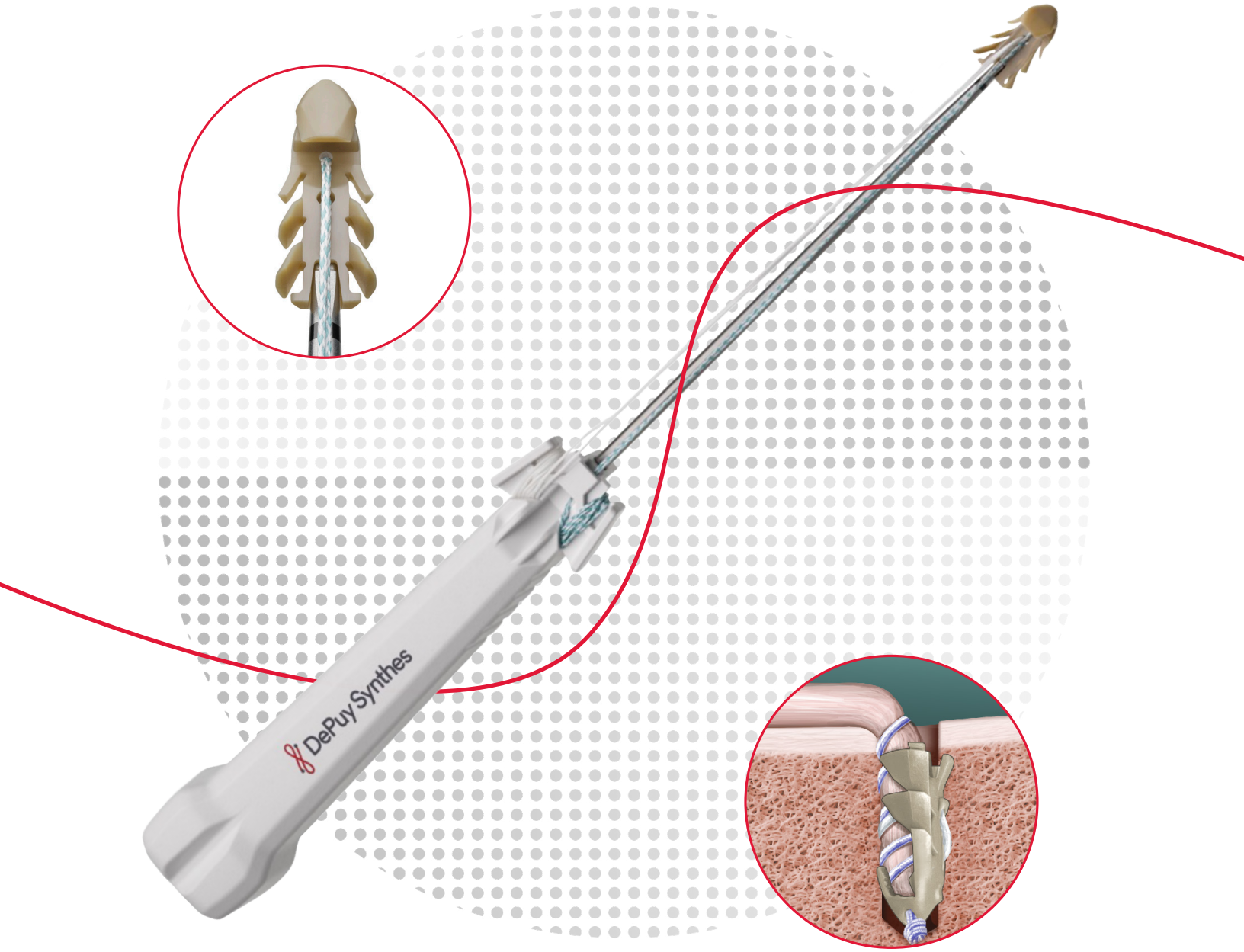
TIGHT-N™

Tendon Docking Anchor

Designed to protect the tendon from wrap and laceration without compromising strength.



Brochure

DePuy Synthes
THE ORTHOPAEDICS COMPANY OF Johnson & Johnson

Current Challenges within Biceps Tenodesis

Current techniques fall short.

Surgeons are in search of a reproducible, fast, easy technique with good fixation, optimal healing and minimal complications (including the post-op “Popeye” deformity).

Challenges with a mini-open Subpectoral (Subpec) Approach

Greater stress riser for fracture risk

Subpec cortical drill holes for biceps tenodesis were shown to be a **stress riser for humeral spiral fracture**; while suprapectoral (suprapec) cortical drill holes were shown to be significantly less of a stress riser.[1]

Greater reoperation, wound complication, and nerve injury rates

Open biceps tenodesis has shown a **slightly greater complication rate** in some studies, including the potential for more serious iatrogenic nerve complications.[2]

Challenges with Inlay Interference Screw Fixation

27%
Failure Rate

27% of patients in the inlay group suffered postoperative popeye deformity after biceps tenodesis.[3] The increased incidence of Popeye deformities seen in the inlay group in studies is **thought to be secondary to interference screws cutting into the tendon during insertion into the bone socket.**[4]

100%
Of failures occur at bone-screw-tendon interface

In biomechanical study investigating the properties of a bone tunnel/suture construct, researchers observed that all the specimens in the **interference screw group failed with tearing of the tendon at the bone-screw-tendon interface.**[5]

Challenges with Onlay Fixation

9.4%
Failure Rate

In another study, which compared onlay techniques, **9.4% of patients in onlay group suffered postoperative failure** (Popeye deformity) after tenodesis.[3]

10-27 mm
Tendon Elongation

Studied suture anchor onlay constructs have shown statistically significant tendon elongation (10-27 mm on average) when compared to inlay interference screw constructs (4 mm on average).[6]

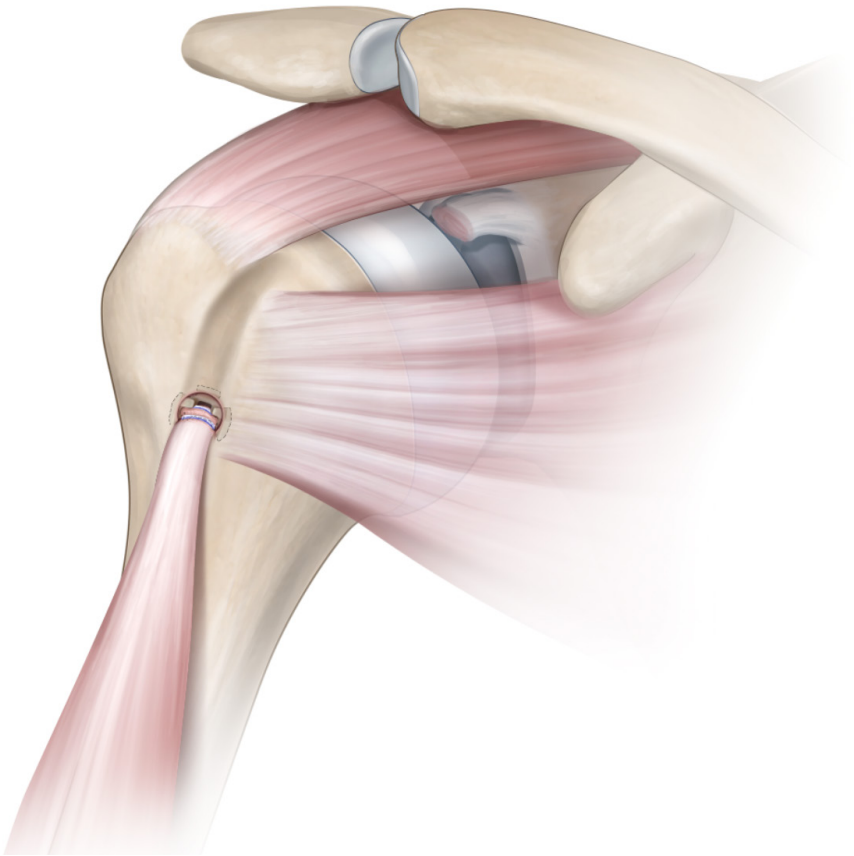
The Suprapec Approach with TIGHT-N Anchor: New Technology using a Classic Technique

Benefits of Suprapec

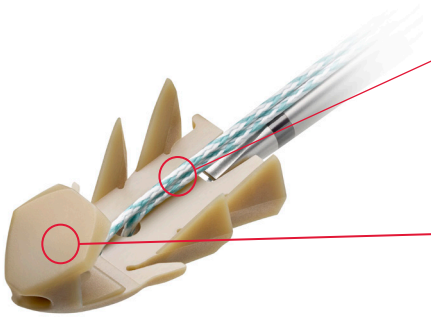
- Reduced complication rates compared to subpec techniques[2]
- Less stress-riser for fractures compared to subpec techniques[1]
- No significant difference in bicipital groove pain versus subpec techniques[2]
- Potentially less tissue damage with an arthroscopic vs. open approach[2]

Benefits of Inlay

- Inserting tendons into bone tunnels is a predominant technique used to heal and repair tendons and ligaments (ex: ACL reconstruction)
- The bicipital groove is designed to let the biceps tendon slide and not adhere to the cortical surface
- Exposure to blood and bone marrow may provide an optimal healing environment



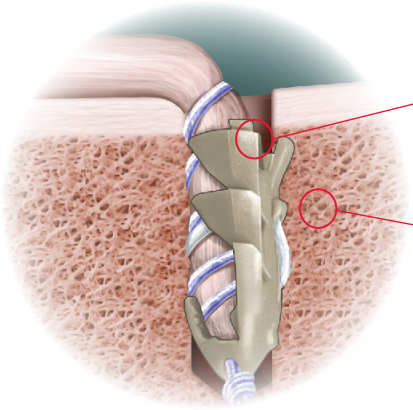
Product Design



Half-sheath intended to **protect tendon from wrap and laceration**

Nose clip intended to **ease tendon insertion**

Handle design to mimic the biciptal groove and **keep orientation during biceps insertion**



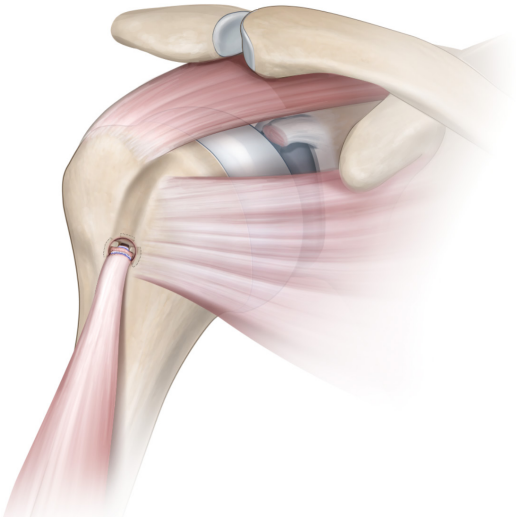
Sub-cortical implant for **strong fixation**[7]

Inlay technique **to optimize exposure to blood and bone marrow**

Indications

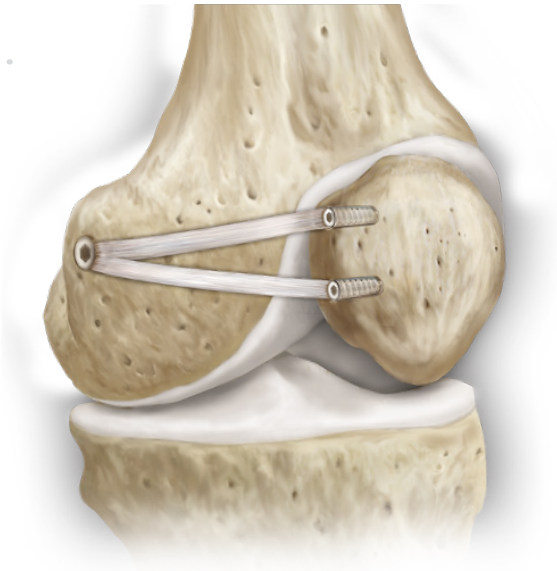
Shoulder

- Biceps tenodesis



Knee

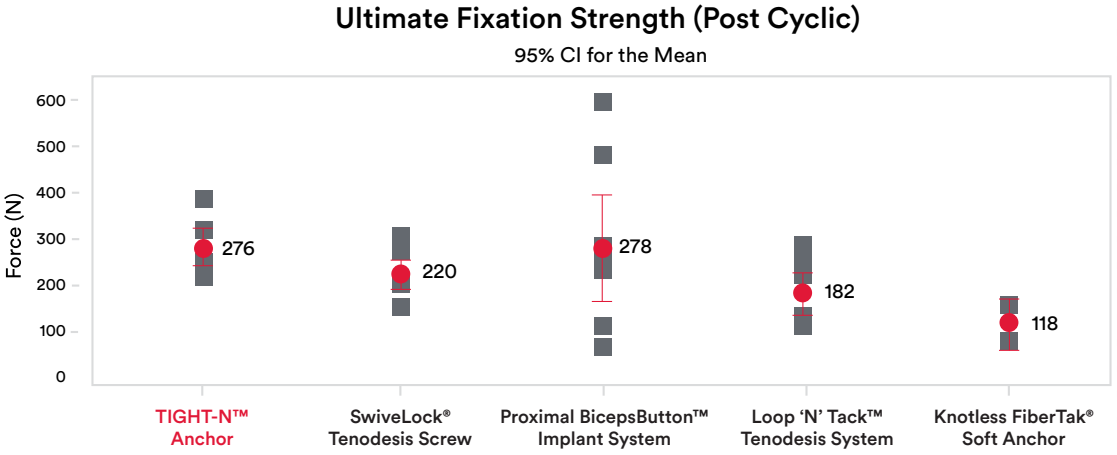
- Medial patellofemoral ligament (MPFL) repair/ reconstruction
- Posterior oblique ligament (POL) repair
- Medial collateral ligament (MCL) repair
- Lateral collateral ligament (LCL) repair
- Anterolateral ligament (ALL) reconstruction
- Iliotibial (IT) band tenodesis



Product Performance

High-strength Fixation[7]

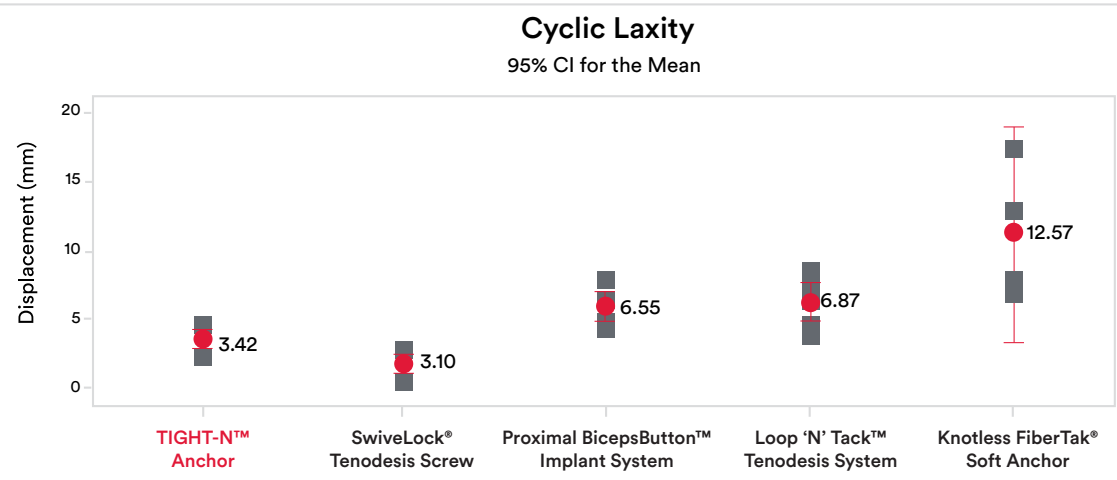
When compared to competitive devices studied, TIGHT-N Anchor showed consistent high-strength fixation.



*Individual standard deviations are used to calculate the intervals. *Competitive devices studied.*

Less displacement* and variability compared to studied competitive devices[7]

Less displacement and variability gives you the confidence that your tendon is going to stay in place.



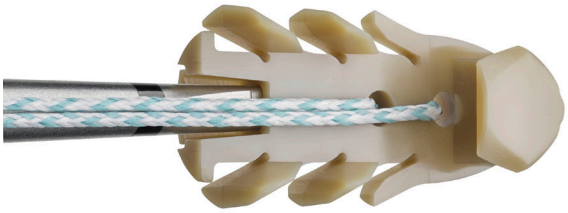
Individual standard deviations are used to calculate the intervals.

***Except the SwiveLock Tenodesis System**

Product Codes

TIGHT-N™ Anchors

Code	Material	Size	Bone Tunnel Diameter	Implant Length	Drill Depth
208881	PEEK	Small	5.5 mm	18 mm	18 mm + cortical thickness + knot stack
208882	PEEK	Medium	7.0 mm		
208883	PEEK	Large	8.5 mm		



TIGHT-N™ Instruments

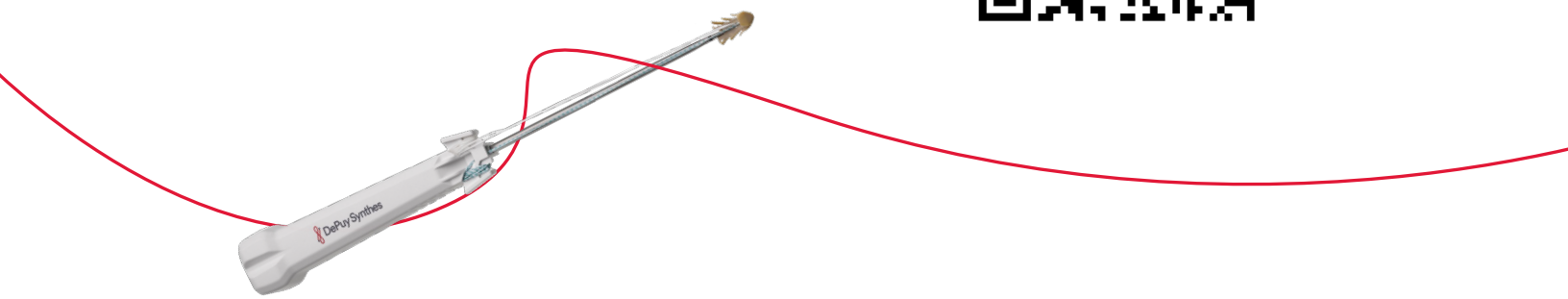
Code	Description
	
208886	Implant Sizer

Code	Description
	
208887	Small Cannulated Reamer, 5.5 mm
208888	Medium Cannulated Reamer, 7.0 mm
208889	Large Cannulated Reamer, 8.5 mm

Code	Description
	
254729	Calibrated Passing Pin Drill Tip

Code	Description
	
208891	Small Self-Piloting Reamer, 5.5 mm
208892	Medium Self-Piloting Reamer, 7.0 mm
208893	Large Self-Piloting Reamer, 8.5 mm

Learn more about the TIGHT-N™ Anchor on our website



References

1. Arash A. Dini, Joshua E. Mizels, Sohale Sadeghpour, Michael J. O'Brien, Felix H. Savoie, Mark H. Getelman. Implant-Free Subpectoral Biceps Tenodesis Is Biomechanically at Higher Risk of Spiral Fracture of the Humerus Compared with Implant-Free Suprapectoral Biceps Tenodesis. Arthroscopy, Sports Medicine, and Rehabilitation, Volume 3, Issue 1, 2021, Pages e73-e78, ISSN 2666-061X. https://doi.org/10.1016/j.asmr.2020.08.011.
2. Deng ZJ, Yin C, Cusano J, et al. Outcomes and Complications After Primary Arthroscopic Suprapectoral Versus Open Subpectoral Biceps Tenodesis for Superior Labral Anterior-Posterior Tears or Biceps Abnormalities: A Systematic Review and Meta-analysis. Orthop J Sports Med. 2020;8(8):2325967120945322. Published 2020 Aug 28. doi:10.1177/2325967120945322.
3. Haidamous G, Noyes MP, Denard PJ. Arthroscopic Biceps Tenodesis Outcomes: A Comparison of Inlay and Onlay Techniques. Am J Sports Med. 2020;48(12):3051-3056. doi:10.1177/0363546520952357
4. Jackson GR, Meade J, Coombes K, et al. Onlay Versus Inlay Biceps Tenodesis for Long Head of Biceps Tendinopathy: A Systematic Review and Meta-analysis. J Am Acad Orthop Surg Glob Res Rev. 2022;6(12):e22.00255. Published 2022 Dec 9. doi:10.5435/JAAOSGlobal-D-22-00255
5. Nels Sampatacos, Mark H. Getelman, Heath B. Henninger. Biomechanical comparison of two techniques for arthroscopic suprapectoral biceps tenodesis: interference screw versus implant-free intraosseous tendon fixation. Journal of Shoulder and Elbow Surgery. Volume 23, Issue 11, 2014. Pages 1731-1739, ISSN 1058-2746. https://doi.org/10.1016/j.jse.2014.02.027.
6. Forsythe, Brian. A Radiostereometric Analysis of Tendon Migration following Arthroscopic and Mini-Open Biceps Tenodesis: Interference Screw confers Greater Construct Stability than Single Suture Anchor Fixation, with No Difference in Patient-Reported Outcomes. Paper presented at AOSSM Annual Meeting 2022.
7. DePuy Synthes. TIGHT-N™ Anchor Evidence Generation Test Summary. April 4, 2023. Windchill #501243771.

Please refer to the instructions for use for a complete list of indications, contraindications, warnings, and precautions.

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