5/13/2026 **FlexPro Grip Protocol Descriptions and Objectives**

1) All FlexPro Grip exercises are designed to target at least one of the three muscle-tendon units optimally positioned to reduce the amount of torque throwing otherwise places on the UCL:

a) flexor digitorum profundus (fingertip)
b) flexor digitorum superficialis (mid-finger)
c) flexor carpi ulnaris (ulnar deviation of the wrist)

2) FlexPro Grip exercises require the user to apply isometric force in one of four directions:

a) Finger flexion
b) Finger extension
c) Ulnar deviation
d) Radial deviation

3) Each FlexPro Grip protocol involves a modification of the amount of force the user is required to provide as a percentage of their 1RM (i.e. target force), the time required to reach the target force, the number of sets and reps, the hold time, and the rest time between each rep and exercise.

4) With the exception of "Freeplay," all protocols involve either "Testing" or "Training."

5) Protocols are split into 6 categories with differing objectives.

	Category	**Objective**
1	Strength	Increase the stiffness and Young's modulus of the muscle-tendon units capable of reducing the amount of torque throwing places on the UCL
2	Endurance	Reduce the rate of fatigue of the muscle-tendon units capable of reducing the torque throwing places on the UCL
3	Rate of Force Development	Increase the amount and consistency of finger flexion force users can apply within 7 ms in order to increase spin rate, ball movement, and command
4	Readiness	Provide a quick assessment of how "ready" the key muscle-tendon units are to protect the UCL
5	% of 1RM Target	Provide users and clinicians with the ability to: 1) objectively measure the force capabilities of the muscle-tendon units capable of reducing the amount of torque throwing places on the UCL 2) impose specific demand levels on the key UCL muscle-tendon units capable of protecting the UCL to ensure optimal adaptations
6	Freeplay	Allow users to experiment with the device without having to follow any specific test or training protocol.

6) Protocols within each category are as follows:

Category	Protocol	Description
Strength	Rapid Flexion Test	1RM of 4 finger fingertip flexion and 4 finger mid-finger flexion. (2 exercises)
	Rapid Flexion Test: on ramp	Same as Rapid Flexion Test (above) but with specific warm-up target forces
	Rapid Strength Test	1RM of 4 finger fingertip flexion, 4 finger extension, 4 finger mid-finger flexion, ulnar deviation, and radial deviation. (5 exercises)
	Training (A Day)	1RM, followed by 2 reps of 70% of 1RM max training of fingertip flexion with all 4 fingers combined and each individual finger paired with ulnar deviation. (6 exercises)
	Training (B Day)	1RM, followed by 2 reps of 70% of 1RM max training of fingertip extension with all 4 fingers combined and each individual finger paired with radial deviation. (6 exercises)
	Training (C Day)	1RM, followed by 2 reps of 70% of 1RM max training of mid-finger flexion with all 4 fingers combined and each individual finger paired with ulnar and radial deviation. (7 exercises)
Endurance	Training	12 sessions of 16 reps of ballistic max effort index + middle finger fingertip flexion followed by 3 reps of ulnar deviation. 4 second hold times with 5 second rest between reps. (2 exercises)
Endurance	Training #3	18 training sessions of ballistic max effort index + middle finger fingertip flexion followed by 4 reps of ulnar deviation. (2 exercises) Sessions 1-3: 8 reps with 6 second rest times Sessions 4-6: 8 reps with 4 second rest times Sessions 7-9: 12 reps with 6 second rest times Sessions 10-12: 12 reps with 4 second rest times Sessions 13-15: 16 reps with 6 second rest times Sessions 16-18: 16 reps with 4 second rest time
RFD	Test - 2 finger	5 ballistic index + middle finger fingertip flexion reps. (1 exercise)
	Test - 4 finger	5 ballistic 4 finger fingertip flexion reps. (1 exercise)
	Training	12 sessions of 3 exercises: 1) 1RM of ballistic index + middle finger fingertip flexion 2) 10 ballistic index + middle finger fingertip flexion reps 3) 8 rep of index + middle finger fingertip flexion where user ramps up to 50% of 1RM over 2 seconds, then applies ballistic max effort flexion force
Readiness	Test	2 max effort ballistic reps of 4 finger fingertip flexion + 2 max effort reps of ulnar deviation + 2 max effort ballistic reps of 4 finger mid-finger flexion with 4 second rest between reps. (3 exercises)
% of 1RM Target	% of 1RM Target A, B, or C day	Single A, B, or C Day (see Strength Training for A, B, and C day exercises) performed at a specified percentage of 1RM. User chooses % of 1RM training percentage in 5% increments from 10 to 100%. 1RM is based on user's peak velocity.
	Long Hold % of 1RM Target (Training from 10 to 100% of Max in 5% increments)	6 total reps of 30 second holds at selected percent of 1RM target: 2 reps of 4 finger fingertip flexion. 2 reps of ulnar deviation. 1 rep of 4 finger mid-finger flexion. 1 rep of combined index and little finger mid-finger flexion.

	Endurance % of 1RM Target (Training from 10 to 100% of Max in 5% increments)	8 reps of ballistic max effort index + middle finger fingertip flexion followed by 3 reps of ulnar deviation at selected % of 1RM Target. Flexion target set based on 90% of the sum of the index and middle finger 1RM target. 4 second hold times with 5 second rest between reps. (2 exercises)
	Power % of 1RM Target (Training from 10 to 100% of Max in 5% increments)	10 reps of ballistic max effort index + middle finger fingertip flexion at selected % of 1RM Target. Flexion target set based on 90% of the sum of the index and middle finger 1RM target with goal to achieve target force in 176ms. 1 second hold times with 5 second rest between reps. (2 exercises)
	Rehab Strength Cycle (Training at 70% of user's 1RM)	3 sessions consisting of 1 A, 1 B, and 1 C Day (see Strength Training for A, B, and C day exercises). All training percentage targets are based on 70% of the 1RM actual of user's 4 finger and wrist deviation first rep (6 exercises on A and B day, 7 exercises on C Day)
	Rehab Strength 70% A, B, or C day	Single A, B, or C Day (see Strength Training for A, B, and C day exercises). All training percentage targets are based on 70% of the 1RM actual of user's 4 finger and wrist deviation first rep (6 exercises on A and B day, 7 exercises on C Day)
Freeplay	Flexion	Allows user to see flexion force output of any finger combination without any programmed rep scheme or rest period
	Extension	Allows user to see extension force output of any finger combination without any programmed rep scheme or rest period
	Ulnar deviation	Allows user to see ulnar deviation force output without any programmed rep scheme or rest period
	Radial deviation	Allows user to see radial deviation force output without any programmed rep scheme or rest period