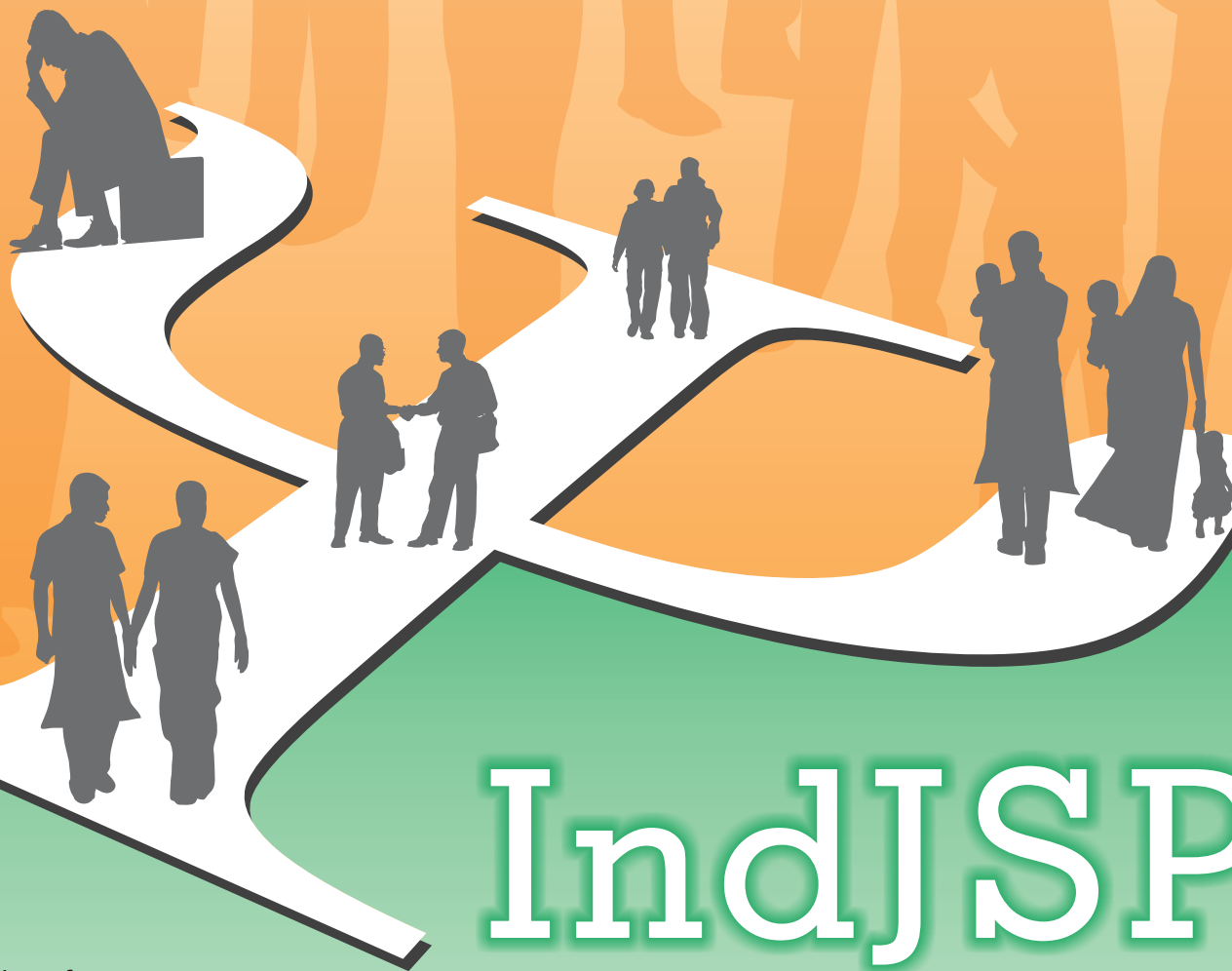




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## Onychophagia: A Synopsis of Nail Biting and Its Management

### Abstract

Onychophagia, also called nail biting (NB), is a body focused repetitive behaviors or self-grooming behavior. It is a group of related disorders in which an individual damages his or her appearance or causes physical injury that include pulling, picking, biting, or scraping one's hair, skin, or nails. NB is a very common, and unresolved, problem in the field of psychiatry, psychology, medicine, and dentistry. NB is a simple behavior associated with obsessive-compulsive-related disorders. The present paper focuses on the management of NB.

**Keywords:** *Body focused, repetitive behaviors, nail biting, onychophagia, self-grooming behaviors*

### Introduction

Onychophagia is a habit of persistent, unexplained desire of pulling as well as biting one's nails and finger tips in such a form that contact occurs between a finger nail and one or more teeth. It is a precise requirement for body-focused repetitive behavior (BFRBs). In Greek, "onycho" means finger nail or toe nail and "phagia" means to consume something, so "onychophagia," is a clinical name for nail biting (NB) as a habit. In this condition, initially actions are done to decrease a sense of built up tension and later often lead to an immediate sense of relief and satisfaction. Actually, this impulse control disorder is not habit or tic; but it is a complex disorder. Such self-grooming behavior may lead to physical injury, and mental health conditions such as serious emotional distress, anxiety, and depression. NB usually begins before the age of 3 years and gradually increases from childhood to adolescence. It is reported to be significantly more in boys than girls and genetically 36.8% chance is there to be seen in children.

It is a stress related behavior seen in adult and children associated with times of stressed, nervous, bored, and hungry situation so anxiety, boredom, frustration, pacification, and perfectionism promote it. Onychophagia is a behavior which is included in obsessive-compulsive spectrum

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disorder. It is often an ignored condition in clinical practice and it may lead to a negative effect on the quality of life. This problem results in physical damage and is considered as a self-mutilating automatic behavior.<sup>[1,2]</sup> Initially, NB starts due to anxiety, severe stress, or tension and then it converts into a habit, later it persists even though the stress or anxiety has disappeared. NB might be related to certain personality traits, also called as a sign of perfectionist personality. Studies suggest, NB is the perfectionist trait where boredom, and frustration, can be the underlying cause. These two traits appear to surface quickly with a perfectionist personality.<sup>[3]</sup>

NB is rarely depicted in literature; not only in psychiatry and dermatology<sup>[4]</sup> but also in medicine, psychology, and dentistry. Thus this problem is infrequently addressed well so as to provide some solution.<sup>[5]</sup> In the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders Fifth Edition NB is called an obsessive-compulsive and related disorder. There is controversy regarding causes of NB, so it is debatable whether its habit or related to psychodynamics.

### Management of Nail Biting

#### Nonpharmacological treatment

There are different techniques for nonpharmacological treatment of NB. The best way to manage NB is to

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inculcate good habits, psycho-educate the sufferer, to develop awareness, and to give emotional support and encouragement.<sup>[6]</sup> Behavioral therapy is the first line standard treatment.<sup>[7]</sup> In this therapy, various methods can be used such as non-removable reminders for NB.<sup>[8]</sup>

#### *Cognitive behavioral therapy*

It focuses on cognitive and behavioral principles, which is based on learning. It commonly uses psychotherapy which is beneficial when simple measures are not effective. This therapy offers skill to the affected person to understand about the incorrectness of the behavior and how to control the NB behavior. This therapy enables person to understand the negative emotions, related habits and more effective ways to deal with them. Cognitive behavioral therapy can be combined with competing response as alternative method to NB, like for example, chewing gum to satisfy the “oral motivated urge.”

#### *Dialectic behavior therapy*

This type of psychotherapy is designed specifically for borderline personality disorder individual and is also useful in mixed personality disorder. It works by modifying behavior which is undesirable, unpredictable, and also stabilizes interpersonal relationship in personality disorder. Dialectic behavior therapy therapist usually takes individual therapy weekly and these are mostly one-to-one sessions. Each session lasts approximately 45–60 min. Each individual's session has a hierarchy of goals, aimed at reducing self-harming behavior like NB.

#### *Interpersonal psychotherapy*

This type of psychotherapy focuses on interpersonal issues between a person and family members. It targets on improving interpersonal communication between family members and increasing social support for a person. In NB, usually interpersonal relationship is disturbed due to the repetitive behavior, so in such situation, interpersonal psychotherapy focuses on the involvement of family members to understand this behavior as well as to provide social support and have empathy toward the sufferer.

#### *Habit reversal therapy*

Here, the habit of NB is replaced by a more productive habit. This therapy targets a similar or dissimilar competing response to improve oral-digital behavior. It is a four-step process which teaches a person how to breathe and feel grounded, achieve relaxation, and to complete muscle-response exercises. This therapy of self-control intervention builds self-confidence and self-esteem.<sup>[9,10]</sup> In this awareness training program, the patient is explained about the negative consequence of NB. Habit reversal therapy consists of many components such as awareness training, bringing habit into consciousness, relaxation training and engaging in opposing behavior which makes it physically responsible to pick or bite till the

behavior subsides. Social support involves praising and encouragement of loved ones or friend to break bad habit. The principle behind habit reversal is the belief that less the behavior is enacted, the weaker the habitual response becomes, thus eliminating the destructive habit completely.

#### *Stimulus control*

This therapy is based on principle to identify and then eliminate the stimulus that often triggers biting urges. This type of behavioral treatment helps to identify, get rid of, or transform the environmental circumstances, or emotions that trigger NB. The main goal of this therapy is to control triggers through conscious behavior modification. This therapy converts unhealthy urges into behaviors which are nondestructive. It is unconscious act of self-monitoring. As it is unconscious act, taking notes during interview can create more awareness of the behavior.

#### *Nail cosmetics*

It can help to enhance NB social effects,<sup>[11]</sup> and help the patient to cope with his or her nail dystrophy while waiting for treatment to show its efficacy. Nail polish or nail plate is used to enhance the appearance of the nail.

#### *Aversion stimulus*

In this method, there is painting of aversive stimulus such as a bitter substance on the nail biter's nail which enables him to think twice before putting nail in the mouth.<sup>[12]</sup> This technique is based on reinforcement learning, which comprises of a reminder, which is self-terminating.

#### *Self-help techniques*

This behavioral method has shown to have preliminary positive results. The wrist bands should be used as nonremovable reminders. In recent era, technology companies started producing wearable devices and smart watch applications that track the position of user.<sup>[13]</sup> This self-help technique or self-control intervention is performed in a number of steps. Initially, the nail biter is taught that the affected behavior is a problem, and they should change it. Then, the nail biter is asked to find out the cause of NB and also find the possible thought and feelings that are associated with the behavior. Third, the nail biter is advised to do self-monitoring, which increase their awareness about the behavior. Fourth, they are educated to use some learned skills such as self-talk and self-reward to change the automated behavior. Finally, the nail biter is trained to use the learned skills to manage and change similar pathologic behaviors.<sup>[14]</sup> When they reach a milestone, such as no picking for 2 weeks, reward can be given to the nail-biters, for example, going out for a celebration dinner.

#### *Emotional freedom technique*

It is powerful Self-help technique and an energy therapy used to prevent NB. It has proved to be highly effective in dealing with addictive habitual behavioral actions

and it overcomes unwanted habitual patterns. Emotional freedom technique (EFT) can help one to stop biting nails by working on the underlying triggers such as stress and other factors. EFT can be used to install new behavior as a response to stress, tension, or boredom. It works effectively without any side effects. This type of therapy is routinely used in sports psychology and sportsmen are taught how to relieve the stress and boost sports performance. It is one of the forms of psychological acupuncture. It is based on the same energy meridians used in traditional acupuncture to treat physical and emotional ailments for 5000 years. It is also called tapping method. In this technique, psychotherapist would tap to different part of body with finger tips which creates kinetic energy on specific meridians of head and chest, while a person thinks about his specific problem, either it is a traumatic event or an addiction like NB. Tapping sites are top of head, eye brow, side of eyes, below nose, chin, collar bone, and under the arm. EFT works more on underlying emotional pattern which proceeds with each bout of NB.

**Hypnosis:** It is sometimes utilized to make the person aware of the habit and find other ways to relax. It is an audio session that taps directly into one's unconscious mind and allows one to easily update unconscious automatic habits like nail chewing so that one break the habit of NB.

### Pharmacological treatment

If non-pharmacologic treatment does not work in severe cases, selective serotonin reuptake inhibitors such as fluoxetine<sup>[15,16]</sup> and tricyclics such as clomipramine<sup>[17]</sup> are the most commonly recommended medications in the management of NB, but has limited evidence. Some case report studies suggest that lithium<sup>[18]</sup> is effective in resolving NB in individuals with a history of bipolar disorder and depression. Pharmacotherapy is helpful in around 60%–70% of patients with NB.<sup>[19]</sup> Another drug such as N-acetylcysteine<sup>[20]</sup> has been used to treat NB but found to have limited efficacy.

NB is an underdiagnosed and ignored condition so it may lead to negative effect on the quality of life. Patients with NB be given adequate psycho-education about the problem and developing good habit should be aimed as a part of treatment. Non-pharmacological treatment alone or combined with pharmacological treatment is beneficial to reduce the consequences of NB.

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### Conflicts of interest

There are no conflicts of interest.

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