

### Editor's key points

► Nonsuicidal self-injury (NSSI) manifests in various forms, such as cutting or carving skin, burning, punching, scratching, and breaking bones, and is predominantly used to reduce a perceived intolerable negative affect and regulate distressing thoughts. Research demonstrates that NSSI occurs in the context of other psychiatric disorders while also existing as a separate clinical condition.

► Nonsuicidal self-injury is associated with other mental health issues that have to be considered in the differential diagnosis such as depression, borderline personality disorder, substance use disorder, developmental disabilities, eating disorders, generalized anxiety disorder, and posttraumatic stress disorder. Nonsuicidal self-injury is associated with childhood sexual abuse and a higher risk of suicidal behaviour, which should be appropriately assessed by family physicians.

► It is important to be aware of this new psychiatric condition to provide more seamless referrals to treatment with dialectical behaviour therapy and psychotherapy. Because of family physicians' long-term trusting relationships with their patients, family physicians are frequently the first point of contact for patients engaging in NSSI. It might be useful to include regular screening for patients at higher risk in family practice.

# Nonsuicidal self-injury in an adolescent patient

Tina Hu MD MSc William Watson MD CCFP FCFP

**N**onsuicidal self-injury (NSSI) is a new psychiatric diagnosis that involves self-inflicted destruction of body tissue without suicidal intent. It is important for family physicians to be aware of NSSI because its prevalence is increasing, especially in adolescent populations.<sup>1</sup> Nonsuicidal self-injury is associated with other mental health issues such as depression and borderline personality disorder.<sup>2</sup> It is linked to a higher risk of suicidal behaviour and needs to be thoroughly assessed from a safety perspective.<sup>3</sup> We describe a case of NSSI in an adolescent patient that highlights the importance of awareness of NSSI assessment and management for family physicians.

## Case

An 18-year-old healthy female patient was referred to a family practice by her secondary school guidance counselor after one of her teachers noticed several cuts on her wrists. Upon questioning, the patient reported that she had cut herself "because it made [her] feel better." During the interview, the patient noted that she started purposely hurting herself without wanting to die at the age of 9, often when she was feeling upset after being teased at school, as the cutting provided her a sense of emotional relief. In the past year, there were approximately 30 days where she had thoughts of hurting herself, and she reported that these thoughts were very intense. Her methods of hurting herself included cutting and carving her skin, hitting herself on purpose resulting in bruising, and picking areas of her body to the point of drawing blood. In the past month, she had physically hurt herself approximately 7 times. She had no previous mental health conditions and was not receiving any treatment. She was in an age-appropriate class at school and performing well academically. There was no history of substance abuse or child abuse. There was no relevant family history of mental health issues. Findings of physical and mental status examinations were unremarkable. She denied any suicidal thoughts or intent and denied any previous suicide attempts. The patient was diagnosed with NSSI disorder. Owing to the severity of her NSSI behaviour (high frequency and number of methods used), she was referred for psychiatric evaluation and dialectical behaviour therapy.

## Discussion

*Nonsuicidal self-injury* is defined as the "deliberate, self-inflicted destruction of body tissue without suicidal intent, and for purposes not socially sanctioned."<sup>4</sup> Nonsuicidal self-injury was previously considered primarily in the context of borderline personality disorder; however, emerging research demonstrates that NSSI occurs in the context of other psychiatric disorders while also existing as a separate clinical condition. As a result, NSSI became a separate diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition, under Section 3 ("Disorders Requiring Further Research").<sup>5</sup> **Table 1** shows the diagnostic criteria for NSSI disorder in the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition.<sup>5,6</sup>

The causes of NSSI are multifactorial. Previous research suggested a strong association between NSSI and early childhood sexual abuse; however, a meta-analysis found a modest correlation, likely owing to shared psychiatric risk factors.<sup>7</sup> Nonsuicidal self-injury manifests in various forms, such as cutting or carving skin, burning, punching, scratching, and breaking

**Table 1. Diagnostic criteria for NSSI disorder**

CRITERION	DEFINITION
A	Engagement in NSSI on 5 or more days in the past year
B	Expectation that NSSI will solve an interpersonal problem, provide relief from unpleasant thoughts or emotions, or induce a positive emotional state
C	Experience of 1 or more of the following: <ul style="list-style-type: none"> <li>• Interpersonal problems or negative thoughts or emotions immediately before NSSI</li> <li>• Preoccupation with NSSI that is difficult to manage</li> <li>• Frequent thoughts about NSSI</li> </ul>
D	NSSI is not socially sanctioned or restricted to minor self-injurious behaviour
E	Presence of NSSI-related clinically significant distress or interference across different domains of functioning (eg, work, relationships)
F	NSSI does not occur only in the context of psychosis, delirium, or substance use or withdrawal and is not better accounted for by another psychiatric disorder or medical condition

NSSI—nonsuicidal self-injury.  
Adapted from Gratz et al<sup>5</sup> and the American Psychiatric Association.<sup>6</sup>

bones.<sup>8</sup> Nonsuicidal self-injury is predominantly used to reduce a perceived intolerable negative affect and regulate distressing thoughts.<sup>7</sup> Most individuals begin self-injuring during adolescence between the ages of 13 and 15 years.<sup>9</sup> Adolescents are at a particularly high risk of NSSI, with 14% to 21% of community-sample adolescents self-injuring at least once in their lives, and 25% self-injuring repeatedly.<sup>8,10</sup> Research suggests that NSSI is increasing in prevalence, especially among adolescents, which makes it highly likely that family physicians will be the first point of contact for patients presenting with self-injury.<sup>1</sup> Nonsuicidal self-injury is also of concern because it is associated with other mental health issues that have to be considered in the differential diagnosis such as depression, borderline personality disorder, substance use disorder, developmental disabilities, eating disorders, generalized anxiety disorder, and post-traumatic stress disorder.<sup>2</sup> Although NSSI is distinct from suicidal behaviour, NSSI frequently occurs in adolescents who have considered or attempted suicide; typically, those who both self-injure and attempt suicide have longer histories of self-injury and use more methods.<sup>3</sup> Thus, it is important for family physicians to have an appropriately high index of suspicion for those who self-injure who are at higher risk of suicidal behaviour.

The family physician–patient relationship is often built on trust developed over years; thus, those who self-injure might seek help from their family physicians as a first resource.<sup>11</sup> This therapeutic relationship enables the use of effective motivational interviewing techniques to encourage the change process while also assessing risk and allowing family physicians to determine

appropriate referrals.<sup>12</sup> Probing questions include asking about the function of NSSI and effects that NSSI is having on patients' lives, encouraging reflection on the disadvantages of continuing NSSI, and asking patients what resources they think they need to stop self-injuring.<sup>12</sup> Assessing NSSI involves first determining the severity of the self-injury, which is based on the frequency and number of methods used. Typically, low severity is 10 or fewer NSSI episodes and 1 NSSI method. Moderate severity is 11 to 50 NSSI episodes and 2 to 3 methods of self-injury, while high severity is more than 50 NSSI episodes and more than 3 methods.<sup>12,13</sup> Second, assessment involves evaluating the risk of suicidal behaviour, which increases with higher severity of NSSI.<sup>3,12</sup> There are also several validated questionnaires, such as the Functional Assessment of Self-Mutilation, that can be used to assess NSSI.<sup>14</sup> Red flags for referral to behavioural health services include intense thoughts about suicide while self-injuring, multiple NSSI methods, early onset of NSSI, extended duration of NSSI (longer than 6 months), injuries requiring suturing or hospitalization, and high frequency of episodes (multiple episodes per week or more than 5 wounds per episode).<sup>12</sup> Research has suggested that NSSI might be a precursor to developing borderline personality disorder, especially in those who engage in both NSSI and suicide attempts, and early referral for mental health support might be beneficial.<sup>15</sup>

There are currently no approved medications specifically for NSSI disorder, but pharmacologic treatment should target any underlying psychiatric disorder that might have NSSI as a symptom.<sup>16</sup> Family and interpersonal supports are essential in implementing management plans such as psychotherapeutic treatment to help the patient understand NSSI and use more adaptive coping strategies.<sup>16</sup> Dialectical behaviour therapy, typically as a 12-month outpatient program with weekly individual cognitive-behavioural therapy sessions and skills training, has been shown to be effective in reducing NSSI in patients with severe or chronic symptoms.<sup>16,17</sup> In addition, general psychiatric management entailing case management, psychodynamically informed therapy, and medication management has been shown to be as effective as dialectical behaviour therapy.<sup>18</sup>

## Conclusion

Because of their long-term trusting relationships with their patients, family physicians are frequently the first point of contact for patients engaging in self-injury. It is important to be aware of this new psychiatric condition to provide a more seamless transition to the necessary referrals and services such as dialectical behaviour therapy and psychotherapy. Nonsuicidal self-injury is associated with childhood sexual abuse and a higher risk of suicidal behaviour, which should be appropriately assessed by the family physician. As NSSI is increasing in prevalence among adolescents, it might be useful to include regular screening for patients at higher risk in family practice.



**Dr Hu** is a resident physician at the University of Toronto in Ontario. **Dr Watson** is a staff physician at St Michael's Hospital and Associate Professor in the Department of Family and Community Medicine at the University of Toronto.

#### Competing interests

None declared

#### Correspondence

**Dr Tina Hu**; e-mail [tina.hu@mail.utoronto.ca](mailto:tina.hu@mail.utoronto.ca)

#### References

- Whitlock J, Eckenrode J, Silverman D. Self-injurious behaviors in a college population. *Pediatrics* 2006;117(6):1939-48.
- Plener PL, Schumacher TS, Munz LM, Groschwitz RC. The longitudinal course of non-suicidal self-injury and deliberate self-harm: a systematic review of the literature. *Borderline Personal Disord Emot Dysregul* 2015;2:2.
- Laye-Gindhu A, Schonert-Reichl KA. Nonsuicidal self-harm among community adolescents: understanding the "whats" and "whys" of self-harm. *J Youth Adoles* 2005;34(5):447-57.
- Heath NL, Nixon MK. Assessment of nonsuicidal self-injury in youth. In: Nixon MK, Heath NL, editors. *Self-injury in youth. The essential guide to assessment and intervention*. New York, NY: Routledge; 2009. p. 143-70.
- Gratz KL, Dixon-Gordon KL, Chapman AL, Tull MT. Diagnosis and characterization of DSM-5 nonsuicidal self-injury disorder using the clinician-administered Nonsuicidal Self-injury Disorder Index. *Assessment* 2015;22(5):527-39. Epub 2015 Jan 20.
- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013.
- Klonsky ED. The functions of deliberate self-injury: a review of the evidence. *Clin Psychol Rev* 2007;27(2):226-39. Epub 2006 Oct 2.
- Muehlenkamp JJ, Gutierrez PM. An investigation of differences between self-injurious behavior and suicide attempts in a sample of adolescents. *Suicide Life Threat Behav* 2004;34(1):12-23.
- Heath N, Toste J, Nedechewa T, Charlebois A. An examination of nonsuicidal self-injury among college students. *J Ment Health Couns* 2008;30(2):137-56.
- Whitlock JL, Powers JL, Eckenrode J. The virtual cutting edge: the Internet and adolescent self-injury. *Dev Psychol* 2006;42(3):407-17.
- Fortune S, Sinclair J, Hawton K. Help-seeking before and after episodes of self-harm: a descriptive study in school pupils in England. *BMC Public Health* 2008;8:369.
- Kerr PL, Muehlenkamp JJ, Turner JM. Nonsuicidal self-injury: a review of current research for family medicine and primary care physicians. *J Am Board Fam Med* 2010;23(2):240-59.
- Walsh B. Clinical assessment of self-injury: a practical guide. *J Clin Psychol* 2007;63(11):1057-68.
- Lloyd EE, Kelley M, Hope T, eds. *Self-mutilation in a community sample of adolescents: descriptive characteristics and provisional prevalence rates*. Paper presented at: Annual Meeting of the Society for Behavioral Medicine; 1997; New Orleans, LA.
- Chanen AM, McCutcheon L. Prevention and early intervention for borderline personality disorder: current status and recent evidence. *Br J Psychiatry Suppl* 2013;54:s24-9.
- Peterson J, Freedenthal S, Sheldon C, Andersen R. Nonsuicidal self injury in adolescents. *Psychiatry* (Edmont) 2008;5(11):20-6.
- Linehan MM, Comtois KA, Murray AM, Brown MZ, Gallop RJ, Heard HL, et al. Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. *Arch Gen Psychiatry* 2006;63(7):757-66. Erratum in: *Arch Gen Psychiatry* 2007;64(12):1401.
- McMain SF, Links PS, Gnam WH, Guimond T, Cardish RJ, Korman L, et al. A randomized trial of dialectical behavior therapy versus general psychiatric management for borderline personality disorder. *Am J Psychiatry* 2009;166(12):1366-74. Epub 2009 Sep 15. Erratum in: *Am J Psychiatry* 2010;167(10):1283.

This article is eligible for Mainpro+ certified Self-Learning credits. To earn credits, go to [www.cfp.ca](http://www.cfp.ca) and click on the Mainpro+ link.

This article has been peer reviewed. *Can Fam Physician* 2018;64:192-4

Cet article se trouve aussi en français à la **page 195**.