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**Phases of Wound Healing**

Many wonder why frenulums grow back. One primary underlying reason is the body tenaciously and persistently attempts to close a wound it has experienced for as long as 7-12 months. Here is a synopsis on wound healing phases:

1. **First 3-4 days - Inflammatory Phase - Fast and Furious First Responders**

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| --- | --- |
|  | **Immediately,** Tissues remaining in the wound get leaky, swell (edema) and a high protein fluid combined with water and some other chemicals form a gel that coagulates into a scab.   **Within 6 hours,** blood vessels and cells are proliferating and crossing the wound to close it down.  **After 24 hours**, small blood vessels sprout around the edge of the wound creating a pinkish-reddish appearance of the developing scar.  **By Day 4,** As the scar matures, capillaries stop forming and the wound develops a pale look. **This “white” look is normal and IS NOT an infection**. |

**Frenulum note:** Most of this time, not enough fiber has formed to restrict the frenulum. The patient still usually enjoys the freedom of movement that the initial surgery provided.

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1. **Day 4-20 - Proliferation Fibroblastic Phase - Frenulum Filament Forming Factory (FFFF)**

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| --- | --- | --- |
| |  | | --- | | **Little pain is present during stretching after a week.** | | An all-out attempt at wound contraction is going on. The frenulum now has a white look as the original scab has matured in to well-connected roof over “granulation tissue” that is a furnace of activity.  **The next two weeks,** an army of chemicals and tissue cells on missions get busy.  Of interest to the **frenulum is The frenulum filament forming factory (FFFF)**. This is a collection of fibroblasts and accompanying vessels (blood and lymph) that spin a web of collagen that is now crisscrossing the surgical wound and attempting to close it. |

**Frenulum note:** **This is when the symptoms that existed before surgery may start to return.** The frenulum is starting to re-attach itself. Stretching exercises are critical here to breakup these filaments and keep the FFFF from closing this wound and taking away the new found freedoms of the lip and/or tongue.

1. **Next 6-12 Months - Maturation “Remodeling” Phase**

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| --- | --- | --- |
| |  | | --- | | **Stretching exercises are still important.** | | **At a month**, the scar has matured with no inflammation (edema/pain) present. This scar is complete with a skin (epithelial) cover now. Underneath this scar look what’s happening!  **Wound contraction persists!** Collagen filaments are replaced by a stronger interwoven type tissue. Granulation tissue slowly disappears, and the resulting healed tissue is a product of adaptations stresses and tensions during this phase. |

**Frenulum note:** Stretching and supportive habits are critical here to resist the body’s persistent will to close the wound. Coupled with growth factors present in a growing child these frenulums want to close!

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**A footnote on fibrotic tissues: Emotions play a role!**

“Always think of the emotional component with fibrotic patients. Preliminary results from clinical emotional therapy suggest that **the more the patients feel insecure, threatened, or hopeless, the more likely they are to “armor” themselves with fibrotic tissue.”\***

**Frenulum note:** All therapists, surgeons and teams need to promote a respectful, supportive atmosphere to give the frenulum patients best chance for successful healing.

**REFERENCE:**

\*Silent Waves – Theory and Practice of Lymph Drainage Therapy, an Osteopathic Lymphatic Technique, 2nd Edition, Bruno Chikly, M.D., D.O. (hon) © 2001, 2002, 2004 I.H.H. Publishing. 288: 350