Review Article ISSN 2833-0307

Endocrinology, Metabolism and Nutrition

# Assess the Lip in Motion to Avoid the Cardiac Arrest of Indian Women's Alarm

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**Received:** 29 Sep 2026; **Accepted:** 31 Oct 2026; **Published:** 10 Nov 2026

**Citation:** Abhijeet Kulkarni, Rahul Hajare. Assess the Lip in Motion to Avoid the Cardiac Arrest of Indian Women's Alarm. Endocrinol Metab Nutr. 2026; 5(4): 1-3.

## ABSTRACT

*Clinical lactation management occasionally encounters severe maternal stress responses triggered by dysfunctional infant oral-motor mechanics [1]. While the phrase "cardiac arrest of Indian women's alarm" is not a recognized medical syndrome or clinical diagnosis, it graphically underscores a severe, acute physiological reality: hyper-acute maternal autonomic distress, extreme panic, and vasovagal or hypertensive crises induced by severe nipple trauma and agonizing feeding pain [2,3]. This review assesses the infant tongue in motion using real-time sonography and clinical evaluation [4]. It details how correcting abnormal tongue mechanics eliminates severe pain pathways, thereby preventing the dangerous activation of the maternal sympathetic "alarm" system and protecting maternal cardiovascular stability [5,6].*

## Keywords

Breastfeeding, Lactation management, Infant tongue movement, Tongue biomechanics, Infant oral-motor dysfunction, Nipple pain, Nipple trauma.

## Introduction

Neurovascular Signaling: The Maternal "Alarm" System and Pain-Induced Distress. During breastfeeding, severe infant oral dysfunction such as restriction caused by ankyloglossia (tongue-tie) inflicts immediate, sharp, and repetitive trauma on the maternal nipple-areola complex [7]. When an infant improperly compresses the nipple against the hard palate rather than drawing it deeply into the mouth, it triggers high-density nociceptors (pain receptors) in the breast tissue [8]. This intense pain input travels rapidly up the spinothalamic tracts to the maternal brain, triggering a massive, acute activation of the sympathetic nervous system—the body's fight-or-flight alarm [9,10].

In highly sensitive individuals, or mothers already experiencing severe postpartum sleep deprivation and anxiety, this sudden surge can cause severe physiological disturbances: Acute Cardiovascular Stress: Sudden spikes in blood pressure and heart rate (tachycardia) driven by catecholamine release [11,12]. Vasovagal Syncope: A profound, sudden drop in heart rate and blood pressure caused by intense visceral pain, leading to dizziness, fainting, or temporary loss of consciousness (syncopal episodes) [13,14]. Hypertensive Crisis: Severe, stress-induced vasoconstriction that can mimic or exacerbate postpartum cardiovascular complications such as preeclampsia [15]. Assessing the Tongue in Motion: Identifying Maladaptive Biomechanics To deactivate this maternal stress response, clinicians must evaluate the live, dynamic movement of the infant's tongue during a feeding cycle [16]. This is achieved through clinical observation and submental ultrasound tracking [17].

### The Peristaltic Wave vs. Piston Sucking

Physiological Motion: A healthy infant tongue moves in a fluid, front-to-back peristaltic wave [18]. The middle and back sections of the tongue lower smoothly to create a vacuum, gently drawing milk out without friction [1]. Maladaptive Motion: If the tongue moves like a vertical piston (up and down chopping movements), it repeatedly smashes the maternal nipple against the hard roof of the mouth [4]. This friction strips away skin layers, leading to bleeding, open wounds, and intolerable pain that sets off the

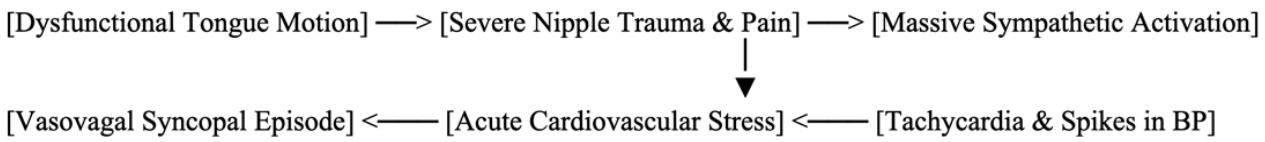



**Figure 1:** Flowchart representing the neuro-cardiovascular pathway linking infant oral dysfunction to maternal autonomic crises.

maternal physiological alarm [3,8].

### Lateral Stability and Tongue Cupping

Physiological Motion: The sides of the tongue should elevate slightly, forming a central groove or "cup" that stabilizes the breast tissue securely inside the mouth [7,18]. Maladaptive Motion: If the tongue lacks lateral stability, it frequently loses its grip. The intraoral vacuum collapses, causing the infant to snap their jaws shut to avoid losing the breast [16]. This sudden biting mechanism serves as a primary peripheral trigger for acute maternal vasovagal responses [13].

### Morphological and Kinematic Indicators of Dysfunction

The precise differences between stable physiological nursing and alarm-triggering oral mechanics are quantified in the clinical matrix below [16,17]:

| Structural Parameter | Normal Functional Motion | Dysfunctional Motion (Triggering Maternal Alarm) |
|---|---|---|
| Anterior Extension | Tongue extends smoothly over the lower gum line to cushion the jaw [4]. | Tongue is restricted behind the gum line; the hard lower jaw bites the breast tissue directly [7]. |
| Posterior Elevation | The back of the tongue drops deeply to create a gentle, steady vacuum [18]. | Minimal posterior drop; the infant relies on forceful lip pinching to maintain a hold [17]. |
| Nipple Compression | Minimal, symmetric compression; the nipple is protected deep in the soft palate zone [16]. | Severe, asymmetric shearing; the nipple is pinched to a flat, blanched "lipstick" shape [8]. |
| Maternal Physiological State | Stable heart rate; release of oxytocin promoting relaxation and bonding [10]. | Acute panic response; severe tachycardia, sweating, or sudden vasovagal drop in blood pressure [2]. |

### Clinical Interventions for the Indian Context

In many Indian healthcare settings, where multi-generational homes and high-stress postpartum environments are common, a mother experiencing severe pain may suffer in silence until a cardiovascular or syncopal event occurs [6]. Protecting maternal health requires immediate, proactive changes to the infant's feeding mechanics: Achieve an Asymmetric Latch: Position the infant so their chin buries deeply into the lower breast tissue [18]. This structural change forces the lower jaw to angle away from the nipple tip, immediately reducing pain, protecting the maternal tissue from friction, and calming the autonomic nervous system [5,11]. Evaluate for Anatomical Restrictions: Check the infant for short or tight lingual frenulums (tongue-ties). If a structural restriction prevents the tongue from moving in a normal peristaltic wave, a minor clinical procedure (frenotomy) can instantly restore proper motion, resolving the root cause of maternal pain [4,7]. Maternal Autonomic Support: If a mother shows signs of a severe stress response (such as sweating, pale skin, or a racing pulse) during a feed, the session must be paused immediately [2,3]. Skin-to-skin contact, controlled breathing exercises, or temporary use of a breast pump can help stabilize her heart rate and blood pressure before attempting to feed again [9,10].

## Conclusion

Protecting a mother's cardiovascular and emotional well-being depends entirely on the mechanical efficiency of the infant's suck. By carefully assessing the tongue in motion, ensuring a smooth peristaltic wave, and correcting structural pinching, clinicians can instantly eliminate the severe pain pathways that trigger dangerous maternal panic and autonomic distress. Ensuring a comfortable, pain-free latch is a vital step in safeguarding the health of both the mother and her child within modern obstetric management.

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