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Most of the time, my 9-year-old son is a cheerful boy, but when he loses his temper he becomes a terror. He becomes both physically and verbally violent. Once the rage passes, he's back to his old self. Is there anything that I can do to help him "lower the temperature" of his anger?

It may be very helpful for your son to receive a comprehensive evaluation to identify and treat potentially unrecognized causes of his anger control problems.

The episode you describe has some features of what we call "impulsive" or "reactive" aggression, meaning that the rage appears to explode seemingly without warning. There are several different behavioral and parenting approaches for treating this type of anger, management that may be quite useful in decreasing the overall intensity, duration, and frequency of outbursts. However, in the moment, when a child is raging, one of the most important strategies is to remain as calm as possible (i.e. "lower your temperature" first). During an explosive episode, the child is already over-stimulated. Thus, it is crucial to avoid taking actions that only further stimulate your child (e.g. screaming or hitting back, further engaging in the volatile exchange, attempting to win, manipulate, or control the argument). Efforts made by your child to self-regulate, such as walking away or going up to his/her room to calm down must be respected and positively reinforced, even when accompanied by a trail of hurtful expletives. Try to remain silent and resist the urge to re-challenge your already agitated child.

It is particularly useful to talk about strategies for handling these outbursts with your child beforehand, at a time when everyone is calm. Ask your child what could be helpful when he/she feels like exploding. Many children will say: "leave me alone" "don't touch me" "don't talk to me" "don't follow me around the house" "try to give me more warnings" for making transitions, etc.

Try to identify potential triggers and/or patterns in your child's rage attacks and determine whether these outbursts can be averted or attenuated. Do these episodes occur at particular times of day? Are they medication re-bound problems? Do these episodes occur primarily when there is need for change or transitions between activities? Do they occur in school? Do they occur mostly during after school hours? Or do they erupt mostly before bedtime or upon waking up and getting ready for school?

It is essential to establish a mutually agreeable, consistent plan for what each of you will do to de-fuse the situation if tempers begin to escalate. Importantly, there also needs to be a plan for how you will later address any damage incurred

during the episode. You might ask your child what he/she thinks would be a fair consequence for the destructive behavior. Remember, the punishment must be reasonable, not overly harsh or shaming, and is most effective when applied relatively proximal to the event (i.e. not days or weeks later). In most instances punishment alone is neither adequate nor remedial; instead I would recommend encouraging your child to participate in the repair of any damage that resulted from his/her behavior. Provide your child with an opportunity to take personal responsibility in a positive fashion with encouragement and positive role-modeling behaviors, not with further chastising, criticism, or coercion.

My daughter has always been very emotional and now that she is a teenager, her outbursts have become a frequent occurrence. She is starting to scare me. Although she hasn't struck anyone, her temper is out of proportion. I've heard of rage as a component of TS. Are her emotional melt-downs a symptom of TS or just related to her being an emotional teenager?

Anger control problems have been reported in 25-75% of children with TS. These symptoms range from frequent temper tantrums of mild to moderate severity, to full-blown episodes of explosive rage resulting in serious damage or destruction of property. Most studies in clinical populations of children with TS indicate that significant anger control problems are more likely to occur when there are additional psychiatric conditions accompanying tics. The most common culprits in normally developing children with TS are: ADHD, Oppositional Defiant Disorder, Mood Disorders (such as depression or bipolar affective disorder), and OCD. Some studies have reported an association between anger control problems and increased tic severity, while other studies suggest the two are entirely unrelated.

Whether or not rage is a component of TS may depend upon how broadly or narrowly one defines Tourette Syndrome. It is fair to say, however, that people who have tics alone do not appear to have a greater risk for anger control problems than others in the general population.

Anger control problems can also arise from a variety of other biological causes such as: underlying medical problems (e.g. infection, autoimmune disorders, metabolic or hormonal disturbances, sleep disorders), neurological problems (e.g. autistic spectrum disorders, seizure disorder, head trauma, mental retardation, dementia), medication side effects or interactions, alcohol or substance intoxication or withdrawal states, anabolic steroid abuse, exposure to pesticides or other toxins, and other psychiatric conditions (e.g.

personality disorders, post-traumatic stress disorder, schizophrenia). A number of environmental factors can also lead to anger control problems including: physical, sexual, or emotional abuse, being bullied or victimized, untreated psychiatric illness in parents/caretakers, high conflict among family members or parents, poverty, starvation and sleep deprivation.

Are there alternative or complementary treatments that are effective in diminishing rage in people with TS?

It is very important to evaluate important aspects of daily living such as nutrition/diet, sleep, exercise, general hygiene as well as the overall structure of the day.

Skipping meals or severe caloric restriction may lead to irritability, distractibility, and increased impulsivity. Well-balanced meals at predictable times and healthy snacks are very important. Some children may respond adversely to certain food additives or dyes and if so, these may need to be eliminated from the diet. Similarly, some people may suffer from food or environmental allergies that are causing or aggravating irritability.

A regular multivitamin may suffice in most instances but when present, specific nutritional deficiencies need to be addressed. Psychotropic medications can cause both weight loss and weight gain. Obesity is associated with a range of medical and psychological risks (e.g. depression, low self-esteem, being bullied) and therefore requires intervention (i.e. either by switching to a different medication if possible, careful diet with increased exercise). Omega-3-Fatty acids appear to improve depression and irritability, particularly in boys and may have some positive effects on attention.

Chronic sleep deprivation and other sleep disorders can mimic symptoms of ADHD and may lead to impaired anger control. Therefore establishing regular bed and wake-up times is important. Melatonin may be helpful for improving sleep-phase disorders and insomnia in some people.

Regular exercise is an important component of general health maintenance but is particularly essential for people with TS. Many report enhanced sense of well-being, improved focusing, and stress reduction from regular daily aerobic exercise. There have been a number of studies that demonstrate the beneficial effects of exercise and meditation on cognition and focus. While some alternative therapies such as massage or acupuncture may be appropriate for some problems such as pain associated with tics, there is little evidence that such treatments prevent or suppress tics. It is possible that some health food supplements may be valuable but such agents must receive the same scientific scrutiny as conventional treatments demonstrating efficacy. □