



Resource Article

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"Helping Families Understand
and Promote Their Child's
Self-Regulation"*

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Childhood obesity is a problem faced by many of our families today. Considering the health hazards associated with obesity (e.g., type 2 diabetes, early puberty and menstruation, high cholesterol, etc.), it is important to consider what factors contribute to this condition. Graziano, Kelleher, Calkins, Keane & Brien (2013) conducted a study to examine how toddler self-regulation and temperament may play a role in the emergence of childhood obesity.

Data from the Centers of Disease Control and Prevention (CDC) provide a startling backdrop of the widespread health condition of childhood obesity. Since the 1970's childhood obesity rates have tripled. According to a 2015-2016 census report, roughly one in five school children is considered obese (CDC.org). The CDC classifies children whose Body Mass Index (BMI) is above the 85th percentile as overweight/obese and children whose BMI is between the 5th and 84th percentile as normal.

Graziano et al. (2013) used data from a longitudinal study for their investigation. A total of 195 toddlers

(114 girls and 81 boys) from Child Development Centers and Women Infant and Children's programs participated in the study. The sample group was considered both racially and economically diverse. Several measures of self-regulation were taken at the initial data collection visit, when the children were age two years: (1) Sustained attention was assessed by coding the overall time a child attended to a five minute video (i.e., 'Spot', a short story about a dog walking about a neighborhood). (2) Emotion regulation was measured over two tasks: (a) Prize in a box: child was given a clear box in which a desirable toy was placed, then the child was told not to open the box for two minutes, and (b) High chair task: child was placed in a high chair for five minutes without toys or distractions. In both of these tasks, observed negative reactivity (e.g., whine, fuss, cry, tantrum, etc.) and regulation (e.g., effectiveness of using various strategies such as distraction) were assessed. (3) Inhibitory control was measured during a delay of gratification task. Children were given a 'present' in the form of a gift wrapped box and told not to touch it for two minutes. The amount of time

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the child touched/interacted with the box was measured. Temperament was assessed during the initial data collection visit using the Toddler Behavior Assessment Questionnaire (Goldsmith, 1996). This particular instrument examines temperament via activity level, pleasure, social fearfulness, anger proneness, interest, and persistence. Other metrics collected included measurements of height (to the nearest 0.1 cm) and weight (to the nearest .10 kg) when the children had their four, five, seven, and ten year visits. The final measurement was of self-perception via the Body Image and Eating Questionnaire (BIEQ) (Thelen, 1992), which asks the child to consider their concerns about possibly being overweight and/or becoming overweight.

Results suggest that toddlers with higher self-regulation scores were found to have lower BMI and fewer body image/eating concerns in preadolescence. Toddlers with lower self-regulation scores were found to have both significantly higher BMI at age ten years as well as increased risk for developing body image/eating concerns. Toddlers with higher levels of pleasure expression at age two years had significantly higher increases in BMI at age ten years.

While it may not be surprising to learn about the inverse correlation between toddlers with higher and lower self-regulation skills and health status at age ten (via BMI), perhaps it was interesting to learn that toddlers who showed higher pleasure expressions were more likely to be overweight at age ten. Essentially, positive affect, specifically oversensitivity to pleasure, was correlated with risk for obesity. The researchers consider neurochemical mechanisms may be at play in adult weight related issues, "...dopaminergic dysfunction leads to

impairments in reward processing that promote obesity" (p. 941). For those toddlers with low self-regulatory skills who are at risk for body image/eating concerns, the researchers wonder whether limited self-regulatory skills may create deficits in later coping competences.

How can we help our toddlers learn to have positive attitudes and behaviors toward food and possibly thwart childhood obesity? We can consider the body's physiological responses to food as well as the environmental factors playing into the mix (e.g., eating environment, experience with different foods, pace and focus of eating, etc.). For example, smelling food that cooks in the kitchen and washing hands helps to prepare the body for the forthcoming meal. Providing different culinary experiences helps develop your child's palate. Foods with crunchy, smooth, and varied textures can alert your child's system so that they recognize and better understand what they are eating as well as when they are full. The varied food textures require more time and effort and the longer it takes the more time the stomach has to trigger the brain that it is full. Foods with different flavors (more than salty and sweet) help children expand their food repertoire. Having children help in the preparation and clean-up of foods for meals helps children anticipate meals and take responsibility during this daily routine. Using language to talk about the smells, sights, and tastes during meals helps children understand what they are eating and it expands their vocabulary in a naturally occurring way. Eating at a table with limited distractions helps turn the child's focus onto the food and meal experience. These are just a few ways we can encourage healthy self-regulation skills amongst our toddlers and promote healthy childhood outcomes.

Graziano, P. A, Kelleher, R., Calkins, S. D., Keane, S. P. & Brien, M. O. (2013) Predicting weight outcomes in preadolescence: The role of toddlers' self-regulation skills and the temperament dimension of pleasure. *International Journal of Obesity*, 37, pp 937-942.

What do the data say?



What influence can parental limit setting have on children's development of self-regulation?

We know that parent-child interactions help shape children's self-regulatory behaviors and early interactions are particularly formative. LeCuyer and Houck (2006) note "the socialization that occurs in limit-setting has been found to be an important source for toddlers' acquisition of socially competent self-regulatory capacities" (p. 348). When it comes to limit setting there are different approaches parents use. Broadly, limit setting may be directive or less directive. To understand the varied strategies used the Prohibition Coding Scheme (PCS) and Prohibition Coding Scheme-Revised (PCS-R) were developed to assess the approaches mothers used to set limits with their children. A longitudinal study was conducted whereby 126 mothers with toddlers were initially observed in a clinical setting engaging their child in a limit-setting activity when the children were ages 12, 24, and 36 months.

The limit-setting strategies used by mothers were condensed into the following four classifications (LeCuyer & Houck, 2006, p. 357).

1. Indirect limit-setting consisted of mothers' distracting their toddler from the prohibited object without clearly stating what the limit was or why the limit was in place.
2. Teaching-Based limit setting included mothers sharing a clear and sensitive rationale for the limit while being empathetic to the toddler's responses and providing occasional reminders.
3. Power-Based limit setting involved mothers being more assertive conveying power and control, including verbal and physical directives.
4. Inconsistent limit setting comprised mothers being seemingly inattentive and showing little contingent response to the toddler thereby showing little predictability or clarity of the limit being set.

At 36 months the children's self-concept was measured using the Self-Concept Questionnaire (SCQ: Stipek et al., 1992) and their self-competence was measured using the Adaptive Social Behavior Inventory (ASBI: Hogan, Scott, & Bauer, 1992). Additionally at age 5, the Self-Imposed Delay Waiting Paradigm was used to measure children's delay of gratification.

The results of the studies employing the PCS and PCS-R clarified that mothers applying teaching-based limit setting strategies had children with more developed social competence and self-concept when measured at 36 months of age. The children of mothers using indirect limit-setting showed diminished self-concept and self competence.

Collectively, the results indicate that the use of strategies such as clearly defining limits and providing developmentally appropriate reasoning about rules and limits, engaging interactively with the child and what is interesting for him/her as a form of distraction, and sensitively attending to children's feelings and offering soothing responses and touch seem to promote the development of self-regulation as children grow older.

Limit setting is a natural and necessary part of child rearing. Yet setting limits can be challenging, especially when parents are in the thick of the situation with their child. When this happens, limit or boundary setting can be reactive rather than sensitive and responsive. Just as trying to reason with a toddler in a full blown tantrum is ineffective, trying to teach a child a limit when the parent is frustrated and emotionally exhausted is often unproductive and not a positive teaching opportunity. Parenting is difficult yet being mindful of internal emotions and the impact on the child is important.

As an early interventionist, how do you help families with setting developmentally appropriate limits and promoting their child's self-regulation?



Consultation Corner

What role do parents play in supporting or impeding infant/toddler self-regulation?

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Daniella (3 months) is in a car seat that is wedged into the grocery cart. She is calm for the first few minutes while her dad, James, shops. But soon she is at her threshold, the noise level, bright lights and strangers coming in and out of view, are becoming overwhelming, and she lets her Dad know by making her fussy sounds. James takes Daniella out of the seat and straps her into a chest carrier. Daniella quickly calms, feeling more secure and protected from the onslaught of stimulation.

Brian (2 years) is getting increasingly agitated when he can't make his toy car fit into the garage he has built with blocks. He keeps trying to ram it in and the blocks keep falling down. He roars with frustration and starts to throw the blocks. His mother, Tonya, approaches, calmly removes the blocks he is throwing and gives him a squishy ball instead, something safe he can squeeze and throw to purge his upset. She acknowledges his aggravation, and wonders: "How can we build a garage that's big enough for the cars? Maybe we can figure it out together." Once Brian calms, Tonya guides him in figuring out how big the garage has to be to fit his car, and then helps him execute this new plan.

As these stories clearly show, parents play a very significant role in helping young children develop self-regulation. Given that this kind of behavioral and emotional control only starts to develop around age 3 and is not fully developed until 5 to 6 years of age (and even then it is still a work in progress well into adolescence), children are dependent on their parents and other trusted caregivers to manage their strong impulses, emotional and physical. Knowing there will be a loving adult to soothe them when the world becomes overwhelming is a baby's first experience with self-regulation.

The following are a range of ways parents support the roots of self-regulation from birth to three years.

From birth to one year:

- **Notice what kinds of experiences cause babies' stress or increase their arousal level, then work to reduce these experiences.** This might mean dimming lights, turning on rhythmic music at a low volume, or providing a deep-pressure massage that is very soothing to babies. On a trip to the grocery store, parents might put their baby in a carrier close to their chest and put a hat on to cover her ears to help her feel safe and less exposed to the overwhelming sights and sounds in that setting.
- **Identify the signals that babies are getting stressed/over-aroused and help them calm.** For example: putting a pacifier back in their baby's mouth; stroking his back to help him fall asleep; or, pausing play and just holding or rocking their baby when she turns her head away and arches her back to show she is getting overstimulated and needs a break. All of these sensitive parental responses help babies experience what it feels like to calm down and be soothed, which is the foundation of self-regulation.
- **Caring adults manage their own emotions and reactions.** In order for parents to help their children self-regulate, they need to be in a calm state themselves. We will address this further below, since it is such a key component in helping children develop self-regulation.

Supporting self-regulation from one to three years:

- The same strategies discussed for babies also apply to toddlers: tuning in to what common stressors are for them and reducing them; helping them calm when they get stressed; and parents managing their own emotions.

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- In addition, establish clear routines. Knowing what to expect helps children prepare for what is coming next which provides a sense of safety and security and enables children to stay calm.
- Play stop-and-go games like freeze-dance. These activities help toddlers learn to manage/regulate their bodies—to slow down when necessary.
- Wrap a child in a blanket and hold her in a firm bear hug to provide the deep-pressure that is very soothing to many children.
- For some children, giving them an acceptable way to “shake their sillies” out and have an outlet to do this can help calm their system. It is best to provide some structure so that it is not just random running that can get children even more aroused and revved up. You might have a child jump like a frog 5 times and then squat or lie down to pretend to rest; then repeat it. Or, have them do some “heavy work” which can be very soothing to the sensory system—such as picking up and dropping or kicking a weighted ball as part of a game.
- Starting around two years you can begin to give children choices, such as whether they want to brush teeth before or after books, which gives them a sense of control that helps with self-regulation. Remember, too many choices can also be overwhelming, so consider providing *choices within limits*, for example, “do you want milk or water with your lunch” instead of “what do you want to drink with your lunch” and then having to say no to the request for a sugary drink or a soda.
- Set and implement clear limits and consequences. For example, rather than giving in to a child having a tantrum when screen time is over, parents would calmly acknowledge their child’s anger/frustration. Then they would help him calm and ultimately choose an alternative activity. Or, if a child throws a toy, his parents would calmly put the toy away and then help their child find something that is acceptable for the child to throw, like tossing a foam ball into a basket.

The importance of parental self-regulation

Parents are only human, and thus have human reactions to emotionally-charged, intense, and stressful situations, such as when the children they love lose it. Parents love their children so deeply that they get distressed when their children are distressed. Parents get anxious when their children engage in behaviors they know are not good for them, which puts them in a revved-up state that can get expressed as frustration or anger. Or, parents rush in too quickly to fix everything, to solve the problem with which their child is struggle. They pacify her instead of helping her calm and guiding her to solve the challenge, such as finding the correct space for the puzzle piece.

All parents have things that set them off, sometimes called “triggers,” situations that for whatever reason, they find really frustrating. Often, the behaviors and situations that yank their chains, that they have a big reaction to, have roots in their own upbringings. For example, a mother whose own parent was not particularly warm and demanded she always have a stiff upper lip finds it very uncomfortable and annoying when her own child becomes clingy or shows a need for nurturing. This makes it hard for her to respond lovingly to her child’s needs. That’s why it’s so important for parents to be mindful of what kinds of behaviors provoke a big reaction in them, to enable them to have more control over their actions. Thinking about the case above, if this mother took some deep breaths when her child became clingy, and reminded herself that the big, negative feelings getting triggered stem from her own childhood, she would be much more likely to provide the reassurance and support her child needed in that moment.

Further, highly-charged, emotional reactions can be obstacles to helping children get calm and learn important coping skills. When children are stressed and in a highly aroused state, their brains get even more flooded with the stress hormone, cortisol, when their parents lose it too. Further, just like children,

Consultation Corner (continued)

when parents are really stressed, upset, and over-reactive (and their sympathetic nervous systems take over), they can't access the thinking part of their brains to provide the calm support their child needs. It is hard for parents to problem-solve when they are internally distressed "flips their lid", as the neuroscientist Dan Siegel describes it, their ability to regulate their emotions, to think and to reason, goes out the window and the emotional, reactive part of their brain takes over. When parents act without thinking, it rarely leads to a good outcome, for the child or for them!

So, in addition to being aware of when their arousal and stress levels are increasing, parents also benefit from learning calming strategies to ensure they have the focus and bandwidth to actually implement strategies for helping their children cope, like the ones below:

"Don't just do something, stand there." (Unless of course the child is doing something dangerous that you need to address immediately.) Note that this is the opposite of the usual advice: "Don't just stand there, do something!" The idea here is to pause before acting. Even the slightest pause gives the frontal part of the brain (the part responsible for logical thinking and reasoning) a chance to kick in. It also serves as a powerful model for your child for how to manage strong emotions.

Change your body posture: If you're standing, sit. If you're sitting, lie down. Sometimes kids shift right out of their defiant stance when parents do this. When kids ask, "What are you doing?" (if old enough), I say, "Keeping myself calm!"

Describe what is happening in simple language and tell your child you need a break. Put into words what is happening and let your child know you need a minute to think about how to solve the problem at hand: "I told you there would be two books tonight. You are angry that I won't read another one. I am going to take a minute to calm myself so I can help us solve this problem." This buys parents time to think through how they want to respond without being reactive. Parents should always ensure the child is in a safe place—a crib or with a trusted caregiver—while the parent steps

away for a few minutes. This is also another way to serve as a powerful role model for managing impulses.

Do some deep breathing. Deep breathing relieves stress and anxiety because it causes the brain to release neurohormones that make us feel more relaxed and counteract or cancel out stress-producing hormones.

Engage the help of a partner. If there is another primary caregiver in your home, ask him or her to step in. Asking for help is a strength, not a weakness. All parents need and deserve help. When you know your limits and ask for help when needed, you are nurturing your child *and* yourself.

Take a break from your child. Especially when a co-parent leaves on TDY or deployment, it is important to give yourself permission to take a break from your child. Check to see if your installation provides respite care during deployments. Many agencies on an installation will cover the cost of child care if you are volunteering with them. Organize child care swaps with others in your neighborhood.

Use self-talk. Research shows that when adults talk to themselves (out loud or in their thoughts) it helps them to calm down and return to a more regulated, rational state (activating the prefrontal cortex in the brain). For example, you might remind yourself that your child isn't acting out on purpose; that she is having a hard time coping and needs your support; that responding with anger and shouting will probably make the tantrum worse and make it harder for your child to learn good coping skills over time.

In short, one of the most important ways we help parents nurture their children's self-regulation is by supporting them in practicing their own self-regulation. This means asking about and tuning in to their feelings and reactions, without judgment; helping them become aware of when they get "triggered"; and providing tools, like the ones above, to help them manage their emotions in ways that enable them to provide the calm, loving support and guidance their children need to develop this critical skill.



On the WWW

Have you wondered how babies develop self-control? Check out the ZERO TO THREE podcast by Dr. Brenda Jones Harden. The podcast is available online at:

<https://soundcloud.com/zerotothree/little-kids-big-questions-how-babies-begin-to-develop-self-control-in-the-first-three-years>

This podcast is part of the larger set of podcasts from the Little Kids, Big Questions: A Parenting Podcast Series. The link to the full podcast series follows.

<https://www.zerotothree.org/resources/series/little-kids-big-questions-a-parenting-podcast-series>



Continuing Education for KIT Readers

The Comprehensive System of Personnel Development (CSPD) is offering a continuing education opportunity for KIT readers.

In line with the focus on **Helping Families Understand and Promote Their Child's Self-Regulation**, readers are invited to receive continuing education contact hours for reading the monthly KIT publications (February through June and completing a multiple-choice exam about the content covered in these KITs.

KIT readers will receive the exam for this series in July 2018. There is no need to register for the CEUs.

Rather, if you are interested, complete the exam online at www.edis.army.mil

Upon successful completion of the exam, you will receive a certificate of non-discipline specific continuing education contact hours.

KIT Newsletters
are available
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Thank you for your continued interest in the KIT.

