT has been looked at in adults with OCD, generalized anxiety disorder, and social phobia. All of these studies had different methods in using the D-cycloserine but the general approach was to give a D-cycloserine dose (ranged from 50 mg to 150 mg) prior to the CBT session. The results in the adult literature has been mixed (see Norberg MM et al, *Biol Psychiatry* 2008;63:1118–1126).

CCPR: Thank you, Dr. Rynn.

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