



WI CAN Educational Series- The Crying Infant: Strategies to Prevent Abuse



Angela Rabbitt, DO
Associate Professor of Pediatrics
Child Advocacy and Protection Services

Disclosure Information for: Angela Rabbitt, DO The Crying Infant: Strategies to Prevent Abuse

- There are no relevant financial relationships related to this presentation/program
- There is no sponsorship/commercial support of this presentation/program
- The content being presented will be fair, well-balanced and evidence-based
- Learners who wish to receive Continuing Education Credit (CME/CLE/CE) must complete and turn in evaluations to successfully complete this program



Objectives

- Normal infant crying
- Some medical causes of crying
- The association between crying and abuse
- How to help caregivers cope with crying
- State and local initiatives and resources



Normal Crying



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Normal Crying

- Progressively increases after 2wks, peaks in second month of life
- Delayed about one month in premature infants
- Peaks in the late afternoon and evening
- May be prolonged and resistant to soothing
- Decreases by 4-5mos

Barr R. The Normal Crying Curve: What do we Really Know? *Developmental Medicine and Child Neurology*. 1990;32:356-362.



Normal Crying

- Consistent among
 - Methods of recording
 - Caretaking styles
 - Cultural groups
 - Socioeconomic status



The Period of PURPLE Crying

THE LETTERS IN PURPLE STAND FOR

PURPLE

PEAK OF CRYING **UNEXPECTED** **RESISTS SOOTHING** **PAIN-LIKE FACE** **LONG LASTING** **EVENING**

Your baby may cry more each week, the most in month 2, then less in months 3-5

Crying can come and go and you don't know why.

Your baby may not stop crying no matter what you try.

A crying baby may look like they are in pain, even when they are not.

Crying can last as much as 5 hours a day, or more.

Your baby may cry more in the late afternoon and evening.

THE WORD PERIOD MEANS THAT THE CRYING HAS A BEGINNING AND AN END



Concerns about Crying are Common

- 303 infants in CHW ED or Urgent Care with complaints of fussiness and crying (2015)



Medical Causes of Crying



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Colic

- Wessel's Criteria
 - At least 3hrs a day
 - At least 3 days per week
 - For at least 3 weeks
 - In a healthy infant
- Starts between 3 and 21 days of age, subsides by 3-4mos
- In evenings
- Flexed legs with “pained” look on face



Colic

- Cause is unknown
 - Gastrointestinal dysfunction (milk protein or lactose intolerance, immaturity of the gut)
 - Gastroesophageal reflux
 - Excessive gas
- Treatments for medical disorders are inconsistently effective, objective testing inconclusive
- May be within normal, more based on temperament or caregivers responses to crying, combination of factors



Gastrointestinal Dysfunction

- Constipation
- Gastroesophageal Reflux Disease
- Cow and/or soy milk protein allergy or intolerance
- Lactose intolerance is **extremely rare**
- More likely if crying is associated with
 - Vomiting
 - Poor growth
 - Blood in stools or emesis
 - Temporally related to feeds



Gastrointestinal Dysfunction

- Making a diagnosis of GERD or milk/soy allergy or intolerance:
 - First assess feeding volume and technique
 - Try whey hydrolysate formula- up to 40% of vomiting and pain in reflux is caused by inflammation from milk protein allergy or intolerance
 - Try probiotics
 - Implement changes one at a time and for at least 2wks
 - Then try medications for reflux



Diagnostic Pitfalls

- Urinary tract infection
- Drug reactions
 - Prenatal: benzodiazepines, amphetamines, heroin, methadone, buprenorphine, other opioids, some antidepressants and anxiolytics
 - Postnatal: cocaine, amphetamines, opiates, fluoxetine, caffeine, pseudoephedrine
- Intracranial process
 - Neuro exam is a poor screen in infants

Rubin DM, Christian CW, et al. Occult Head Injury in High-Risk Abused Children. Pediatrics 2003; 111:1382-1386

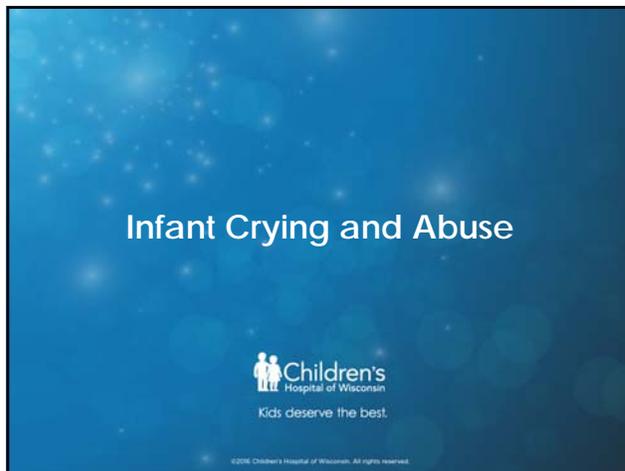
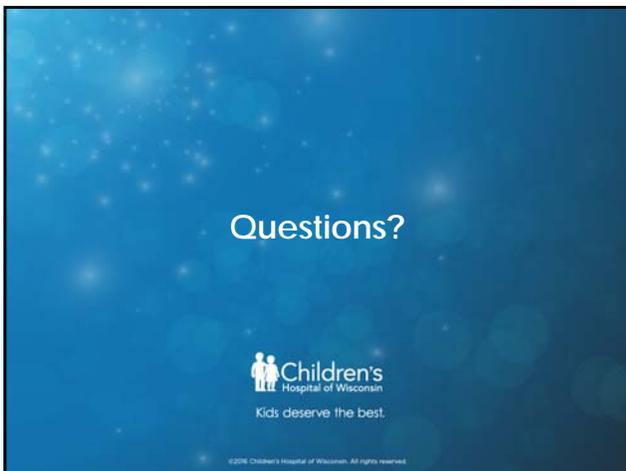


When to seek medical care

- Other symptoms of illness (fever, rash, etc)
- Ill appearing
- Sudden and/or persistent inconsolability
- Unexplained poor growth, developmental delay
- History of previous neurological symptoms or suspicious injuries
- Other suspicion for abuse

Irritable Infant. Nelson's Symptom-Based Diagnosis, third edition. Elsevier Publishing





The effects of crying

- On the infant
 - Self-resolving
 - Most don't have continued problems on re-evaluation at 2yrs of age
 - Premature cessation of breast-feeding
 - Excessive weight gain
 - When combined with family dysfunction are at higher risk for ongoing behavioral problems



The effects of crying

- On the caregiver
 - Higher rates of depression
 - Strained family relationships
 - Guilt about inability to calm infant
 - Beliefs about the cause of the crying can have a lasting effect on how they interact with child and beliefs about the child's health



Infant Distress and Child Maltreatment

- Infant Distress:
 - Description by parent describing infant as excessive crier, fussy, colicky, irritable
 - Feeding issues
 - Formula changes, intolerance
 - Us of OTC for distress
 - Prescriptions for GERD
 - Teething <6mos

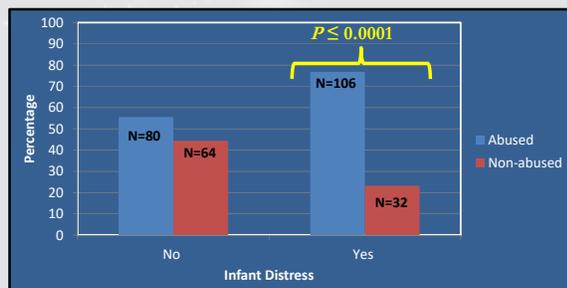


Infant Distress and Child Maltreatment

- Retrospective study of 314 infants, some of whom were abused and some not abused.
- 30% of abused infants had a previous sentinel injury
- A history of infant distress was much more common in abused versus non-abused infants



Infant Distress and Child Maltreatment



A history of infant distress was much more common in abused versus non-abused infants

(OR = 2.650, CI = (1.585 - 4.431), P ≤ 0.0001)



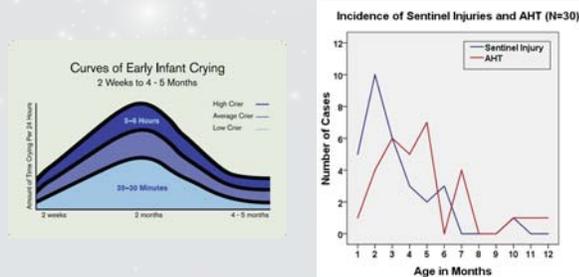
Infant crying is a trigger for abuse

- Parental reports
 - Survey of parents¹
 - By 1mo 2% had taken “detrimental action” to stop the crying, by 6mos 6% had smothered, slapped or shaken infant
 - Confession studies
 - Crying is the trigger in 67% of AHT²
 - 55% admitted to repeated episodes of shaking because the shaking stopped the crying³

¹Reijneveld SA et al. Infant crying and abuse. The Lancet. 2004;364(9442):1340-1342.
²Flaherty EG. Analysis of caretaker histories in abuse: comparing initial histories with subsequent confessions. Child Abuse & Neglect. 2006;30(7):789-798.
³Adamsbaum C et al. Abusive Head Trauma: Judicial admissions highlight violent and repetitive shaking. Pediatrics. 2010;126:546.



Normal Crying Curve: AHT Incidence



Barr RG et al. Age-related incidence curve of hospitalized Shaken Baby Syndrome cases: Convergent evidence for crying as a trigger for shaking. Child Abuse & Neglect. 2006;30:7-16.

Sheets LK et al. Sentinel injuries in infants evaluated for physical abuse. Pediatrics. 2013;131(4):701.



Why is Crying Frustrating?

- Not the fun experience parents expected
- Feelings of resentment toward the baby
- Social pressure to have a “good baby”
- Fear of being a bad parent
 - the parent personalizes the crying as poor parenting
- Fear that the crying will never end



The effects of crying

- “I got advice from everyone, friends, family, and the doctors... My mother in law told me it was because I fussed over her too much. My confidence was so low about being a good mother that I was beginning to think that I was the cause. I felt so inadequate as a mother because my child cried every night and I could not make her feel better.”
- One evening after months of crying, I had had enough. I remember my mind drifting off to a horrible place... and visions of me screaming at the top of my lungs... grabbing Jady... shaking her.”

Purplecrying.info



Risk factors for abuse

- Recurrent presentation to medical for crying or expressing significant frustration
- Prematurity (less than 36 weeks' gestation or history of prolonged neonatal hospital stay)
- Chronic Illness – FTT
- Children with Special Needs
- Multiples (twins, triplets etc.)
- Families with DV
- Families with AODA issues
- Families with Mental Health Issues
- Poor understanding of normal development
- Poor social supports

• Keenan HT, Runyan DK, Marshall SW, Nocera MA, Merten DF. A population-based comparison of clinical and outcome characteristics of young children with serious inflicted and noninflicted traumatic brain injury. Pediatrics. 2004;114(3):633-639.

• Jonny C. Child Abuse and Neglect: Diagnosis, Treatment, and Evidence. Elsevier Publishing, 2011.

• Lindberg DM et al. Prevalence of abusive injuries in siblings and household contacts of physically abused children. Pediatrics. 2012;130:1-9.



Post Partum Depression

- “The baby blues”
 - 80% of new mothers
 - Starts 3-4 days after delivery, lasts up to 2wks
 - Normal
- Postpartum depression
 - From to 10-16% of new mothers
 - Onset within the first few months of delivery
 - It's treatable

Viguera A. Postpartum unipolar major depression: epidemiology, clinical features, assessment and diagnosis. UpToDate. <http://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=see-link>. Accessed 7/18/17.



How to help caregivers cope with crying



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Evidence-based strategies to decrease crying in infancy

- Carrying and feeding on demand in the first few months of life
- Room sharing in first 3mos
- Prompt attempts to soothe before the crying becomes inconsolable (in first few months)
- Consistent routine

St. James-Roberts I. *The Origins, Prevention and Treatment of Infant Crying and Sleep Problems: An evidence-based guide for healthcare professionals and the families they support.* New York, NY: Routledge; 2012.



Comfort measures

- Period of Purple Crying
- Happiest Baby on the Block
- AAP Resources
- Common themes:
 - Swaddling
 - Decreased stimulation
 - Pacifier, rocking, noise and vibration
 - Warm bath



Drug exposures

- No significant or reproducible effect
 - Simethicone
 - Gripe water
 - Fiber enriched formula
 - Lactase enzyme
- Dangerous
 - Sedating medications (Benadryl, cough meds, opiates)
 - Topical anesthetics for teething



Education for caregivers

- Sometimes there is nothing you can do
- Crying peaks in the second month, then improves
- Infants have trouble stopping themselves once they start
- You can't spoil a very young infant
- Most cry-fuss problems are not predictive of ongoing behavior problems



REALLY IMPORTANT MESSAGES

- Put the baby in a safe place and walk away if frustrated
- Never shake, squeeze, smother, hit, or roughly handle an infant
- Don't use medications to calm an infant
- Have a plan to handle the crying- find a support person
- Share the education and tips for coping with all who care for the infant



Questions?



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State and Local Initiatives and Resources



Kids deserve the best.

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The Period of **PURPLE** Crying®

A New Way To Understand Your Baby's Crying



The *Period of PURPLE Crying* program is an evidence-based shaken baby syndrome/abusive head trauma prevention program available since 2007.

The program has two aims:

1. To support parents and caregivers in their understanding of early increased infant crying
2. To reduce the incidence of SBS/AHT



Kids deserve the best.

Why PURPLE

- Designed and approved by pediatricians, public health nurses, child development experts and parents.
- Evidenced-Based: The program is based on 25 years of scientific research on Infant crying
- Positive approach



Kids deserve the best.

Three Dose Model

- Dose 1: Provision of materials, video, and 1 on 1 education
- Dose 2: Reinforcement messaging
- Dose 3: Community campaign



Kids deserve the best.

Click for Babies: Dose 3

CLICK for Babies



"CLICK" your knitting needles together for this grassroots campaign to help prevent Shaken Baby Syndrome throughout Wisconsin!

Nicole.braconier@wisconsin.gov



Infant Safety Education in the NICU

- Survey of mothers with infants at CHW NICU
 - Knowledge and beliefs regarding infant crying
 - Confidence in coping with crying and providing the education to others
 - Distributed at admission, at discharge, and 4mos post discharge



Infant Safety Education in the NICU

- Significant increase in knowledge ($p < 0.0001$) and confidence ($p < 0.0001$) between pre- and follow-up survey
- 77% shared the information with others
- 62% remembered a situation in which the education was helpful
- Few received information about coping with crying (35%) and AHT (27%) from a healthcare provider after discharge



Supporting Families with Fussy Infants in Pediatric Primary Care

- Survey sent to 21 primary care offices.
 - 80% use in-office counseling regarding infant soothing when parents have crying concerns
 - Only 5% are talking about abusive head trauma
 - 94% felt it was important to have resources and tools to support caregivers



Overview

- Collaboration between Children's Community Services and Children's Hospital
- Funding from The Child Abuse and Neglect Prevention Board to implement Period of PURPLE Crying
- Program implementation areas include:
 - Children's Medical Group
 - Children's Urgent Care
 - Emergency Room
 - NICU
 - Areas within Community Services and Fox Valley Hospital
- Implementation began at the end of 2016



For more information and access to parent education

www.dontshake.org
www.purplecrying.info

Child Help Hotline:
1-800-4-a-child



State Resources

- Parent education materials available through the Child Abuse and Neglect Prevention Board

<https://preventionboard.wi.gov>



Parent Education is a Piece of the Solution

- Must reach the intended audience
- Must address risk factors
- Self-regulation



Other promising interventions for infants

- Home visiting
 - Patient Protection and Affordable Care Act of 2010
 - Systematic review evidence in reduction of maltreatment
 - Child FIRST
 - Early Head Start- Home Visiting
 - Early Start (New Zealand)
 - Healthy Families America
 - Nurse Family Partnership

Avellar SA, Supplee LH. Effectiveness of Home Visiting in Improving Child Health and Reducing Child Maltreatment. *Pediatrics* 2013;132:590-599.



Home Visiting Programs in Wisconsin

- Healthy Families America
- Nurse Family Partnerships
- Early Head Start

- Wisconsin Family Foundations
Comprehensive Home Visiting Program

<https://www.dhs.wisconsin.gov/mch/homevisits.htm>



Triple P- Positive Parenting Program

- Associated with reductions in county-wide rates for
 - Substantiated child maltreatment
 - Out of home placement
 - Hospital treated child maltreatment injuries

Prinz RJ et al. Addendum to "Population-based prevention of child maltreatment: The US Triple P system population trial. *Prevention Science*. 2016;17(3):410-416.



Triple P- Positive Parenting Program

- Multiple levels of interventions
 - Levels 1-5
- Multiple ways to access the program
- Focuses on developing positive relationships with child, particularly those with behavior problems
- Purpose is to equip parents with skills and confidence to manage family issues without ongoing support

Triplep.net



Triple P – Positive Parenting Program

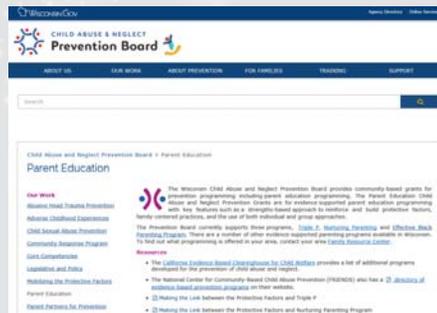
- The Parenting Network
 - Kenosha, Milwaukee, Ozaukee, Racine, Washington, Waukesha

theparentingnetwork.org

- Additional programs
 - Education and support for parents (including dads)
 - Confidential phone counseling
 - Referrals to home visiting programs and community resources



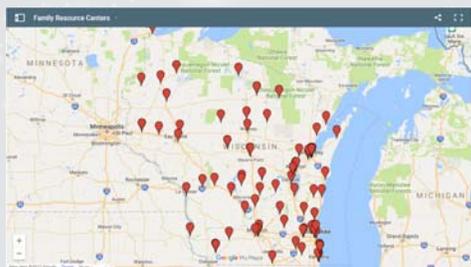
Child Abuse & Neglect Prevention Board



For information about local parenting education and resources: preventionboard.wi.gov



Family Resource Centers



Community focused prevention programs throughout Wisconsin

preventionboard.wi.gov



Other innovative programs

- Fussy Baby Clinics
- Fussy Baby Network (Chicago)
 - Home visiting with infant-parent specialists
 - Medical and behavioral assessment
 - “Warm” line
 - Support group for mothers experiencing post-partum depression
 - Support to implement programs in local area



Conclusions

- Education about crying is an important piece of prevention
- Should be a part of anticipatory guidance
- Important to recognize families at risk for maltreatment and be prepared to provide additional resources



Resources

- Barr R. The Normal Crying Curve: What do we Really Know? *Developmental Medicine and Child Neurology*. 1990;32:356-362.
- Rubin DM, Christian CW, et al. Occult Head Injury in High-Risk Abused Children. *Pediatrics* 2003; 111:1382-1386
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- Avellar SA, Supplee LH. Effectiveness of Home Visiting in Improving Child Health and Reducing Child Maltreatment. *Pediatrics* 2013;132:S90-S99.
- Prinz RJ et al. Addendum to "Population-based prevention of child maltreatment: The US Triple P system population trial. *Prevention Science*. 2016;17(3):410-416.



Thank you!

