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## ABOUTME

Jeff is a WNBF Pro Drug-Free Bodybuilder and IPF/CPU Powerlifter in the 74 kg class. He earned the title of Mr. Junior Canada for natural bodybuilding in 2012 prior to which Jeff was a two-time Mr. Junior Newfoundland title-holder for 2009 and 2010.

As a powerlifter, Jeff has claimed a 502 lb squat, 336 lb bench press (2014 Canadian national record) and a 518 lb deadlift with an all time best Wilks score of 446.

With a Bachelor of Science degree in biochemistry, Jeff has gathered the requisite scientific knowledge to compliment his practical experience acquired through training and coaching. Jeff worked as a coach with esteemed online coaching group. The Strength Guys through 2014 and 2015 before branching out with STRCNG, Jeff has coached women's bikini and men's bodybuilding national and provincial champions, professional natural bodybuilders and nationally and IPF Worlds qualified raw powerlifters. He has presented seminars on block periodization, concurrent training and nutrition for natural bodybuilding in academic settings including the 2014 Online Fitness Summit and at the University of Iowa. Jeff has recorded interviews with some of the best in the business on his science-based fitness podcast IceCream4PRs.

Previously, Jeff was enrolled in the Doctor of Dental Surgery program at Dalhousie University where he completed two years of the program before deciding to instead pursue a career where his passions lie. He has aspirations of completing a PhD in exercise science or a related field.

Through his informative and personable Youtube channel and Instagram Jeff aims to share the knowledge he has gathered through university education and field experience with others who are passionate about bodybuilding, powerlifting and the science behind building muscle, losing fat and getting healthier.

Jeff currently lives in Kelowna, Canada while frequently visiting his girlfriend in Tampa, Florida, where he is coaching athletes around the world full-time while preparing for his next competition season in natural bodybuilding in 2018.

# KEYTERMS

**DB:** DUMBBELL

EMG: ELECTROMYOGRAPHY

LSRPE: LAST SET RPE

**MVC:** MAXIMUM VOLUNTARY CONTRACTION

PROGRESSIVE OVERLOAD: THE GRADUAL INCREASE OF STRESS PLACED UPON THE BODY DURING

EXERCISE TRAINING

ROM: RANGE OF MOTION

RPE: RATE OF PERCEIVED EXERTION

**TEMPO:** THE SPEED AT WHICH THE LIFT OCCURS. TEMPO NOTATION IS GIVEN AS FOLLOWS: 4:3:2:1 WOULD MEAN A 4 SECOND ECCENTRIC, 3 SECOND PAUSE AT THE BOTTOM, 2 SECOND CONCENTRIC AND 1 SECOND PAUSE AT THE TOP. THE MOST COMMON TEMPO IN THIS PROGRAM IS 2:0:1:0.



### 1. Why is a specific arm day included?

A: Research shows that you're stronger earlier in the training session. Because arm work is often added on at the end of a bunch of pushing or pulling work, it's easy to treat them as an "afterthought" or give them less effort than movements for the back, chest, shoulders and legs. By giving arms their own day, you ensure that they're getting the priority they need. Since an arm day inflicts a very low demand on the body centrally, it won't interfere with the rest of the week's training days, making its benefits outweigh its costs in the context of this program.

### 2. What if I am still sore? Should I train or take another rest day?

A: Training sore is fine unless it puts you at an increased risk of injury. If you're having a difficult time getting into position or completing a full ROM due to pain, do not train. Otherwise, still train but be sure to perform a slightly longer warm up for each exercise. Use your own discretion to avoid injury but training sore will not impair gains in and of itself.

### 3. What if I can't do dips?

A: Do close-neutral grip DB presses instead for the same sets and reps.

### 4. What if I can't do bench press?

A: Do close-neutral grip DB presses instead for the same sets and reps.

### 5. If the RPE increases across sets, should I drop the weight back?

A: If you hit failure prematurely, drop the weight back. Otherwise, select the weight as appropriate to hit the RPE for each set.

### 6. Why such little exercise variation from week to week?

A: Changing exercises from week to week is more likely to flatten out the progression curve. They do change slightly week to week and from Block 1 to Block 2, but the bulk of the program maintains the same exercise selection. This is to ensure progression by adding volume incrementally to these specific movements.

### 7. What is the LSRPE column for?

A: The idea here is to reflect on your last set and ask yourself how many more reps you think you could have gotten. It is a useful way to account for how hard you're working on the final set.



### BEFORE EVERY TRAINING SESSION PERFORM:

- 5-10 minutes of moderate intensity cardio
- · Dynamic stretches such as arm swings and circles for 15-20 reps

### BEFORE THE FIRST EXERCISE FOR EACH BODYPART:

- · Pyramid up in weight with 1-2 light sets, getting progressively heavier
- · Such a warm up is only required for the first "heavy" exercise for each body part.

### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	3	6-8	2.1.1.1	8	3.0					SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
MACHINE PREACHER CURL	2	12-15	2:0:2:0	7	10					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	8-8	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
BAYESIAN CABLE CURL	3	12-15	2:0:1:0	9	1.0					FACE AWAY FROM CABLE MACHINE, FEEL STRETCH AT BOTTOM END ROM
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	2	12-15	2:0:1:0	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

### SUPPLEMENTAL A

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	3	8-10	2:0-1:0	9	2.0					ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
INCLINE DUMBBELL CURL REVERSE 21'S	2	7+7+7	-	9	1.5					PERFORM BOTH ARMS AT ONCE, 7 REPS FULL ROM, 7 REPS TOP 1/2 ROM, 7 REPS BOTTOM 1/2 ROM
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:01:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2:0:1:0	9	1.0					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2:01:0	9	10					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

TOTAL TRAINING TIME:

### SUPPLEMENTAL B

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	3	8-10	2:1:1:1	8	3.0					CAN USE REGULAR GRIP IF FITS BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1:0:1:0	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
SCOTT CURL	3	12-15	2:0:1:0	9	15					USE BARBELL OR EZ BAR, AT BOTTOM END ROM ARMS SHOULD BE ALLIGNED VERTICALLY
PREACHER DEATH CURLS	2	12-15	2	10	1.5					1 SECOND PAUSE AT 90 DEGREES ELBOW FLEXION ON POSITIVE AND NEGATIVE OF EVERY REP, REACH FAILURE, REST 3 SECONDS, THEN DO A 15 SECOND HOLD AT 90 DEGREES
HEAVY NEGATIVE CONCENTRATION CURLS	0	0	2	10	15					USE YOUR FREE HAND TO ASSIST WITH THE POSITIVE, CONTROL THE NEGATIVE WITHOUT ASSISTANCE, LOAD HEAVILY BUT MAINTAIN CONTROL
FARMERS WALKS	3	40	2		1.0					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
VETAS V DIGED VOLUME	163			-			-			

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

WEEKLY TRICEP VOLUME

### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	3	6-8	2.1.1.1	8	3.0		1.			SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
MACHINE PREACHER CURL	2	12-15	2:0:2:0	7	10					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	6-8	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
BAYESIAN CABLE CURL	3	12-15	2:0:1:0	9	1.0					FACE AWAY FROM CABLE MACHINE, FEEL STRETCH AT BOTTOM END ROM
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	2	12-15	2:0:1:0	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0		6			OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

### SUPPLEMENTAL A

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	3	8-10	2:0-1:0	9	2,0		ji.			ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
INCLINE DUMBBELL CURL 21'8	2	7+7+7	=	9	15					PERFORM BOTH ARMS AT ONCE, 7 REPS BOTTOM 1/2 ROM, 7 REPS TOP 1/2 ROM, 7 REPS FULL ROM,
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:0:1:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2:0:1:0	9	1.0					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2:0-1:0	9	10					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

TOTAL TRAINING TIME:

### SUPPLEMENTAL B

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	3	8-10	2:1:1:1	8	3.0					CAN USE REGULAR GRIP IF FITS BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1:0:1:0	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
HAMMER CURL	3	12-15	2:0:1:0	9	15					GRIP DUMBBELL IN MIDDLE OF HANDLE, PERFORM STANDING, 1 ARM AT A TIME
PREACHER DEATH CURLS	0	0	2	10	15					1 SECOND PAUSE AT 90 DEGREES ELBOW FLEXION ON POSITIVE AND NEGATIVE OF EVERY REP, REACH FAILURE, REST 3 SECONDS, THEN DO A 15 SECOND HOLD AT 90 DEGREES
HEAVY NEGATIVE CONCENTRATION CURLS	2	6-8	2	10	15					USE YOUR FREE HAND TO ASSIST WITH THE POSITIVE, CONTROL THE NEGATIVE WITHOUT ASSISTANCE, LOAD HEAVILY BUT MAINTAIN CONTROL
FARMERS WALKS	3	40	÷		10					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
VEEKLY BICEP VOLUME	19								-	

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

WEEKLY TRICEP VOLUME

### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	8-8	2:1:1:1	8	3.0		VI.			SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
MACHINE PREACHER CURL	2	12-15	2:0:2:0	7	10					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	6-8	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
BAYESIAN CABLE CURL	3	12-15	2:0:1:0	9	1.0					FACE AWAY FROM CABLE MACHINE, FEEL STRETCH AT BOTTOM END ROM
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	2	12-15	2:0:1:0	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0		6			OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

### SUPPLEMENTAL A

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	4	8-10	2:0-1:0	9	2,0		jt.			ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
INCLINE DUMBBELL CURL REVERSE 21'S	2	7+7+7	-	9	1.5					PERFORM BOTH ARMS AT ONCE, 7 REPS FULL ROM, 7 REPS TOP 1/2 ROM, 7 REPS BOTTOM 1/2 ROM
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:01:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2:0:1:0	9	1.0					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2:01:0	9	10					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

TOTAL TRAINING TIME:

### SUPPLEMENTAL B

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	8-10	2:1:1:1	8	3.0					CAN USE REGULAR GRIP IF FITS BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1:0:1:0	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
SCOTT CURL	4	12-15	2:0:1:0	9	15					USE BARBELL OR EZ BAR, AT BOTTOM END ROM ARMS SHOULD BE ALLIGNED VERTICALLY
PREACHER DEATH CURLS	2	12-15	2	10	1.5					1 SECOND PAUSE AT 90 DEGREES ELBOW FLEXION ON POSITIVE AND NEGATIVE OF EVERY REP, REACH FAILURE, REST 3 SECONDS, THEN DO A 15 SECOND HOLD AT 90 DEGREES
HEAVY NEGATIVE CONCENTRATION CURLS	0	0	2	10	15					USE YOUR FREE HAND TO ASSIST WITH THE POSITIVE, CONTROL THE NEGATIVE WITHOUT ASSISTANCE, LOAD HEAVILY BUT MAINTAIN CONTROL
FARMERS WALKS	3	40	2		1.0					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
VEEKLY BICEP VOLUME	21									

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

WEEKLY TRICEP VOLUME

### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	6-8	2:1:1:1	8	3.0		VI.			SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
MACHINE PREACHER CURL	2	12-15	2:0:2:0	7	10					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	6-8	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
BAYESIAN CABLE CURL	3	12-15	2:0:1:0	9	1.0					FACE AWAY FROM CABLE MACHINE, FEEL STRETCH AT BOTTOM END ROM
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	2	12-15	2:0:1:0	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0		0			OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

### SUPPLEMENTAL A

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	4	8-10	2:0-1:0	9	2,0		jt.			ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
INCLINE DUMBBELL CURL 21'S	2	7+7+7	=	9	1.5					PERFORM BOTH ARMS AT ONCE, 7 REPS BOTTOM 1/2 ROM, 7 REPS TOP 1/2 ROM, 7 REPS FULL ROM,
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:01:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2:0:1:0	9	10					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2:01:0	9	10					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

TOTAL TRAINING TIME:

TOTAL TRAINING TIME:

### SUPPLEMENTAL B

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	8-10	2:1:1:1	8	3.0					CAN USE REGULAR GRIP IF FITS BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1:0:1:0	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
HAMMER CURL	3	12-15	2:0:1:0	9	15					GRIP DUMBBELL IN MIDDLE OF HANDLE, PERFORM STANDING, 1 ARM AT A TIME
PREACHER DEATH CURLS	0	0	2	10	1.5					1 SECOND PAUSE AT 90 DEGREES ELBOW FLEXION ON POSITIVE AND NEGATIVE OF EVERY REP, REACH FAILURE, REST 3 SECONDS, THEN DO A 15 SECOND HOLD AT 90 DEGREES
HEAVY NEGATIVE CONCENTRATION CURLS	2	6-8	2:	10	15					USE YOUR FREE HAND TO ASSIST WITH THE POSITIVE, CONTROL THE NEGATIVE WITHOUT ASSISTANCE, LOAD HEAVILY BUT MAINTAIN CONTROL
FARMERS WALKS	3	40	2		1.0					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
VEEKSY BICEP VOLUME	21		-							

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

WEEKLY TRICEP VOLUME

### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	4-6	2111	8	3.0					SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
BAYESIAN CABLE CURL	2	12-15	2:0:2:0	7	1.0					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	4-6	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
DUMBBELL PREACHER HAMMER CURL	3	12-15	2:0:1:0	9	1.0					PERFORM BOTH ARMS AT ONCE, HAMMER GRIP IN THE MIDDLE OF DUMBBELLS
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	2	12-15	2:0:10	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE EXCEPT CLOSE GRIP BENCH PRESS TO FAILURE

### SUPPLEMENTAL A

TOTAL TRAINING TIME:

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	4	8-10	2:0:1:0	9	2.0					ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
STANDING EZ BAR CURL (DESCENDING ROM)	2	10+5+5	12:	9	1.5					10 REPS FULL ROM, 5 REPS TOP END ROM, 5 REPS BOTTOM END ROM
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:0:1:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2:0:1:0	9	1.0					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE TO FAILURE

### SUPPLEMENTAL B

TOTAL TRAINING TIME:

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	8-10	2:11:1	8	3.0	NR:				CAN USE REGULAR GRIP IF FITS BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1010	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
SCOTT CURL	4	12-15	2:0:1:0	9	15	,				USE BARBELL OR EZ BAR, AT BOTTOM END ROM ARMS SHOULD BE ALLIGNED VERTICALLY
LYING INCLINE DEATH CURLS	2	20	9	10	1.5					PAUSE FOR A 5 SECOND SQUEEZE AT THE TOP OF EVERY 5TH REP
REVERSE GRIP EZ BAR CURL (METABOLIC)	0	0	2:0:2:0	10	15					USE VERY LIGHT WEIGHT AND MAINTAIN CONTROL, NOTE TEMPO
FARMERS WALKS	3	40			1.0					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
WEEKLY DICED VOLLIME	22		1	-					TTANT	THE LAST SET OF SACUEVEDOISE EVENT OF ORE ONE DEVICUINDESS TO SALL UNIT

TOTAL TRAINING TIME:

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

JEFF NIPPARD

WEEKLY TRICEP VOLUME

ARM HYPERTROPHY PROGRAM

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### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH - PRESS	4	4-6	2/1/1	8	3.0					SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
BAYESIAN CABLE CURL	2	12-15	2:0:2:0	7	1.0					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	4-6	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
DUMBBELL PREACHER HAMMER CURL	3	12-15	2:0:1:0	9	10					PERFORM BOTH ARMS AT ONCE, HAMMER GRIP IN THE MIDDLE OF DUMBBELLS
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	2	12-15	2010	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE EXCEPT CLOSE GRIP BENCH PRESS TO FAILURE

### SUPPLEMENTAL A

TOTAL TRAINING TIME:

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	4	8-10	2010	9	2.0					ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
STANDING EZ BAR CURL (DESCENDING ROM)	2	10+5+5	11:	9	1.5					10 REPS FULL ROM, 5 REPS TOP END ROM, 5 REPS BOTTOM END ROM
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:0:1:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2010	9	1.0					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2010	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE TO FAILURE

### SUPPLEMENTAL B

TOTAL TRAINING TIME:

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	8-10	2:11:1	8	3.0	ARI				CAN USE REGULAR GRIP IF FITS BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1010	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
SCOTT CURL	4	12-15	2:0:1:0	9	15	,				USE BARBELL OR EZ BAR, AT BOTTOM END ROM ARMS SHOULD BE ALLIGNED VERTICALLY
LYING INCLINE DEATH CURLS	0	0	9	10	1.5					PAUSE FOR A 5 SECOND SQUEEZE AT THE TOP OF EVERY 5TH REP
REVERSE GRIP EZ BAR CURL (METABOLIC)	2	50	2:0:2:0	10	15					USE VERY LIGHT WEIGHT AND MAINTAIN CONTROL, NOTE TEMPO
FARMERS WALKS	3	40			1.0					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
MECKLY DICED VOLLIME	21		1	-				-	-	

"TAKE THE LAST SET OF EACH EXERCISE EXCEPTICLOSE GRIP BENCH PRESS TO FAILURE

TOTAL TRAINING TIME:

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

21

WEEKLY TRICEP VOLUME

JEFF NIPPARD ARM HYPERTROPHY PROGRAM

12

### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH - PRESS	4	4-6	2/1/1	8	3.0					SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
BAYESIAN CABLE CURL	2	12-15	2:0:2:0	7	1.0					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	4-6	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
DUMBBELL PREACHER HAMMER CURL	3	12-15	2:0:1:0	9	10					PERFORM BOTH ARMS AT ONCE, HAMMER GRIP IN THE MIDDLE OF DUMBBELLS
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	3	12-15	2010	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE EXCEPT CLOSE GRIP BENCH PRESS TO FAILURE

### SUPPLEMENTAL A

TOTAL TRAINING TIME:

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	4	8-10	2010	9	2.0					ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
STANDING EZ BAR CURL (DESCENDING ROM)	3	10+5+5	11:	9	1.5					10 REPS FULL ROM, 5 REPS TOP END ROM, 5 REPS BOTTOM END ROM
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:0:1:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2010	9	1.0					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2:0:1:0	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE TO FAILURE

### SUPPLEMENTAL B

TOTAL TRAINING TIME:

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	8-10	2:1:1:1	8	3.0	407				CAN USE REGULAR GRIP IF FITS BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1:0:1:0	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
SCOTT CURL	4	12-15	2:0:1:0	9	15					USE BARBELL OR EZ BAR, AT BOTTOM END ROM ARMS SHOULD BE ALLIGNED VERTICALLY
LYING INCLINE DEATH CURLS	2	20	29	10	1.5					PAUSE FOR A 5 SECOND SQUEEZE AT THE TOP OF EVERY 5TH REP
REVERSE GRIP EZ BAR CURL (METABOLIC)	0	0	2:0:2:0	10	15					USE VERY LIGHT WEIGHT AND MAINTAIN CONTROL, NOTE TEMPO
FARMERS WALKS	3	40			1.0					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
WEEKLY BICEP VOLUME	22		1						TAKE	THE LAST SET OF EACH EXERCISE EXCEPT OF OSE ORID RENCH DRESS TO FAILUR

TOTAL TRAINING TIME:

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

WEEKLY TRICEP VOLUME 22

### ARM DAY

DAY 1	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	4-6	2:1:1:1	8	3.0					SHOULDER WIDTH GRIP, TOUCH BAR TO CHEST WITH SLIGHT PAUSE
BAYESIAN CABLE CURL	2	12-15	2:0:2:0	7	1.0					PREACTIVATION, SMOOTH AND CONTROLLED REPS, GET A SLIGHT PUMP WITH LIGHT WEIGHT
STANDING EZ BAR CURL	4	4-6	2:0:1:0	9	3.0					2 SETS WIDER GRIP, 2 SETS SHOULDER WIDTH, LAST SET TAKEN TO FAILURE, 1-2 EFFECTIVE CHEAT REPS AT END OF SET
DUMBBELL PREACHER HAMMER CURL	3	12-15	2:0:1:0	9	10					PERFORM BOTH ARMS AT ONCE, HAMMER GRIP IN THE MIDDLE OF DUMBBELLS
TRICEP PRESSDOWN	4	10-12	2:0:1:0	9	2.0					USE BAR ATTACHMENT, 2 SETS WIDE, 2 SETS NARROW, KEEP ELBOWS LOCKED IN PLACE, MINIMIZE SWINGING
OVERHEAD ROPE TRICEP EXTENSION	3	12-15	2:010	9	1.0					PERFORM BOTH ARMS AT ONCE, PRESS ROPE APART AT THE TOP END ROM
FOREARM WRIST CURL	3	15-20	2:0:10	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE EXCEPT CLOSE GRIP BENCH PRESS TO FAILURE

### SUPPLEMENTAL A

TOTAL TRAINING TIME:

DAY 2	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
DUMBBELL CONCENTRATION CURL	4	8-10	2010	9	2.0					ELBOW PINNED AGAINST THIGH, ROTATING GRIP (SUPINATE THROUGHOUT CONCENTRIC)
STANDING EZ BAR CURL (DESCENDING ROM)	3	10+5+5	11:	9	1.5					10 REPS FULL ROM, 5 REPS TOP END ROM, 5 REPS BOTTOM END ROM
WEIGHTED DIP (CLOSE GRIP)	3	12-15	2:0:1:0	8	2.0					MAINTAIN MORE UPRIGHT POSTURE AND MIND-MUSCLE CONNECTION WITH TRICEPS
1-ARM OVERHEAD CABLE EXTENSION	2	15-20	2010	9	1.0					KEEP ELBOW LOCKED INTO PLACE AND TUCKED IN
REVERSE GRIP FOREARM WRIST CURL	3	15-20	2010	9	1.0					OPTIONAL, PERFORM WITH FOREARM BRACED ON HORIZONTAL BENCH

'TAKE THE LAST SET OF EACH EXERCISE TO FAILURE

### SUPPLEMENTAL B

TOTAL TRAINING TIME:

DAY 3	SETS	REPS	TEMPO	APE	REST	1	2	3	4	NOTES
CLOSE GRIP BENCH PRESS	4	8-10	2:1:1:1	8	3.0					CAN USE REGULAR GRIP IF FIT'S BETTER WITH YOUR CHEST GOALS/ TRAINING SPLIT
MEDICINE BALL PUSHUPS	2	8-10	1-0-1-0	9	1.0					MAKE A DIAMOND SHAPE WITH HANDS AND PERFORM CONTROLLED PUSHUPS, TAKE THE LAST SET TO FAILURE
SCOTT CURL	4	12-15	2010	9	15					USE BARBELL OR EZ BAR, AT BOTTOM END ROM ARMS SHOULD BE ALLIGNED VERTICALLY
LYING INCLINE DEATH CURLS	0	0	29	10	15					PAUSE FOR A 5 SECOND SQUEEZE AT THE TOP OF EVERY 5TH REP
REVERSE GRIP EZ BAR CURL (METABOLIC)	2	50	2:0:2:0	10	15	-				USE VERY LIGHT WEIGHT AND MAINTAIN CONTROL, NOTE TEMPO
FARMERS WALKS	3	40		1	1.0					OPTIONAL FOREARM WORK, LIFT HEAVY DUMBBELLS FOR 40 TOTAL STRIDES
WEEKLY BICEP VOLUME	22		1							1

"TAKE THE LAST SET OF EACH EXERCISE EXCEPT CLOSE GRIP BENCH PRESS TO FAILURE

TOTAL TRAINING TIME:

\*NOTE: REST TIMES ARE GIVEN IN MINUTES.

WEEKLY TRICEP VOLUME 22

## PROGRAM VARIABLES

### INTENSITY

### How hard should you train? How heavy should you go?

The answers to these questions are determined by the RPE given for each exercise. Keep in mind that RPE's are meant to be for working sets only. An RPE of 10 indicates the set should be taken to failure. An RPE of 9 means you should stop one rep shy of failure. An RPE of 8 means you should stop two reps shy of failure and so on. RPE's provided are intended to be applied to all working sets except for when the training day is annotated with a note indicating that the final set of each exercises is to be taken to failure.

### **VOLUME**

How much volume you need to progress will depend on your level of advancement and how "stubborn" your arms are. The more advanced you are and the more stubborn your arms are, the more volume you need. Experts suggest that 14–20 working sets for biceps and triceps is typically enough to maximize arm development. This routine flirts with the upper end of that range because, as I see it, even if less would get you results, I want you to get the best results you can get from this routine. With that said, if you're a relatively new lifter, you may want to start with one less set per movement for the first week or two. From there, you can assess your tolerance to that weekly volume and then begin adding sets once you're confident you're recovering adequately.

### **FREQUENCY**

The most recent and comprehensive meta analysis on training frequency concluded that 2x/week is better than 1x/week for maximizing growth while frequencies of 3 or more may or may not be better<sup>2</sup>. However, because the biceps and triceps are smaller muscles with arguably faster recovery rates, a 3 day per week frequency is likely to be more optimal than a lower frequency which would make squeezing in sufficient weekly volume difficult. This frequency should be easy to adapt to either an upper/lower or push/pull/legs split, examples of which are provided in the "Sample Training Splits" section.

### **PERIODIZATION**

### WEEKLY PROGRESSION

A linear progression scheme is used for all exercises since progressive overload is arguably the most important factor for growth. The goal is to add reps while keeping the weight the same until the top end of the range is reached for all sets. From there, you will add weight and go back to the low end of the rep range. In the real world, it might not work out that neatly. As

## PROGRAM VARIABLES

long as you're adding some weight or some reps over time on average (meaning it doesn't have to increase EVERY week) you're doing it right.

### **BLOCK PERIODIZATION**

The program is split into 2 blocks: Weeks 1-4 and Weeks 5-8.

Block 1 is focused on getting adapted to the relatively high volume and frequency of the program. In order to ensure this happens safely and without undesired overreaching, RPE's are kept generally between 7–9 for this block, with a few RPE 10 sets included sparingly at the end of the training weeks.

Block 2 is quite similar in exercise selection to ensure progressive overload is in place and has more focus on reaching momentary muscular failure (MMF). Because the previous block allowed for adaptation to the volume and frequency of the program, intensity is increased in Block 2 as the final set of most exercises are taken to failure. This block also introduces several new movements, loading patterns and intensity techniques for the sake of novelty, something that has been emphasized in the scientific literature as a central tenant of periodization<sup>3</sup>.

### STEP PERIODIZATION

### Weeks 1 and 2:

· Weekly set volume for biceps and triceps is 19 sets per muscle

### Weeks 3 and 4:

· A step in volume is made to 21 sets each muscle

### Weeks 5 and 6:

- · Weekly volume is kept stable at 21 sets per muscle
- An increase in intensity is emphasized for progress

### Weeks 7 and 8:

- Another step in volume is made to 22 sets for each muscle
- · Intensity remains high
- These final weeks will provide the biggest growth stimulus
- Should be followed up with a week off (unload) or a light week (deload) to re-sensitize the muscles for new hypertrophy
- Optionally repeat the program following unloading or deloading

# BICEPS

It's important to understand the biomechanical function of the arms before we can understand how to best train them. So first, we need to quickly cover their basic anatomy.

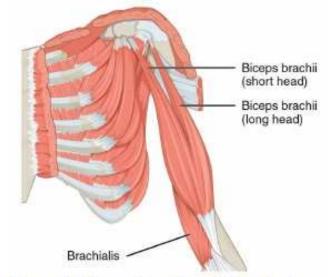


Figure 1 Biceps Brachii and Brachialis

(Image: By CFCF - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=44309314)

### **ANATOMY & FUNCTION**

The upper arm consists of 3 muscles in the anterior compartment:

- biceps brachii
- brachialis
- corachobrachialis

**Biceps brachii**: The biceps are composed to two heads: a long head (think "outer") and a short head (think "inner"). Both heads insert at the radius bone of the forearm and originate on the scapula. This means the biceps muscle crosses both the elbow and the shoulder and as such can flex both the elbow ("curl") and the shoulder (think "front raise"). It also acts on the radioulnar joint to supinate the forearm (think turn the palm "up"). The long head seems to assist more with shoulder abduction (think "lateral raise") with the short head doing more adduction.

**Brachialis:** The brachialis is the stronger elbow flexor, because it originates at the humerus bone of the upper arm and inserts on the ulna bone of the forearm. It has no action at the shoulder and only functions to flex the elbow.

**Coracobrachialis:** The coracobrachialis is a tiny muscle that doesn't flex the elbow and won't beef up your arms much, so we won't focus on it. It's more active when you do chest-focused training movements as opposed to bicep-focused movements.

## BICEPS

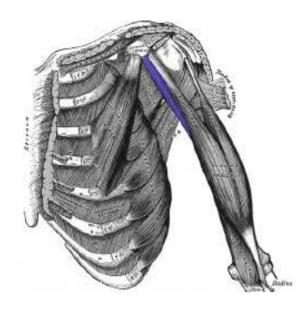


Figure 2 Coracobrachialis (purple)
(Image: By Me - Created from Gray's Anatomy plate 411 using Gimp, Public Domain, https://commons.wikimedia.org/w/index.php?curid=1595008)

### FIBER TYPE

While data is really limited, the biceps muscle does appear to be slightly type II, or fast-twitch, dominant with a roughly 60:40 split of type II:type I <sup>4</sup> This indicates that the biceps should be trained with a variety of rep ranges with at least one "main" heavy movement to fully activate the fast twitch fibers. Because the biceps are also targeted with any heavy vertical or horizontal pulling movements, it may be wise to focus more of your sets on moderate (8–12) and high (12–20) rep ranges for recovery purposes and for the sake of avoiding redundancy.



### BACKGROUND

It's common to hear that heavy back movements (vertical and horizontal pulls) are all you need to do to grow your arms. While it's true that several studies have shown pull ups and rows elicit high levels of biceps activation<sup>5,6</sup>, they may not be enough to maximize arm development on their own. Because so much back musculature is involved in these movements relative to bicep involvement, I think they should be seen as back builders, not arm builders.

To really maximize development of the biceps, it's important to include isolation exercises.

Since, as far as we know, all curling movements lead to very high levels of biceps activation I would focus on finding one "main" movement that:

- You enjoy
- 2. Feels comfortable for you
- 3. Is well suited for steady progressive overloading

The remainder of the program is filled in with a variety of movements that utilize different loading schemes and patterns as needed to hit total weekly volume targets.

### **BICEPS EXERCISES EXPLAINED**

- 1.EZ BAR CURL: The EZ bar is a safe choice for the main heavy movement because it tends to generate less strain at the wrist joint than the barbell curl. However, if you prefer the straight barbell curl or heavy cable curls with a bar, they are both biomechanically similar enough to work as an effective substitute for this exercise. Because research shows that you're stronger earlier in the training session<sup>6</sup>, this heavy movement should be performed both early in the training session and early in the training week.
- 2. MACHINE PREACHER CURL: A case can be made for including a pre-activation exercise for trainees who struggle with activating their biceps on heavier movements. For this purpose, I like to include an exercise where the arms are pinned against a pad to prevent swinging, which allows the biceps to "turn on" before beginning any main movements. The idea here is to use slow and controlled reps and stay well away from failure. Make sure to focus on "feeling" the biceps and initiating each rep with the intention of shortening the muscle.
- 3. BAYESIAN CABLE CURL: One potential limitation of most curling movements is a mismatch between the exercise's resistance curve and the strength curve of the biceps. Basically, peak torque occurs in most curls when the elbow is at 90 degrees of flexion. Every point in the ROM above and below 90 degrees results in less tension on the biceps.

## BICEPS

An easy way around this, is by doing a cable curl facing away from the cable machine. This way, you have roughly even tension throughout the ROM, ensuring that if you are reaching failure, it's the result of maximal motor unit recruitment and not a mechanical shortcoming of the movement itself. The Bayesian cable curl also achieves a degree of stretch on the biceps at the bottom end of the ROM that isn't possible with many other curling exercises.

- 4. DUMBBELL CONCENTRATION CURL: The reason this exercise is included is because it locks your elbow into position to prevent cheating, similar to the preacher curl. But unlike the preacher curl, the shoulder is less flexed, taking more of the emphasis away from the brachialis, shifting it to the biceps. This movement is directly supported by some data7 which showed the concentration curl to outperform the scott curl, straight bar cable curl, barbell curl and dumbbell preacher curl in terms of EMG activation relative to the standard barbell curl.
- 5. INCLINE DUMBBELL CURL: A 2009 study by Oliveira et al measured biceps activity at different parts in the ROM for 3 different exercises and found that activation was highest in the initial third of the ROM for the preacher curl, with activation decreasing for the remaining two thirds. The incline curl showed the exact opposite pattern: activation was lowest at the bottom and highest at the top of the ROM7. In my opinion, combining exercises where the shoulders are more extended (like incline curls) with exercises where the shoulders are more flexed (like preacher curls) is best for recruiting all regions of the biceps evenly.

Reverse 21's are included as an intensity technique for this exercise where the movement is broken down into 3 segments: full ROM, top-half ROM and bottom-half ROM. The full ROM curls will require the most effort, with top-half ROM curls requiring less and bottom-half ROM curls requiring the least. The net effect is that this sequence functions as a sort of "drop set". Later in the program "death sets" are included to introduce a novel loading pattern with isometric holds and generate substantial metabolic fatigue.

- 6. SCOTT CURL: The Scott Curl is similar to a preacher curl in that the elbows are supported by a pad or bench however this exercise has the upper arms more vertically positioned. The higher rep ranges here will generate a high degree of metabolic stress and volume accumulation while achieving a higher degree of stretch on the biceps.
- 7. PREACHER DEATH CURLS: This exercise is intended to be one of the more challenging in the program and should generate significant metabolic stress because of the unorthodox tempo with isometric holds. This movement provides a novel way of taxing the biceps at the end of not only the training session, but also the training week, ensuring that ample time for post-exercise recovery is available. This exercise should be done sparingly and alternated every second week.

## BICEPS

8. HEAVY NEGATIVE CONCENTRATION CURLS: While the scientific literature as a whole indicates that concentric (positive) and eccentric (negative) muscle actions both promote substantial hypertrophy7, Hather et al found that hypertrophy can't be maximized unless eccentric actions are performed<sup>8</sup>, and other research found eccentrics to lead to increased muscle protein synthesis<sup>9</sup>.

The heavy negative concentration curl allows for these high tension eccentric contractions without risk of cheating because of the locked-in nature of the movement. Similar to the death curl, this exercise should be done sparingly and alternated every second week.

9.DUMBBELL PREACHER HAMMER CURL: Contrary to popular belief, the hammer grip has also been shown to elicit very high levels of biceps activation? Because of the orientation of the forearm, this exercise is very effective at utilizing the brachioradialis (that thick muscle on the "back" of your forearm). A preacher variation is used to prevent cheating – something very commonly seen with this exercise as trainees are tempted to load more heavily than appropriate.

10. DESCENDING ROM EZ BAR CURL: In Block 2, this movement is included to increase the weekly training volume of the EZ Bar curl with the goal of increasing the trainee's proficiency with this movement. The rationale of using the "descending ROM" technique is similar to that of the "reverse 21's" technique: the decrease in ROM functions as a sort of drop set.

11. REVERSE GRIP EZ BAR CURL: Despite the fact that the pronated grip is the only grip that seems to be really sub-optimal for biceps activation, with one source showing it to have less than 40% activation relative to a supinated grip7, it is very effective at involving the underlying brachialis muscle and brachioradialis muscle of the forearm. Because we're concerned with overall arm development and not just bicep development, this exercise is included in Block 2.

### **GRIP WIDTH**

Grip width matters. Since the long (outer) head contributes more to abduction, taking a slightly wider grip might elicit more long head activity. For this reason, "omni-grip" is recommended for some exercises, where the sets are split between a narrow and wide grip within the same training session. Note that a very close grip where the hands are only about a single hand's width apart seems to hinder biceps activation, with one source showing a 13% detriment in activation relative to a shoulder width grip. In this program, a narrow grip can be defined as: at or just inside shoulder width and a wide grip can be assumed to be about 4–6 inches outside shoulder width.



### ANATOMY/FUNCTION

There is one main muscle in the posterior compartment of the upper arm: the triceps brachii.

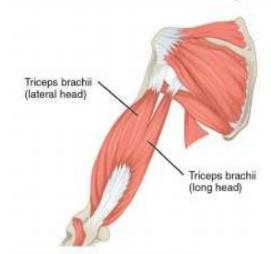


Figure 3 Triceps Brachii

(Image: By CFCF - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=44309313)

The triceps muscle has three heads: a medial head, long head and lateral head. The long head makes up most of the beefy part you see when doing a front double bicep pose. The lateral head is the "horseshoe" muscle you see most visibly in the side tricep pose with the medial head being a deeper muscle, not as visible superficially as the other two.

The primary function of the triceps is elbow flexion as all 3 heads cross the elbow joint, inserting on the ulna bone of the forearm. The lateral and medial heads both originate on the humerus bone of the upper arm, while the long head crosses the shoulder joint and originates on the scapula. This means that in addition to elbow flexion the long head can assist with shoulder extension (think "opposite of a front raise") and shoulder adduction (think "opposite of a lateral raise").

### **FIBER TYPE**

Limited data seems to indicate that the triceps are slightly type II dominant, with estimates ranging from 55% to 65% to 65% type II, depending on the training state of the subjects. In any case, similar to the biceps, a mix of rep ranges would be best for optimizing the recruitment of all fibers.

Because the triceps are also targeted with any heavy vertical or horizontal pressing movements, it may be wise to focus more of your sets on moderate (8-12) and high (12-20) rep ranges for recovery purposes.



### BACKGROUND

Similar to the biceps, compound pressing movements like horizontal and vertical presses have been shown in the literature to highly activate the triceps, with horizontal presses having a slight edge<sup>11</sup>. However, since so much pec and shoulder musculature is involved with these exercises, it is prudent to include triceps isolation movements in any program set towards optimizing their development specifically.

### TRICEPS EXERCISES EXPLAINED

**1.CLOSE GRIP BENCH PRESS:** Because the bench press, being a compound movement, is so conducive to overloading, it makes it a perfect choice for the triceps' main heavy movement. Like the biceps, heavier loads have been shown<sup>12</sup> to elicit higher levels of triceps activation, so this exercise is loaded in a lower (6–8) rep range.

A narrower grip increases triceps activation, according to Barnett et all1, where a shoulder width grip had more activation than 2x shoulder width, a finding supported by later research from Lehman in 2004<sup>13</sup>. Lehman also introduced an ultra–narrow third grip at the width of just one hand, which showed the highest activation of all. However, I would personally advise against using such a close grip since it can put unwanted strain on your wrists and limit ROM. For the purposes of this program, a "close grip" should be assumed to be roughly shoulder width.

- 2. TRICEP PRESSDOWN: The tricep pressdown targets the lateral head to a greater degree since the long head is more shortened at the shoulder, putting it in a more actively insufficient position. This means it can't maximally contract at the elbow joint because it's already shortened at the shoulder. Since the lateral head doesn't cross the shoulder, it isn't affected by this position. This movement will help beef up the outer part of the "horseshoe" and make your arms look thicker from the side.
- 3. OVERHEAD ROPE EXTENSION: Unlike the tricep pressdown, this movement has your shoulder in a more flexed position meaning the long head comes more into play as it's lengthened more at the shoulder joint and as such, can contribute more to elbow extension. The main idea is to combine exercises that use both shoulder positions so that both the lateral and long heads can be developed equally.
- 4. WEIGHTED DIP: Being another compound movement, this exercise is included because it challenges the triceps with the shoulders in a more extended position than the bench press. This shifts more of the emphasis to the short head. A closer grip and more upright posture is likely to take emphasis away from the pecs and shoulders and place it on the triceps.



5. 1-ARM OVERHEAD CABLE EXTENSION: Including the unilateral version of the rope extension allows both the left and right arms to be trained individually. This is important for trainees who suffer from left-right asymmetries and for those who want to avoid developing an imbalance. The cable variation is included instead of using dumbbells because it results in a more even resistance curve throughout the ROM.

**6. MEDICINE BALL PUSHUPS:** Multiple lines of research have shown pushups performed on an unstable surface to lead to superior triceps activation than those done on a stable one 13,14. Because this movement can't be loaded easily with added external resistance, this exercise is included as a "finisher" exercise for the triceps.

# FOREARMS

### BACKGROUND

While the bulk of this program is dedicated to developing the biceps and triceps, optional exercises for the forearms are also included. Optional in the context of this program means you can train them at your own discretion, depending on if they're an area of your physique you'd like to develop more or not. Because the anatomy of the forearm and hand musculature is very complex, it is beyond the scope of this project. We'll suffice it to say that muscles of the forearm on the "front" are mainly responsible for flexing the wrist and fingers (this includes "gripping" movements) while the forearm muscles on the "back" do the extending.

### FOREARM EXERCISES EXPLAINED

In essence, you want to train both flexion and extension through movements such as DB wrist curls and DB wrist extensions supported on a flat bench. Farmer's walks are also included in the program to help develop grip strength and isometrically train the flexors of the forearm. Any hammer grip and pronated grip curling movements in the program will tax the forearms heavily as well. Because so many compound movements like deadlifts, rows and even heavy curls require a strong grip, the forearms get a lot of indirect work if these exercises are included in your overall program. For this reason, forearms are not specifically emphasized in this routine with a large amount of training volume, however in conjunction with the rest of your training, the isolation movements included here will be sufficient to stimulate growth.

## SAMPLE TRAINING SPLITS

As long as total weekly volume requirements are being met and you are recovering adequately (i.e. not excessively fatigued, sore and/or getting weaker) then how you set up your split around this program is of relatively less importance.

Below are some suggested splits including how to incorporate the arm program.

### 1.Upper/Lower split

Day 1: Upper body + Supplemental A

Day 2: Lower Body

Day 3: Arm Day

Day 4: Rest

Day 5: Upper body + Supplemental B

Day 6: Lower Body

Day 7: Rest

### 2. Push/Pull/Legs/Upper/Lower Split

Day 1: Push + Supplemental A

Day 2: Pull

Day 3: Legs

Day 4: Arm Day

Day 5: Rest

Day 6: Upper + Supplemental B

Day 7: Lower

## SAMPLE TRAINING SPLITS

### 3.Push/Pull/Llegs split (8-9 day split)

Day 1: Push + Supplemental A

Day 2: Pull

Day 3: Legs

Day 4: Arm Day

(Optional rest)

Day 5: Push

Day 6: Pull + Supplemental B

Day 7: Legs

Day 8: Rest

I would personally recommend running split #1 or 2 on this program for the sake of optimizing frequency and the convenience of fitting your full split within a single calendar week. The extra training days in split #3 allow for adequate recovery between sessions, however, the weekly frequency may be slightly sub-optimal. Given this, if this split allows you to train with either more intensity (effort) or with better adherence than the others, then you should go with it.

Remember that regardless of the split you choose, the most important thing is accomplishing the weekly arm training volume with the appropriate intensity (RPE). Because of the high arm training volume in this program, consider lowering back, chest and shoulder volume by 1–2 working sets per exercise for at least 1–3 weeks to assess your recovery if needed.

### COMMENTS FROM JEFF

For customer support email info@strcng.com.

To keep the cost of the program down, I did not include supplemental instructional videos for this program. If you're unsure about how to perform any exercises included, access to all exercises are just a quick Google/YouTube search away!

Thank you so much for your support! Enjoy training and feel free to show me your progress on social media by hashtagging #kiwisandarms and I'll make sure to check it out! Completely serious. Peace!

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## ARM HYPERTROPHY PROGRAM

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