



# SPOTLIGHT ON EMS (FOR ADULTS ONLY)

OFFICE OF EMERGENCY MEDICAL SERVICES  
NJ DEPARTMENT OF HEALTH & SENIOR SERVICES  
P.O. BOX 360  
TRENTON, NJ 08625-0360

## TOURETTE SYNDROME AWARENESS MONTH

WHEREAS, Tourette syndrome (TS) is a hereditary neurological condition with onset in childhood that is defined by repetitive and involuntary body movements and/or vocal outbursts, also known as tics; and

WHEREAS, Tourette syndrome can affect people of all ethnic groups, although men are affected 3 to 4 times more often than women; it is estimated that 1 in 100 children in the United States show signs of TS; and

WHEREAS, there is no known cure for Tourette syndrome; therefore, treatment of the disorder focuses on managing patients' tics and creating a supportive environment for them so that they can lead healthy and productive lives; and

WHEREAS, because of the stereotypes surrounding those living with this often misunderstood condition, there is a need to expand public knowledge of Tourette syndrome through awareness and education efforts; and

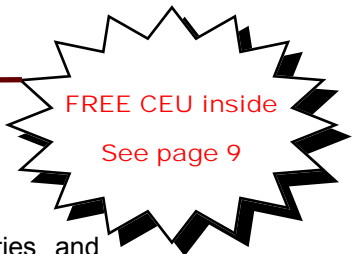
WHEREAS, the New Jersey Center for Tourette Syndrome is committed to supporting the needs of families dealing with TS, advocating for individuals suffering from this condition and educating the public, medical professionals and educational communities about its prevalence and effects;

NOW, THEREFORE, I, CHRIS CHRISTIE, Governor of the State of New Jersey, do hereby proclaim:

**MAY 15 THROUGH JUNE 15, 2012**

**TOURETTE SYNDROME AWARENESS MONTH**

in New Jersey.



### A Special Message for NJ EMS Personnel

My name is Jeff Ludwig and I am a Firefighter/Emergency Medical Technician (EMT) at Pennington Road Fire & First Aid Co. of Ewing. First and foremost, I would like to thank all first responders for their hard work and dedication. Our time volunteering can be very demanding, but we keep pushing because we know we are making a difference.

Now, more than ever, the field of Emergency Medical Services provides us with new and different medical problems and diagnoses.

Unique disabilities and diagnoses are being seen more frequently in the performance of our jobs. These conditions may demand a different approach or method of patient assessment and care. Among these conditions is Tourette Syndrome, a neurological disorder.

Tourette Syndrome, or TS, is characterized by involuntary verbal outbursts and/or physical movements referred to as "tics" The occurrence of this disorder is approximately

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#### Special points of interest:

- Estimates indicate that some 200,000 people in the United States have Tourette Syndrome.
- TS symptoms usually emerge between 5 and 18 years of age.
- There is no known cure for Tourette Syndrome, but medications can help control TS symptoms.
- Many people with TS get better as they mature.

# Tourette Syndrome (TS) and Emergencies

By Tolga Taneli, M.D.

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Broadly speaking, there will be two contexts for a call to service: The emergency might be because of an unrelated medical condition, or it might be for a direct manifestation of Tourette Syndrome (TS,) its associated disorders and their treatment.

## General Approach to the TS Patient

Like any other medical condition, TS presents a challenge for the EMT that will not necessarily be to identify the disorder on sight, but to suspect it in the first place. While many patients will have been previously diagnosed, a good number might be reluctant to offer the diagnosis for fear of stigma.

Even though tics can start as early as 5 to 7 years of age and peak in the teenage years, it is not uncommon for them to have been dismissed by family and clinicians as a “nervous habit” or response to allergies. It is not uncommon for persons with TS to receive a diagnosis after more than a decade of symptoms.

It will be a judgment call, whether to simply ask about a diagnosis of Tourette Syndrome or to go about it more indirectly. Incidentally, the TS community has preferred “Tourette Syndrome” over “Tourette’s Disorder,” which is the official DSM-IV name - the name as it stands in the Diagnostic and Statistical Manual, Fourth Edition maintained by the American Psychiatric Association.

The defining feature of Tourette Syndrome is motor and vocal tics. These are brief, recurrent, nonrhythmic, stereotyped motor movements or vocalizations. Unlike other inborn neurological disorders (Huntington’s Disease, Wilson’s Disease, Cerebral Palsy, etc.) and induced states (drug, trauma, etc..) tics occur on a background of

otherwise normal activity. In other words, if one could somehow subtract the tics, the person would appear unremarkable.

If the situation does not require immediate medical stabilization, it will be best to approach the patient casually and with little regard to or emphasis on the tics, including insults that can be readily and repeatedly offered.

“Coprolalia” is the utterance of obscene words or statements, which may occur in about one in ten patients with TS. It is not a defining or necessary feature. “Copropraxia” involves the involuntary performance of obscene gestures (for example, the middle-finger-sign). In both coprolalia and copropraxia, the words, statements, and gestures will seem out-of-context. There need not be an ongoing argument. Words and gestures will not necessarily be addressed at anyone and can be repeated many times, in salvo.

Once rapport is established, an open-ended question might be most appropriate, such as: “Is there a name for what you are experiencing?” or “Do you know if you have a diagnosis?” It should be assumed that the person has little control over his/her tics and it is therefore best not to ask that he/she stop or to offer doubt that it cannot be controlled.

## Responding to TS-Related Emergencies

### Recognizing Core Symptoms

While some of the more distressing and urgent calls for help will be related to psychotropic medicine ad-

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## A Message . . . (continued from page 1)

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1 out of 100, according to Centers for Disease Control and Prevention (CDC) statistics. A cluster of associated disorders is often seen in a patient with TS, including obsessive-compulsive disorder (OCD), attention deficit hyperactivity disorder (ADHD), sensory integration issues, anxiety and depression.

As a fellow EMT who has been diagnosed with this disorder, I cannot emphasize enough the need for you to read this newsletter and understand its contents.

If you haven’t already, there is a good possibility that you will encounter a patient with TS and proper understanding and management of their care is crucial.

Knowing how to recognize the disorder and comfortably talk with the patient is as crucial as your documentation.

The New Jersey Center for Tourette Syndrome (NJCTS) has assembled some information in this newsletter to education New Jersey Emergency Medical Services personnel. I hope this newsletter will provide you with the knowledge and patient care strategies you need to give your patients quality patient care.

*Jeff Ludwig*

# TS and Emergencies ... continued from page 2

verse effects, it is conceivable that a call will originate out of a bystander's concern that a medical emergency is unfolding when prominent tics are on display.

Brief observation should ascertain that the person is not in cardiopulmonary distress and that their condition is stable over time. If this is not the case, there certainly is reason for concern. It will be important to remember that tics can be anywhere from mild and difficult to discern to violent, with flailing extremities and truncal movements.

## Recognizing Associated Disorders

Like many other conditions of the brain, Tourette Syndrome appears to be a multiple-etiology disorder with variable expression. This is true for its core symptoms of motor and vocal tics, but also for the associated disorders. In other words, tics and associated impairments can be variable and independently expressed.

As such, a person with TS can have mild tics, but substantial impairment from Obsessive Compulsive Disorder (OCD,) Attention-Deficit/Hyperactivity Disorder (ADHD) or mood symptoms. Irritability, rage or rapid changes in mood can be a significantly impairing feature of TS and can be cause for a call, in and of itself. Bipolar Disorder is perhaps over-represented in TS, compared with the general population. SSRIs (Selective Serotonin Reuptake Inhibitors) and other antidepressants can elevate risk for mania.

## Understanding TS Medicines

Because tics are merely one aspect of a multifaceted disorder, the treatment of TS is often times a complex balance of many medicines and psychotherapies. While there are few FDA-approved medicines specifically targeting tics, a broad range of pharmacological agents is used to treat both the tics and the associated disorders, many times concomitantly (also referred to as "polypharmacy".) As such, the EMT will need to be vigilant for adverse effects and drug interactions.

## Antipsychotics

Neuroleptics (traditional antipsychotics) and atypical (second generation) antipsychotics are by far the most commonly prescribed medicines for the management of tics. The neuroleptics include haloperidol and pimozide, which are the two medicines with the best evidence for tic control, albeit perhaps no longer the most popular. They have been largely supplanted by atypical antipsychotics (aripiprazole, olanzapine, quetiapine, risperidone, ziprasidone and others) which appear to have somewhat more favorable side effect profiles.

Side effects of antipsychotics that may present as emergencies include several related to muscle movement. These are "acute dystonic reactions" (or dystonias), "akathisia," "tardive dyskinesia" (TD), "withdrawal dyskinesia", and "neuroleptic malignant syndrome" (NMS). Of these

adverse effects, acute dystonic reactions will be more common, but easy to recognize and treat. The condition is characterized by abrupt muscle spasms, including rolling the eyes and tilting the head, usually within days to weeks of the onset of treatment with the offending medicine. Akathisia refers to restlessness related to drug affects. TD describes movements related to long-term use and includes more rhythmic, subtle movements such as tongue protrusions or lip-smacking. TD is now exceedingly rare. Withdrawal dyskinesia—abnormal movements upon stopping the offending medicine—are difficult to diagnose, mostly because most clinicians fail to suspect the diagnosis. Whereas NMS is rare, it is potentially fatal (and therefore critical to recognize). A high degree of suspicion will be necessary. (NMS is more likely to occur in the context of schizophrenia, when antipsychotics are more likely to be prescribed.) Mental status might be uncharacteristically altered. Fever and autonomic instability will follow muscle cramps or rigidity.

"QTc prolongation" is a potential side effect of pimozide and other drugs (e.g. ziprasidone) that can lead to "Torsades de Pointes," a fatal arrhythmia. This is essentially a prolongation of the time it takes the ventricles to complete their contraction and relaxation—not the time between heartbeats, which puts the heart at risk of "reentry," or the abnormal continuation of the cardiac action potential in the absence of a refractory period. Pimozide is of particular concern, as it tends to interact with all of the SSRIs in increasing this risk.

## SSRIs

Selective Serotonin Reuptake Inhibitors (SSRIs) are not prescribed for tic management, but for associated conditions, such as Obsessive-Compulsive Disorder (OCD), other anxiety disorders and depressive disorders. The class includes: Fluoxetine, sertraline, fluvoxamine, paroxetine, citalopram and escitalopram.

The most significant risk from the use of SSRIs is Serotonin Syndrome. Like NMS, onset can be insidious and outcome fatal, if untreated. The cause is an abundance of serotonin in the central and peripheral nervous system. This can be due to drug interaction (for example two serotonergic medicines competing for the same metabolic pathway, at the expense of slowing of elimination) or the prescription of high doses of a single serotonergic agent. Symptoms include increased heart rate, sweating, dilated pupils, high blood pressure, elevated temperature, hyperactive reflexes, agitation, and life-threatening metabolic changes, muscle tissue breakdown (rhabdomyolysis), seizures, renal failure, and pathological activation of coagulation (disseminated intravascular coagulation or DIC).

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# Individuals with Tourette Syndrome May Also Have a Sensory Processing Disorder

By Cheryl Ludwig

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Sensory processing (i.e., sight, sound, and touch) is a part of every movement, activity and interaction that we engage in. It is a neurological process that the central nervous system (CNS) is responsible for and includes:

- taking this information in (reception)
- connecting it with other sensory information (visual, auditory or tactile) to create a multidimensional perception (integration)
- organizing, interpreting and attaching meaning to it (modulation and discrimination)
- sending out a message in response to stimuli.

The more efficiently the brain accomplishes this task, the more automatic an adaptive response becomes. When this process goes smoothly, the individual feels calm and safe and uses energy to learn, work and play in a variety of environments.

Sensory processing disorders exist on a continuum and when combined with Tourette Syndrome, ADHD and OCD, can intensify the symptoms these disorders present. A sensory processing disorder can exist in one of three forms or in combination; Sensory Modulation Disorder, Sensory Discrimination Disorder and Sensory Based Motor Disorder.

All three involve difficulty of the brain with the detection of sensory information, the organization, interpretation and use of sensory input. It results in problems with attention, movement, emotions and forming appropriate responses. The following chart highlights symptoms of each disorder and what a first responder might observe in terms of behaviors or responses.

## Tics and other physical symptoms

- Realize that many individuals with TS and associated disorders exhibit odd behaviors (both motor and vocal) and take medication. Do not make assumptions about drugs, medication or alcohol use. It could be that a medication dose was missed..
- Tics cannot be controlled or interrupted. Do not insist that the individual stop these behaviors. If the person is echolalic, do not interpret their repeating first responders' words/comments as a fresh or provoking behavior.
- Person might chew on things. Clothes, furniture, paper, etc.

- This person might appear as tactile defensive and unusually sensitive to physical contact, clothing changes.
- If OCD is a factor, the individual might dwell on a part of the event, a statement, or some small detail that they repeat over and over.

## Cognitive Symptoms

- Realize that cognitive skills might be compromised in stress and confusion.
- Explain the purpose of the first responder on this occasion and offer alternatives to the current behavior. Use first – then statements.
- Speak slowly and calmly to articulate directions, requests, procedures as processing speed might be slower than typical. Allow additional time to process information. Insert pauses into conversation or phrasing to allow for processing. Be patient while the individual formulates a verbal response. Stress will make this process more difficult and the person might have difficulty organizing answers.
- It might be more effective to show the individual what he/she should do with a gesture or demonstration and then pair the gesture with calm, simple language.
- Talk individual through a procedure.
- Provide warning about changes or transitions whenever possible.

## Sensory Symptoms

- Isolate the individual from large crowds to decrease sensory input and stress.
- Whenever possible avoid flashing lights and sirens.
- When appropriate, offering a blanket (to wrap up in) can provide a calming effect
- Select private or quiet exam rooms or areas to decrease anxiety. Busy hallways in front of nursing stations create anxiety. A situation with minimal background noise is better for problem solving.
- Odd smells can stimulate a negative response.
- Calm, rhythmic nonlinguistic music might calm the individual.

Disorder and Reason	Symptoms	Behaviors Observed
<p><b><u>Sensory Modulation</u></b> (a problem with inhibition, governing, balance, coordinating and monitoring a response to sensory input)</p>	<p><b>Over or hyper-sensitivity</b></p> <ul style="list-style-type: none"> <li>• Distractible as person pays attention to every sensation</li> <li>• Can't screen relevant from irrelevant information</li> <li>• Avoids touch, sound and movement sensations</li> <li>• Misinterprets touch/actions as threatening</li> <li>• Distressed by loud noises, sudden changes, abrupt actions</li> <li>• Misinterprets gestures or non-verbal cues</li> <li>• Low tolerance threshold</li> </ul> <p><b>Under or hypo-sensitivity</b></p> <ul style="list-style-type: none"> <li>• Appears "spacey" or "zoned out"</li> <li>• Moves through environment in clumsy manner</li> <li>• High pain threshold</li> <li>• Sensory input overwhelms person and they freeze, unsure of what to do</li> <li>• Decreased ability to read facial/body language, non-verbal cues</li> </ul> <p><b>Sensory Seeking</b></p> <ul style="list-style-type: none"> <li>• Disorganized responses as person seeks intense levels of input</li> <li>• Risk taker</li> <li>• Poor impulse control</li> <li>• May be in constant motion</li> <li>• Craves deep pressure contact</li> </ul>	<p>Responds to intense or scary situation in an extreme way.</p> <ul style="list-style-type: none"> <li>• <b>Fight Response</b> (defiant/ negative/defensive/aggressive)</li> <li>• <b>Flight Response</b> (avoids sensation or perceived threat at all cost) push back, hide, run away or withdraw and avoid object or person causing stress</li> <li>• <b>Freeze Response</b> difficulty moving or speaking, forming language/verbal response may be difficult</li> <li>• <b>Fright Response</b> unfamiliar causes great fear and anxiety, shaking or crying</li> <li>• <b>Intense, emotional and loud responses</b></li> <li>• <b>Easily annoyed or irritated</b></li> <li>• <b>Anxious, easily upset</b></li> </ul> <p>Responds to intense or scary situation in disinterested way or for self-preservation</p> <ul style="list-style-type: none"> <li>• Wants to avoid touch, hands in pockets</li> <li>• Passive, withdrawn, hard to engage</li> <li>• Slow response to both verbal and nonverbal messages</li> <li>• May tire easily or seem sleepy</li> <li>• May chew on objects or clothes</li> <li>• May seem unaware of problems</li> <li>• Inappropriate responses or misinterpretation of humor or facial expressions</li> <li>• Compromised pain register</li> </ul> <ul style="list-style-type: none"> <li>• May demonstrate crude habits (burp, pass gas, sniff people/objects/food, chew on fingers/hands/clothing)</li> <li>• Constant talking or humming</li> <li>• Likes loud sounds, bright colors</li> <li>• Food cravings for intense flavors</li> <li>• Touches everything in sight</li> </ul>

Disorder and Reason	Symptoms	Behaviors Observed
<p><b><u>Sensory Discrimination</u></b> (telling the differences and similarities between sensory stimuli, judging the quality of sensations)</p> <p>CNS processes information inaccurately so information is not helpful in forming an appropriate response</p> <p><b>Brain processes information related to time and space, compares it to a previous experience and responds</b></p>	<p><b>Sensory Combination</b></p> <ul style="list-style-type: none"> <li>• Responses waver between intense and avoidance</li> </ul> <p><b>Defensiveness and self-protection are initial responses and should diminish as the neurological system matures.</b></p> <p>Emergency situations are both stressful and unique. Persons have difficulty forming appropriate responses in unfamiliar situations.</p> <p><b>Difficulty with visual/spatial tasks</b></p> <p><b>Difficulty with auditory discrimination or defensiveness</b></p>	<ul style="list-style-type: none"> <li>• A sense of “out of control” as responses are so variable</li> <li>• Unpredictable emotional responses (anger to laughing to crying)</li> <li>• In stressful or threatening situations, poor discrimination skills may lead the person to revert to defensiveness</li> <li>• Person compares quality of sensory input to prior experiences for speed, intensity, weight, texture, temperature</li> <li>• Misinterprets visual cues, social cues and interactions</li> <li>• Misinterprets words, verbal directions, confused by rapid speech, fast-paced conversation or rapid-fire Q&amp;A</li> <li>• Bothered by environmental sounds (fans, beepers, fluorescent lights)</li> <li>• Poor attention, poor listening</li> <li>• Agitated by excessive room noise</li> <li>• May tune out and not respond</li> <li>• Words may sound similar or confusing</li> <li>• Difficulty processing language with background noise</li> <li>• Needs extra time, pauses or slower presentation to process language</li> <li>• Talks excessively, makes noises</li> </ul>

Disorder and Reason	Symptoms	Behaviors Observed
<p><b><u>Sensory-based Motor Disorder</u></b>            How to use the body and hands in novel motor tasks            (may reflect poor posture or low tone)</p>	<p><b>May have compromised body awareness</b></p> <p><b>Difficulty knowing where body is in space</b></p>	<ul style="list-style-type: none"> <li>• May appear as clumsy, bumps into things; uses inappropriate force, grip or touch</li> <li>• Difficulty completing a novel task under stress</li> <li>• Organization and balance issues</li> <li>• Motor planning problems (developing a plan of action when moving)</li> <li>• Poor bilateral coordination or using both sides of the body together</li> </ul>

## Sensory Processing Disorder . . . continued from page 4

- Move slowly around the individual during interactions or exams from far away moving in towards individual. Approach from the front, not from behind.
- In hospital situations, be aware that the temperature of the room, lighting in the room, texture of blankets will influence sensory input. Dim the lights or select a lighting option that is not fluorescent whenever possible. Warm instruments prior to contact with skin. Use caution with adhesive products. Minimal or no use of restraints.
- The individual who is enraged and combative should be placed in a calm and safe environment to calm down independent of intervention. Rage storms have some neurological roots and the person must bring self to a state of calm on their own.
- Do not insist on eye contact.

###

### **Other Points**

- Realize that some individuals have altered sensitivity to pain and might not recognize pain or trauma like others

*\*Cheryl is an ASHA certified and state licensed speech/language pathologist and received a certificate in Assistive Technology. Cheryl maintains a private practice and is a senior clinician in a community speech and hearing center. Cheryl and her husband are the parents of three children; all diagnosed with TS and associated disorders.*

# TS and Emergencies ... continued from page 3

In addition to SSRIs, medicines typically prescribed in TS, which may contribute to Serotonin Syndrome include bupropion, trazodone, methylphenidate (and other stimulants,) valproic acid, buspirone, lithium, risperidone and olanzapine.

## Tricyclic Antidepressants (TCAs)

Tricyclic antidepressants have a place in TS treatment, mostly for the associated disorders (Clomipramine for Obsessive-Compulsive Disorder [OCD] and desipramine or nortriptyline for ADHD). In the face of treatments with fewer side effects, TCAs are losing ground. The primary concern for TCAs is in overdose, risking fatal arrhythmias.

## Venlafaxine and Atomoxetine

While unrelated, these two medicines both cause small elevations in blood pressure. Their abrupt cessation may cause blood pressure fluctuations and an acute withdrawal syndrome, characterized by flu-like symptoms and headache. (Atomoxetine is an FDA-approved treatment of ADHD.)

## Alpha-2 Agonists

Alpha-2 agonists such as Clonidine and Guanfacine are widely used for both tics and hyperactivity in ADHD. Many times they are too sedating to be very useful and are associated with low blood pressure (which is the primary purpose of these medicines). At high doses and especially when combined with other central nervous system depressants such as benzodiazepines, they can be of concern.

## Bupropion

Bupropion is a third-line medicine in the treatment of ADHD, which helps one avoid concerns associated with

stimulants. Bupropion elevates risk for seizures in a dose-dependent manner, especially if a seizure disorder was previously present. Bupropion exists in generic and trade forms, as well as a smoking cessation agent, named ZYBAN. As such, accidental co-prescription and toxicity is not unheard of.

## Other Psychotropics

A propensity for explosive outbursts have been well documented in TS and has been the target of a number of medicines, to include lithium, propranolol, psychostimulants, clonidine, antipsychotics and anticonvulsants such as valproic acid. Once again, concern is for polypharmacy, as well as volatile temperament.

## Responding to Non-TS-Related Emergencies

It will be best to approach the TS patient, without drawing attention to tics, if at all feasible. Reactions to trauma and pain may be exaggerated, especially in children, although substantial cooperation with the EMT should be the norm, not the exception.

A detailed medicine history, including agents that might have been discontinued in the past two weeks will help avoid critical drug interactions.

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*\* Dr. Taneli is Director, Division of Child and Adolescent Psychiatry at UMDNJ-New Jersey Medical School. He specializes in Tourette Syndrome and emergency psychiatry. He is the Training Director for the Child and Adolescent Psychiatry Fellowship Program.*

## POST TEST

- Which of the following is true about Tourette Syndrome?
  - TS symptoms usually emerge between 13 and 25 years of age.
  - Medications can help control TS symptoms.
  - Many people with TS get worse as they mature.
  - Estimates indicate that some 350,000 people in the United States have TS.
- Which of the following is the most common side effect of the antipsychotic drugs?
  - Akathisia
  - Neuroleptic malignant syndrome
  - Tardive dyskinesia
  - Acute dystonic reactions
- Symptoms of Serotonin Syndrome include all of the following, except:
  - Increased temperature
  - Hyperactive reflexes
  - Decreased heart rate
  - High blood pressure
- Tourette Syndrome is characterized by involuntary verbal outbursts and/or physical movements.
  - TRUE
  - FALSE
- Individuals with TS can control their outbursts.
  - TRUE
  - FALSE
- The treatment of TS is often a balance of medicines and psychotherapies.
  - TRUE
  - FALSE



7-12 Match the sensory processing disorder with the appropriate symptom/behavior. (Answers may be used more than once.)

7. Constant humming or talking

8. Clumsy, bumps into things

9. Pauses to process language

10. Uses inappropriate force

11. Bothered by environmental sounds

12. Seems unaware of problems

A. Sensory-based Motor Disorder

B. Sensory Modulation

C. Sensory Discrimination

## ANSWER SHEET (#120254208) Spotlight on EMS Newsletter, Spring 2012

Name \_\_\_\_\_ NJ EMT ID # 5

Address \_\_\_\_\_

Town \_\_\_\_\_

State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

E-MAIL \_\_\_\_\_

Answer sheets must be submitted prior to **October 31, 2012.**

Complete and return only the answer sheet  
via mail, fax or e-mail—do not fax & mail the same form.

OEMS

Attention Kathy Lutz

P.O. Box 360, Trenton NJ 08625-0360

Fax (609) 633-7954

E-mail [ems@doh.state.nj.us](mailto:ems@doh.state.nj.us)

• 1 (One) Elective CEU for NJ EMTs with a minimum score of 70%

• 1 (One) Professional Development Hour for NJ School Nurses with a minimum score of 70%

Check this box if NJ EMT

Check this box if NJ School Nurse

Spring 2012 (circle correct answer only)

1. A B C D

7. A B C

2. A B C D

8. A B C

3. A B C D

9. A B C

4. A B

10. A B C

5. A B

11. A B C

6. A B

12. A B C

## NJ/PA Reciprocal Continuing Education Documentation

Name\* \_\_\_\_\_ Date of Birth\* \_\_\_\_\_

PA Certification Level\* \_\_\_\_\_ PA Region\* \_\_\_\_\_ PA Provider # \* \_\_\_\_\_

Course Title: NJOEMS Newsletter Volume 3, Issue 2 Tourette's Syndrome Course # 120254208

Dates Available: May 15, 2012-October 31, 2012

Total Credits: 1 elective CEU/Medical

Location: Trenton (Mercer County) NJ

Name of Coordinator/Instructor: Kathleen S. Lutz

Coordinator/Instructor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

\*If requesting proof of CEU for **PA CEUs** please complete the 5 items marked \* and submit form with answer sheet.

PA Providers—This document will be returned to you signed. Then you must submit a copy directly to your Regional EMS Council for addition to your continuing education records.



**OFFICE OF EMERGENCY MEDICAL SERVICES  
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Chris Christie, Governor  
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Office of Emergency Medical  
Services  
Karen Halupke, Director

## New Jersey Center for Tourette Syndrome and Associated Disorders, Inc

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NJCTS provides direct services and referrals for families, training of the next generation of qualified professionals and support for research that will lead to better treatments and a cure.

### Services include:

- Referrals for medical diagnosis, treatment and psychological services
- Coordinated family support among partner and community organizations throughout the state
- The nation's only university-based, stand-alone TS clinic, located at Rutgers University
- Education and training at medical schools and universities to develop a new generation of professionals knowledgeable about TS and associated disorders
- Professional and educational training for practicing physicians, educators and allied professionals
- Research into causes and effective treatments for TS and associated disorders



NJCTS has provided the world's first TS DNA and cell sharing repository making genetic material available to qualified researchers world-wide to understand factors that may lead to treatments and cures.

NJCTS is New Jersey's resource for TS families, medical and education professionals.

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