



Jaeger/Sullivan Return to Throwing Manual & Schedule: 2.0

2.0 – Updates & Changes to our Throwing Schedule

Though the fundamental principles of our Throwing Manual hasn't changed, and the driving force behind our Throwing Schedule is still based on *Individuality, Self-Regulation, and Listening To Your Arm*, we have made some important updates and modifications, specifically, to our Throwing Schedule that we feel will be even more effective in ensuring that your arm returns to PEAK PERFORMANCE, including the following:

1: The Continuum of Throwing

The *traditional* "Return To Throw Programs" (RTP's) are based on a *conventional, 7 Day* Calendar week. Though it may not seem like a huge deal, this can actually present a number of unnecessary issues and challenges (especially early on) because the *conventional* or Gregorian calendar was created to "assign time measurements" that coincided with the solar year (the amount of days that the earth orbits around the sun, or every 365.25 days). As practical as this is for our daily lives, the *conventional, 7 Day* model is not ideal from a training perspective because it forces the athlete to "fit" their throwing sessions into a "predetermined number" (7) *rather* than base their throwing sessions on a *continual* progression of workload, rest, and recovery that simply evolves from "Day to Day". By eliminating the "weekly model", the athlete is able to train, develop, and adapt in the most optimal way.

To give you an example of just how beneficial the "Day to Day" versus "Weekly" model is, the traditional RTP's will tend to have the athlete throwing "3 days a week" from the onset (i.e., M/W/F for a specific number of weeks). The concern with this format is that as *early* as Week 1, the rhythm and continuity of an *ideal* progression – which is based on *consistent* exposure to a predictable workload – is already upset by going 2 days *without* throwing at the end of the week (Saturday/Sunday). In addition, when a 4th day of throwing is introduced in these models (e.g., M/W/F/Sunday), the rhythm and continuity is also disrupted because the athlete is then put in a scenario where you now have "back to back" days of throwing from the end of one

week to the beginning of the next week (e.g., Sunday/Monday), when early on, it still may be more ideal to be throwing “every other day”.

In both scenarios – which can promote *instability* and *harmful* effects due to a lack of consistent demands – you are at the *artificial* control of the “7 Day Week”, rather than the *natural* progression and rhythm of a schedule based on the *Continuum* of “Days”. Again, by eliminating the “Weekly” schedule (at least until you get to the Mound Build-Up Phase) you don’t have to worry about “fitting” throwing sessions into an “arbitrary number”, 7 – you can now simply focus on a *continual* progression and adaptation from Day to Day.

Also, because athletes are throwing “every other day” in the first 4 Weeks of our Throwing Schedule, they are not only staying in an ideal rhythm but are getting in *more* days of throwing than is generally prescribed in the traditional RTP’s. For example, based on our “every other day” format for Weeks 1-4, the athlete can get in 14 days of throwing (rather than 12) over a 28 day period. And this gets *exponentially better* in Weeks 5-8 when we go to a 2 Days On, 1 Day Off format and the athlete is now able to get in 20 Days of throwing (rather than 16) in a 30 Day period. And finally, in Week 9, when we go to a 3 Days On, 1 Day Off format, the athlete is now able to get in 24 Days of throwing (rather than 18) in a 32 day period (assuming the traditional RTP’s are still prescribing throwing only 4 times a week at this stage). Not only can you see how many days of throwing are lost to the “weekly format”, but again, how much this format can disrupt the continuity of throwing based on a “Day to Day” model.

The bottom line is that our Throwing Schedule enables the athlete to stay in an ideal rhythm because the focus is on throwing according to a *Continuum*, rather than trying to figure out how to *fit* “x” amount of days into a conventional “7 Day Week”. The net result of eliminating the conventional 7 Day format and replacing it with a *Continuum of Throwing* provides a far superior way to approach the rhythm, frequency, spacing, adaptive loading, and recovery of the athlete’s progression in their Throwing Schedule.

2: Additional Frequency and Volume of Throwing in the Early Stages

The initial goal of the early stages of our Throwing Schedule (e.g., the first 6-8 weeks) was to model it after many of the standardized protocols in the medical community because we felt, consistent with their models, it was important to be extra conservative from the onset, and that there was “no downside to being too conservative”. We also didn’t want to deviate too much from the traditional protocols because we knew that what made our Throwing Schedule so unique and advantageous is that we allotted extra time to *build out* our Throwing Schedule to 300 feet (as opposed to most of the traditional RTP’s, which build out their throwing schedule to 120 feet), and we *increased* the Frequency of throwing sessions from 4 to 5 Days, and 5 to 6 Days earlier on in the timeline (which in turn leads to a *notable* increase in Volume throwing).

But after recently reviewing our Throwing Schedule we both agreed that despite wanting to stay consistent with the standardized RTP’s in the early stages, that ultimately, based on our

core beliefs and 60+ years of experience, that this model was actually *too* conservative, *especially*, in the first 6-8 weeks. For example, as mentioned above, there were too many days off from the onset which caused disruptions in the rhythm and synergy of the progression. We also felt that the amount of time it took for the athlete to increase their distance was too deliberate (part of this was also caused by the amount of days off from the onset).

With that said, we want to make it clear that our Throwing Schedule still places a great deal of emphasis on going slower, rather than faster (especially in the first 6-8 Weeks). But we also came to the realization that today's athletes are far more *prepared* than ever before to transition into the types of modifications that we've made. Simply put, we felt that today's athletes would respond much better, strategically, to *more* days of throwing (which leads to *more* volume of throwing), rather than less – especially when you consider the following factors: 1) The major emphasis we place on “Low Intent, Volume Throwing” and “Variability” from the onset, 2) The amount of time we spend on “Base Building” and prioritizing “Gradual, Adaptive Loads”, “Feel”, and “Recovery”, 3) The amount of time today's athletes spend post-surgery on building a great foundation in the clinical setting (4-5 months), and 4), The amount of time today's athletes spend on Arm Care, Training, and Strength & Conditioning in order to get their arm “prepared” for their Throwing Program.

Based on these and other factors, we feel strongly that the changes we've made with regard to the *frequency* and *volume* to our Throwing Schedule (which are outlined below) will best position the athletes' arm to return to its' most optimal Health, Strength, Endurance, Feel and Recovery. These changes include:

1: Beginning in Week 1, as referenced earlier, we have gone to an every other day format for the first 4 weeks, which is not only ideal for the rhythm and continuity of the athletes throwing progression, but positions them to avoid unnecessary issues of having “two consecutive days off” or throwing “back to back days” – all of which helps them make a much smoother transition into the “2 Days On, 1 Day Off” format, which begins in Week 5.

2: Beginning in Week 5, we have changed the format from “every other day” of throwing to 2 Days On, and 1 Day Off (which is earlier on than our original schedule). This now affords the athlete the advantages of throwing 4 out of 6 Days, rather than throwing “x” times per Week” (which again, can cause a disproportionate amount of “days on” or “days off”). This is a huge upgrade to our previous Throwing Schedule because we feel that it is essential to add more *frequency* to the athletes throwing progression at this stage – especially when you consider that throws are being made at relatively short distances (e.g. 30-90 feet), and with such low intent (30-35% perceived intent). We also feel at this point that the arm and body is more than ready (wanting) to start moving 2 out of 3 days. Again, as you will see often throughout our Throwing Manual, because we place such a strong emphasis on Volume Building via Low Intent Throwing – which is *ideal* for the athletes arm – we simply felt that by Week 5, the arm was ready for both more *volume* and *frequency*.

3: Beginning in Week 9, we have changed the format to 3 Days On, and 1 Day Off of throwing (which is earlier on than our original schedule). This now affords the athlete the advantages of throwing 3 out of 4 Days or 6 out of 8 Days, rather than throwing “x” times per week (which again, can cause a disproportionate amount of “days on” or “days off”). Again, this is a huge upgrade to our previous Throwing Schedule because we are adding in more frequency to the athletes throwing progression at a time that the athlete has not only built such a strong “base” from the first 8 Weeks of throwing, but the distance is still relatively close in Week 9 (i.e., 120 feet), and the throws are still being made with such low intent (55-60% perceived intent). Also, we felt that the athletes’ arm is starting to get so well conditioned at this point that it simply wants to throw more, and have *less* “time off”.

4: Beginning approximately Week 19 (depending on the individual), we have built in a 3 Week “Pull-Down Progression” so that the athlete can *gradually* work their way into the Pull-Down Phase. Because we have made every effort to ensure that each athletes arm has gone through all of the proper steps to be *fully* stretched out (distance wise) *prior* to any type of high intent throws, and thus, to avoid *shocking* the arm, that we’ve also taken the extra step to ensure that the Pull-Down Phase is navigated in a progressive format (Note: as you will see in great detail later on in the Throwing Schedule, this transition to the “Pull-Down Phase” shouldn’t begin until the athlete has extended out to their maximum distance).

In Summary

The main focus of our Throwing Schedule remains fundamentally the same: 1) to create a progression that is easy to understand and adaptable for each athlete to make it *their own*, 2) to build up the arm in the most optimal way in the first 2 Phases via Base Building, Incremental Loading, Variability, Low Intent Volume Throwing, and Athleticism, and 3) to have a sound plan in place with a great deal of guidance and guard rails, but to ultimately *position* and *empower* the Athlete to be so intimate with their arm that they are able to Self-Regulate (by the beginning of Phase 3).

With our newest revision, we’ve simply changed the format for a much more ideal rhythm, adaptation, and progression, while strategically, adding in more “frequency” and “volume” of throwing – especially early on when throwing is made at such shorter distances and with such low intent.

By optimizing the Build-Up Phase (Phase 1) and Extension Phase (Phase 2) of our Throwing Schedule with these modifications (approximately Weeks 1-18), you will be in an even more ideal position to transition into, and optimize the subsequent phases of our Throwing Schedule, which include, the Pull-Down Phase (Phase 3), the Mound Ramp-Up Phase (Phase 4), and the Pitch Count Build-Up (Phase 5).

Wishing you all the best along your journey...enjoy the process!

Alan & Randy

Table of Contents

Page 1-4:	2.0 Updates & Changes
Page 5:	Thank You/Acknowledgements
Page 6:	Clarity & Trust The Process
Page 7:	Opening Remarks
Page 8:	Journaling & Awareness
Page 9:	Timeline: Five Phases of Our Throwing Schedule
Pages 10-12:	Ben Brewster's Distance, Velocity, Effort Charts
Page 13:	Supplemental Resources: Nunzio Signore, Nolan Rappé
Page 14-15:	Timeline Notes for Throwing Schedule
Page 15:	Core Principles – Arm Care, Massage Throwing
Page 16-17:	Self-Regulation
Page 18:	Navigating the Extension Phase Beyond 120 Feet
Page 19-20:	Crow-Hopping vs Shuffling
Page 20-23:	The Magic That Happens Beyond 120 Feet
Page 23-25:	Additional Notes Regarding Throwing Schedule
Page 26-29:	Glossary of Terms
Page 30:	Questionnaire: Pre-Surgery Throwing History/Routine
Page 31-34:	Jaeger/Sullivan Throwing Manual Coalition
Page 35-71:	Return To Throwing Schedule (Phases 1-5)
Page 72:	About The Authors
Page 73:	Additional Resources/Return To Throw Support Group, Ian McMahon

Thank You/Acknowledgements

There are so many people we wish to thank who have been instrumental with their support and encouragement throughout this process. This Manual and Throwing Schedule is a by-product of a great deal of input and feedback from so many incredible people in both the Coaching and Medical fields. We want to especially thank those who have joined our Coalition (see Coalition list on pages 26-28), along with the following people who have made direct contributions to this Manual: Ben Brewster, Ricky Meinhold, Nunzio Signore, and Nolan Rappé. We also want to thank Brittany Dowling for her help regarding the formatting of the first 12 Weeks of our Throwing Schedule. Words cannot express how grateful we are for everyone's support.

Clarity

The initial goal of our Manual & Throwing Schedule is to give you a great deal of clarity *up front* so that you can optimize the entire return to throwing process in the safest and most effective way. For this reason, in addition to the actual Throwing Schedule, we have also included a number of other resources, including a *Note Section*, a *Glossary of Terms*, *Videos*, *Ancillary Programs*, and a *Questionnaire* (regarding your pre-surgery throwing routine). We want you to be as educated and *clear* as to the meaning and purpose behind everything we do, and ultimately, you do. We've also gone into great detail to ensure that this entire process is *user-friendly* and adaptable to your individual needs. Please be sure to go over each of these sections a few times so that you are abundantly clear as to their meaning and purpose before starting the Throwing Schedule.

Application/Adaptation Based on the Type of Surgery

The following Throwing Schedule and Guidelines are based *specifically* on returning from a traditional Tommy John Surgery (10-11 Months). Because your needs for a Throwing Schedule may change based on other types of surgery on your arm (i.e., Internal Brace), the following guidelines and timelines may not be consistent with your particular needs. However, please keep in mind that the “core principles” of our Manual & Throwing Schedule can still give you a great deal of direction and insight as to the best way to navigate your return to throwing process. Especially in the case of a minor surgery, or even just taking time off to heal. In many of these cases, you may find it helpful to condense, especially, the first 10 Weeks of our Throwing Schedule that extends out to 120 feet, and then find that starting at Week 11, our Guidelines may align well with your throwing routine going forward.

Note: the timeline of “when” to start your Throwing Schedule may vary anywhere from 4-6 months post-surgery, depending on your surgeon. Please keep in mind that if your surgeon recommends a more aggressive start up after 4 months, you may consider an even more conservative approach to your Throwing Schedule. As with everything we recommend, please be sure to listen to your arm and instincts, and consult with both your Medical Professionals and Pitching.

Trust The Process: Eliminate Target Dates

Often times, your return to throwing schedule will occur “In Season”. For example, you may be in the middle of your Regular Season, Playoffs, Summer Ball, Fall Ball, etc. Because you may feel a strong pull to “get back” to action as soon as possible, you may feel a tendency to “rush” your Throwing Schedule. Our strong advice is to “eliminate the calendar” of when you think you “could” or “should” be back, and simply focus on the PROCESS of getting into the *best* shape of your life by not rushing the natural progression. This should be your *only* goal, rather than the “goal” to rush back according to a “target date”. Trust the process, and eliminate the calendar.

Opening Remarks – How to best Optimize our Throwing Schedule: Awareness, Freedom, Open Focus & Variability

Awareness/Freedom

Considering that you have typically spent anywhere from 4-6 months, post-surgery, *confined* in a clinic, and haven't touched a ball for an even longer period of time, there's a chance that you may feel somewhat restricted and guarded as you begin making your first throws. For this reason, we want you to be highly *aware* as you begin our Throwing Schedule to focus on being as *free* as possible – to allow your body to relax, be athletic, and move *naturally*.

A huge aspect of feeling *freedom* in your body is feeling *freedom* in your mind. Because your initial few throwing sessions may feel a bit “heady” because you may have some apprehension about throwing for the first time in months, we highly recommend that you make this a “full body experience”, or what's called, *embodiment*.

For this reason, you will see a lot of information below about the importance of “Massage Throwing” and “Arc Throwing”, as opposed to being “mechanically correct”. Our goal from the onset is for you to “open up” your body and mind by throwing with *freedom*, rather than from a restricted or guarded state. Naturally, your mentality plays a major role in your ability to optimize your most optimal return to peak shape, and having this *awareness* of how to best navigate this potentially foreign territory up front, is pivotal.

Open Focus vs Narrow Focus

For this reason, we highly recommend you have what's called an “Open Focus” mind-set. Open Focus is a meditation term that is designed to promote a feeling of being “open”, “spacious”, “expansive”, and “free”. When you are in “space”, and beyond your thinking mind, you allow your most natural, athletic, and innate movement patterns to take over. On the other hand, “Narrow Focus” promotes a more confined, linear, and concentrated state. Whereas Open Focus promotes Athleticism and Variability, Narrow Focus promotes Mechanical and Linear movements. This doesn't mean we are opposed to having some awareness about your “Mechanics” – it's just to say that after being in a confined and restricted space for many months, the main focus for the first several weeks, especially, is to prioritize being free rather than being mechanical.

Variability, Creativity, Feel & Fun

One of the biggest keys to navigating your first few weeks of throwing is to create *variability* with your throwing. Part of this will happen naturally as your release point begins to *change* as you gradually *arc* the ball as you move away from your throwing partner. But there are other creative ways to promote variability as well, including shuffling your feet, creating rhythm with your body, varying your targets, and gamify your throwing. All of these movements can really

help you transition from a potentially “confined” and “guarded” state of mind, to a relaxed, free and open state of mind. This can also promote more right brain activity, which includes feel, athleticism, spaciousness, and fun!

Journaling

One of the most essential principles of our throwing philosophy is to have a great deal of *awareness* throughout the entire process. Therefore, it’s important to be sensitive to what your arm and body are telling you. For this reason, we highly recommend *journaling* your entire Return to Throwing Schedule as you work through it. This would include a number of essential categories, including, 1) how many minutes you spend throwing each day, 2) How many total throws you make each day, 3) How many high intent throws you make on a given day (this occurs *much* later on in the Throwing Schedule), 4) How you felt on a scale of 1-10 each day, and 5) How you felt on a scale of 1-10 the following day, regardless of whether it’s a day off, or a scheduled day of throwing (be sure to evaluate yourself *prior* to throwing).

This can provide invaluable feedback regarding your *Recovery*, and help you realize if you are doing too much, or not enough on a given day. Your awareness and ability to adapt each day based on your *Recovery* plays a major role in how well you navigate this entire process in the most optimal way. For this reason, know that it’s okay to back off at any time in some scenarios regarding volume, distance or how many days a week you are throwing, just as it may feel good to add some volume, distance, or an extra day of throwing throughout the schedule. This will also help you be more sensitive to trends as you transition into adding more volume, distance, intent, or an additional day to your Throwing Schedule. A big thank you to Vanderbilt’s Scott Brown for his suggestion and input regarding Journaling.

A Final Word – The Essential Role of Awareness

The bottom line is that as you go through this Throwing Manual & Schedule, the main emphasis is to be highly in tune with your instincts and trust the process knowing that only your body knows on a given day what it ultimately wants and needs. Our Throwing Schedule will give you 27+ Weeks of guidelines to help you return to what we believe will be the best shape of your life. But your *awareness* throughout this process to adapt and adjust on the fly is absolutely essential for your ultimate optimization of our Throwing Schedule.

Timeline: 5 Phases of Our Return to Throwing Schedule

Phase 1: Weeks 1-6 (30 Feet – 120 Feet) – “Base Building/The Stretching Out Phase”: Introduction of Athleticism, Variability, Volume, and Massage Throwing

Phase 2: Weeks 7-18 (120 + Feet) – “Stacking The Base & The Extension Phase”

Phase 3: Weeks 19-21 – “Self-Regulation & Introduction To The Pull-Down Phase”

Phase 4: Weeks 22-27 – “Mound Ramp Up/Live Inning”

Phase 5: Weeks 28 and Beyond – “Pitch Count Build-Up”

Notes To Help You Optimize Our Return To Throwing Schedule

Collaboration: Your rehabilitation process is going to be a team effort. Be sure you involve your Surgeon, Physical Therapist, Strength & Conditioning Coach, and Pitching Coach throughout this entire process. But always listen to your arm and your instincts.

Objective Feedback/Radar Feedback: Gauging your *real* effort as opposed to *perceived* effort has been proven difficult to gauge for anyone throwing a baseball – especially after spending 4-5 months off the field. Therefore, we *highly* recommend using some type of Radar Feedback in order to best gauge your real effort and give you objective feedback from throw to throw (there are several options on the market). You will find two extremely helpful and informative charts below from Ben Brewster to help you navigate various distances based on objective feedback from radar readings. These Charts correspond to Weeks 1-21.

Throwing Counter: It may be somewhat unrealistic to expect players to count “every throw” they make, therefore we also *highly* recommend some type of “pitch counter”. There are several options available on the market.

Data Driven Analysis: This program has been developed with universality at its core. Though we want the predominate gauge and measurement of our Throwing Schedule to be centered around, 1) Our on-field experience, 2) Self-Regulation by the athlete, and, 3) Objective feedback via Ben Brewster’s Distance/Velocity/Effort Chart, it's important to recognize the presence of various "data-driven" tools available today, such as Driveline Pulse and isometric dynamometers, designed for the objective measurement and monitoring of workload and effort. Though this can be of great value, our ultimate decision was to ensure that both players and coaches can efficiently navigate the return-to-throwing progression without the need for advanced technological know-how and/or having access to these tools.

Distance/Velocity/Effort Chart – Ben Brewster

As you navigate each week of our Throwing Schedule, you'll notice a gradual increase in distance, which naturally, will require a gradual increase in effort. Though we hope you are able to gauge this gradual progression through Self-Regulation, it's also very helpful to have objective feedback, especially considering that you haven't thrown a ball in 4-5 months or more.

It's widely known that there is a noticeable difference between real and perceived effort. Therefore, the two charts below from data gathered by Ben Brewster/Tread Athletics will help you navigate these gradual transitions based on your pre-surgery maximum velocity in a bull-pen. The first chart, "Perceived Intensity Progression", will show you from week to week the percentage of Perceived Intensity or effort you should be using based on the distance you cap out at in a given week. Once you establish your Perceived Intensity percentage, you can then look at the second, color coded chart below, "Target Velocity Ranges Based on Perceived Intensity", which will calculate a mph range also based on your pre-surgery maximum velocity in a bull-pen setting.

For example, if you are in Week 6 of our Throwing Schedule, the maximum distance you will throw at is 60 feet. The "Perceived Intensity Chart" for this distance is 40-45%. Thus, if you look at the second chart, "Target Velocity Ranges Based on Perceived Intensity", you'll see that 40-45% Perceived Intensity based on your pre-surgery, maximum bull-pen velocity corresponds with a given range based on radar readings (you'll notice in the Chart that there are 6 different Tiers of pre-surgery maximum velocity: 75 mph, 80 mph, 85 mph, 90 mph, 95 mph, and 100 mph). Therefore, if your pre-surgery max velocity was 85 mph, our suggested radar readings at 60 feet would be between 49-55 mph.

These two charts can be used throughout the first 21 Weeks of our Throwing Schedule as you progressively increase your distance, and thus, effort. Once you get to Week 22, we feel that you will have a much deeper understanding of the "feel" and "rhythm" of this progression so much so that you will be able to comfortably Self-Regulate your feel and effort. Keep in mind that this Chart is meant to be a starting point, as there are many variables that influence these numbers. We'd also recommend that you err on the side of throwing with less, rather than more velocity within each range. Be sure and consult with both your Medical Professionals and Pitching Coach.

Chart #1: Perceived Intensity Progression

<u>Week</u>	<u>~Max Days/Week</u>	<u>~Max Distance</u>	<u>~Perceived Intensity</u>
Week 1	4	45 ft	15-20%
Week 2	4	60 ft	20-25%
Week 3	4	75 ft	25-30%
Week 4	4	90 ft	30-35%
Week 5	5	105 ft	35-40%
Week 6	5	105 ft	40-45%
Week 7	5	120 ft	45-50%
Week 8	5	135 ft	50-55%
Week 9	6	150 ft	55-60%
Week 10	6	165 ft	60-65%
Week 11	6	180 ft	65-70%
Week 12	6	180 ft	65-70%
Week 13	6	195 ft	70-75%
Week 14	6	195 ft	70-75%
Week 15	6	210 ft	75-80%
Week 16	6	210 ft	75-80%
Week 17	6	225 ft	80-85%
Week 18	6-7	240 ft	85-90%

Week 19	6-7	240 ft	90-95%
Week 20	6-7	255 ft	95%
Week 21	6-7	270 ft	95+%

Chart #2: Target Velocity Ranges Based on Perceived Intensity

Target Velocity Ranges based on Perceived Intensity

This chart shows the approximate relationship between perceived intensity & actual intensity. Based on knowing an athlete's bullpen velocity, you can use this chart to identify target velocity ranges given the desired effort level called for in your throwing program. This chart is meant to be a starting point, as there are many variables that influence these numbers. Always defer to a coach or rehab professional to tailor any throwing program to your specific needs.

Perceived Intensity	Approximate Actual Intensity	Peak Bullpen Velo	Peak Bullpen Velo	Peak Bullpen Velo	Peak Bullpen Velo	Peak Bullpen Velo	Peak Bullpen Velo
		75 mph	80 mph	85 mph	90 mph	95 mph	100 mph
15%	35%	24-26 mph	26-28 mph	27-29 mph	29-31 mph	31-33 mph	33-35 mph
20%	40%	28-30 mph	30-32 mph	32-34 mph	34-36 mph	36-38 mph	38-40 mph
25%	45%	31-33 mph	34-36 mph	36-38 mph	38-40 mph	40-42 mph	43-45 mph
30%	50%	35-37 mph	38-40 mph	40-42 mph	43-45 mph	45-47 mph	48-50 mph
35%	55%	39-41 mph	42-44 mph	44-46 mph	47-49 mph	50-52 mph	53-55 mph
40%	60%	43-45 mph	46-48 mph	49-51 mph	52-54 mph	55-57 mph	58-60 mph
45%	65%	46-48 mph	50-52 mph	53-55 mph	56-58 mph	59-61 mph	63-65 mph
50%	70%	50-52 mph	54-56 mph	57-59 mph	61-63 mph	64-66 mph	68-70 mph
55%	75%	54-56 mph	58-60 mph	61-63 mph	65-67 mph	69-71 mph	73-75 mph
60%	80%	58-60 mph	62-64 mph	66-68 mph	70-72 mph	74-76 mph	78-80 mph
65%	84%	61-63 mph	65-67 mph	69-71 mph	73-75 mph	77-79 mph	82-84 mph
70%	86%	62-64 mph	66-68 mph	71-73 mph	75-77 mph	79-81 mph	84-86 mph
75%	88%	64-66 mph	68-70 mph	72-74 mph	77-79 mph	81-83 mph	86-88 mph
80%	90%	65-67 mph	70-72 mph	74-76 mph	79-81 mph	83-85 mph	88-90 mph
85%	92%	67-69 mph	71-73 mph	76-78 mph	80-82 mph	85-87 mph	90-92 mph
90%	94%	68-70 mph	73-75 mph	77-79 mph	82-84 mph	87-89 mph	92-94 mph
95%	96%	70-72 mph	74-76 mph	79-81 mph	84-86 mph	89-91 mph	94-96 mph
100%	99+%	72-74+ mph	77-79+ mph	82-84+ mph	87-89+ mph	92-94+ mph	97-99+ mph

*Chart based on research from Slenker et al (2014), Wilk et al (2002)

**These ranges are meant to serve as an approximate guideline - significant individual variation may exist

Supplemental Resources & Notes

We are extremely grateful to also have Nunzio Signore & Nolan Rappé, two highly respected professionals in their field, offer a number of programs that can be used to supplement our Throwing Schedule. You will find an overview to each of these programs below, along with a link in their bio's if you are interested in pursuing additional information from these incredible contributors (you will also find an outline of these programs after the completion of our Throwing Schedule).

Nunzio Signore: Strength & Conditioning

We are so grateful to have such an invaluable contribution from Nunzio Signore, who has had an incredible amount of success with his post-surgery return to training and throwing programs. His Strength & Conditioning Program is designed to supplement your physical therapy throughout the rehabilitative process, and his program places a major emphasis on the very early stages post-surgery to ensure that your body is well prepared once you begin your return to the throwing schedule. We highly recommend that you look into Nunzio's program, and share it with your Doctor and Physical Therapist. You can find an outline of his program at the end of our Throwing Schedule, and a more detailed version of his program here:

Link: <https://rocklandpeakperformance.com/rpp-baseball-tj-strength-training-program/>

Contact: <https://rocklandpeakperformance.com/>

Nolan Rappé: Ancillary Pre & Post Throw Arm Care:

We are so grateful to have such an invaluable contribution from Dr. Nolan Rappé, who is a Physical Therapist for SSM Health Physical Therapy in St. Louis, MO. A 2017 graduate of Washington University in St. Louis, Nolan is a Certified Strength and Conditioning Specialist with the National Strength and Conditioning Association. He is certified in dry needling and is Functional Range Conditioning certified through Functional Range Systems. Nolan's clinical specialty includes both conservative and postoperative rehabilitation of overhead athletes as well as strength and conditioning program design with an emphasis in baseball players. He utilizes systematic evaluations and progressions in combination with advanced mechanical analysis to individualize care and streamline return to competition.

Link: <https://jaegersports.com/program/return-to-throwing/chapter/nolan-rappe-plyometric-progressions-for-throwing-program/>

Contact: IG – Nolan.Rappe

Notes Regarding Timeline of Throwing Schedule

Week 1: As mentioned earlier, you'll notice that our Throwing Schedule is based on "days", rather than a traditional "weekly" schedule. So keep in mind that you will be throwing "every other day" from the onset until you get to Week 5, where the format changes to 2 Days on, and 1 Day off.

You'll also notice that the start of your Throwing Schedule each day will begin at 30-45 feet (rather than, e.g., 30 feet). The reason for starting you out in this "range" is because you may feel like 30 feet is too close of a distance to start at – especially if you are in High School, College, or Professional Baseball. In addition, today's athletes will also tend to first go through a very thorough Arm Care Program prior to throwing (e.g., Bands, Plyo Balls, etc). And finally, because we are placing such a strong emphasis on *arc* throwing from the onset, you will probably notice that the ball will actually carry much further than throwing it on a line. For all of these reasons, you may feel like starting at a distance closer to 40 or 45 feet.

However, you may find that 30 feet may actually be the right distance to start with, especially if you are a younger athlete. The bottom line is that we are giving you the flexibility with the beginning of your throwing session to start where it feels comfortable, knowing you can disburse the allotted amount of throws within this range (30-45 feet) in any manner. As always, listen to your arm and instincts.

Week 5: Starting at the beginning of Week 5 (Day 29), we will be going from "every other day" of throwing, to a "2 Days On, 1 Day Off" format. We feel strongly that by Week 5, the arm and body simply want to move more often, especially considering that throws are being made with such Low Intent and Perceived Intensity. We feel that it is vital and necessary at this point for the body to get more blood flow and oxygen with more frequency and *continuity*. We believe strongly in the principle of Davis's Law: "soft tissue heals according to the demands that's being placed on it".

Week 9: Starting at the beginning of Week 9 (Day 57), we will begin going from a "2 Days On, 1 Day Off" format to a "3 Days On, 1 Day Off" format. For the same reasons that we added an additional day in Week 5, we feel that after more than 2 Months of optimal, incremental build-up and conditioning, the arm is positioned to throw more. Because of the increase in frequency of throwing, you'll note that the "middle" of the 3 days is scheduled to be a "light day". But keep in mind that you can always go lighter on any particular day, or even take a day off. The bottom line is that we want your arm to start moving the arm and body 3 out of 4 days at this point because the workload and intent is still relatively low even into Week 9. As always, listen to your arm.

Note: In Week 9, you have the option after any throwing session to begin “Cooling Down” on the Mound at 45 feet in order to get acclimated to the slope. Please keep in mind that the tendency may be to throw with more effort “because” you are now on the mound. Therefore, be sure to err on the side of using *less*, rather than more effort.

Week 19: Starting at the beginning of Week 19 (Day 127), we strongly encourage you to begin to Self-Regulate if you haven’t begun this process. This also marks the beginning of The Pull-Down Progression Phase.

Week 22: Starting at the beginning of Week 22 (Day 148), we will introduce a traditional “7 Day Format”. Though you will be encouraged to continue to Self-Regulate, we have built in a Light, Medium, and Heavy Day format into your Throwing Schedule that is designed to help you transition into your Mound Ramp-Up, and eventually, Live Pitching. This is also where we begin the process of Building-Up of Higher Intent Pull-Downs.

Week 28: Starting at the beginning of Week 28 (Day 190), you will begin transitioning into your “Pitch Count Build-Up”. Once you have established 20 pitches in an “In-Game” outing (Week 27, Day 187), you are now ready to begin to Build-Up your “live”, in game pitch count. Traditionally, this is done by adding 15 Pitches per week. Thus, for Week 28, we would recommend following the same schedule as Week 27, and simply add 15 Pitches on Day 194, or a week later. If this progression feels right, you can continue to add 15 Pitches every 7 Days. You will also notice that once you Build-Up your pitch count to your desired workload, you will see “sample schedules” to help you transition into a 5, 6, or 7 Day Throwing Cycle for Starting Pitchers, along with some throwing protocols for Relief Pitchers (you will also see two corresponding links to articles for more information regarding these areas). Naturally, as with everything else in our Throwing Schedule, listen to your arm and add “live inning” pitches at your discretion.

Note: For Relief Pitchers, you may find that once you Build-Up to, e.g., 30 pitches, you will want to follow the “Relief Pitcher Protocols” that we have also set up for you in the last section.

Core Principles:

How to Best Build-Up & Condition an Arm from Scratch

Arm Care

There are many different ways to prepare your arm *prior* to throwing. Please be sure that whatever you do, your arm is *always* warmed up and prepared thoroughly prior to throwing each day. The same applies to *post* throwing arm care. You will find some great information regarding pre/post throwing routines from Nolan Rappé below.

Arc & Massage Throwing

Video: <https://www.youtube.com/watch?v=E9t5awU8Kvs&t=4s>

The single most important aspect of any type of Throwing Progression or Build-Up starts by establishing an optimal *base*. The best way to build a base is to make “low intent” throws, or what we call “massage throws” from the onset and then slowly and progressively, add more volume and distance over time. Massage throwing implies that you are throwing with freedom, relaxation, and effortlessness – all of which allow the arm (body and mind) to best adapt to adding more load, gradually, without being “shocked”.

The best way to ensure that you are throwing in this manner is to throw the ball with “arc” from the onset. Arc throwing provides a number of vital benefits, including relaxation in the arm, body and mind, a gradual increase of range of motion, feel (proprioception), and athleticism.

The combination of “massage throwing” with “arc” allows the joints, ligaments and muscles of the arm to “warm-up” and be “pliable” in the most optimal way – slowly, surely, freely, naturally, and progressively. And concurrently, this type of throwing not only allows the body to open up freely and progressively, but it frees up the mind.

Additionally, as you begin to introduce more distance by throwing in this manner (what we call the Stretching Out Phase), eventually, as you make your way back to your maximum distance, and your arm is fully stretched out, you are in the most optimal position possible to make higher intent throws (Pulling-Down much later on in the Throwing Schedule) on the way back into your throwing partner in the *safest* manner possible.

Self-Regulation/Awareness: Listening to Your Arm and Body

Video: What does it mean to Self-Regulate?

<https://www.youtube.com/watch?v=E9t5awU8Kvs&t=4s>

“Your Arm is the Boss”

-- Deskaheh Bomberry, Sacramento City College, Pitching Coach

The ultimate goal of our Return To Throwing Schedule is to make it your own, by *Self-Regulating* as soon as possible. To Self-Regulate means to be completely in tune with your body and instincts. This may feel a bit foreign to you after going through a major surgery and months away from throwing, but the more you bring a great deal of *awareness* to how your body is feeling and adapting to new routines each day, the better you are going to understand what it means to Self-Regulate, and navigate this entire Throwing Schedule. Especially as you begin to get into a consistent rhythm with the way the Throwing Schedule gradually progresses.

Though we will make many *suggestions* to help guide you throughout these protocols based on a great deal of experience – along with leaning on a model based on Brittany Dowling’s (MOR Optimized Throwing Program) initial 10 week Build-Up – we strongly encourage you to “listen to your arm and body”, and “trust your instincts” as you go through this process so that eventually, your throwing routine runs itself.

Although these suggestions will give you a very detailed road map that you can rely on throughout the process, ultimately, the most important guide is YOUR arm, YOUR body, and YOUR instincts – especially after the initial 10 Week Build-Up Phase, when you will have had a great deal of time under your belt to get very intimate with your arm with regard to volume, distance, and effort. This ability to “feel” your way through your throwing session each day, and adapt on the fly *instinctively*, is what we mean by *Self-Regulating*.

In addition, *Self-Regulating* not only includes what your work-load is like on a given day, but whether or not you feel like adding a day or taking a day off to your Throwing Schedule in a given week. We want it to be YOUR call. Our goal is for you to get to know your arm and body so well that it feels completely natural to allow the rhythm, pace, and feedback of throwing to take over.

Therefore, at some point, as you start to feel very intimate with your arm and routine, you’ll find that the best way to *Self-Regulate* is to go out each day and simply take your arm for a walk. Be open-minded and curious. Let your arm dictate how many throws it wants to make, how far it wants to go, and for how long it wants to do it.

Thus, there comes a point where there is simply no longer a “pre-determined formula” – there is no longer a “set amount” of throws, increments, or distance on any given day. What distance you start at, how many throws you make at that distance, when you back up, how far you back up, when you decide to come back in, and with what type of intent you come back in with, are all based on Listening To Your Arm, Body and Instincts...it will tell you EXACTLY what it wants and needs each day.

Ultimately, your feel and instincts are your greatest guide and teacher, and hopefully, in short order, you will begin to notice how comfortable and empowering it is to trust these feelings. Ironically, this is similar to how you would normally go about getting your arm into peak shape based on any other typical off-season had you not had surgery.

The bottom line is that there isn’t a formula or metric that can understand and predict what best works for you on a given day...*Self-Regulating* is *by far*, the most accurate measurement and barometer that you have. And it is *by far*, one of the most essential aspects of our entire philosophy, and ultimately, your return to peak preparation and performance.

Notes:

*We have scheduled the Self-Regulation to “formally” begin at Week 20 because this is when the incremental Throwing Schedule is replaced by “Light, Medium, and Heavier” days of

throwing. However, please keep in mind that we encourage you to begin the Self-Regulating process as soon as you feel ready at any point in the Throwing Schedule.

*You may realize that by Self-Regulating, you'll actually want or need more time at any of the 3 Phases throughout the entire process of our Throwing Schedule. Please trust this feeling and be patient knowing that the difference between returning to competition in 10 months post-surgery, versus 11 or 12 months, is a moot point when it comes to ensuring that you are going to be in the peak shape of your life and are best positioned to optimize this condition for the remainder of your career.

*Though your pre-surgery throwing distance is a great barometer as to how far out you may want to extend your distance in our Throwing Schedule, the ultimate guide is still your arm, body and instincts. In other words, there isn't a "set number" or "target number" of how far you should ultimately extend out to distance wise before you feel completely "stretched out" or "opened up". Simply let your arm be your guide.

Navigating The Extension Phase Beyond 120 Feet

One of the most important decisions you will need to make is *when* you feel like you have reached your maximum distance in the Extension Phase (Phase 2), and are ready to begin the "Higher Intent Pull-Down" Phase (Phase 3) of your Throwing Schedule.

Though our Throwing Schedule is built out to 300 feet, you may find that you need more or less distance based on your age, strength and throwing history to get *fully* extended or stretched out. Therefore, be sure and note that once your arm is fully stretched out – based on whatever "week" you are in regarding the time line of the Throwing Schedule – you are ready to begin Phase 3, the "Pull-Down Phase". Again, use the Throwing Schedule as a road map, and keep in mind that each of these Phases will be addressed in greater detail as you go through the Throwing Schedule. But as quick reminder, here are the first 2 Phases that need to be completed prior to Phase 3, the Pull-Down Progression Phase:

Phase 1: 30-120 Feet (Base Building)

Phase 2: 120+ Feet -- Extension Phase (120+ Feet), Fully Stretched Out

Phase 3: Introduction to Pull-Downs

It is imperative that you are sensitive to this timeline because one of the most essential principles of our Throwing Schedule is to ensure that your arm is *fully* stretched out to its maximum distance in the Extension Phase *prior* to beginning the higher intent Pull-Down Phase, and your higher intent Pull-Downs need to be completed *prior* to ramping up your higher intent Mound Work.

By following this sequential order, you don't have to worry about "what week you are in" in the Throwing Schedule once you reach your maximum distance in the Extension Phase. You'll simply know that when you get to your maximum distance (Phase 2), you can move on to the next step (Phase 3). For example, though the Throwing Schedule is built out to 300 feet, if you feel like you peaked out at 250 feet, you can immediately begin the "The Pull-Down Phase", which will then transition you into Phase 4, the "Live Pitch Count Build-Up".

The same is true if you get to 300 feet, and your arm is *not* at its maximum distance yet. In this scenario, you can add 15-30 feet a week, and then, once you get to your maximum distance, you can begin the same transitions from Phase 2 to Phase 3.

This will make a lot more sense as you continue to read on. Just know that regardless of where you are at in the Throwing Schedule, to not move on to Phase 3 until your arm has reached its' maximum distance in the extension phase (Phase 2).

Crow-Hopping vs Shuffling

Video: <https://www.youtube.com/watch?v=ZOjPL74sbW0&t=5s>

Every single throw that you make for the rest of your life can either be made with optimal support of your body, or not. One of the most important aspects of our Throwing Schedule is to incorporate a Crow-Hop off of your back leg (right leg for right handed athletes, left leg for left handed athletes), which should typically start around 75-90 feet.

Though, for several reasons below, we want you to Crow-Hop almost exclusively on all of your throws, we actually recommend that you do some type of shuffle with your feet for the first 6-8 weeks of the Throwing Schedule in order to be ATHLETIC and generate some RHYTHM. For this reason, use the first 6-8 weeks to move the lower half in any manner that supports this. But once you get to 75-90 foot increment, we highly recommend you begin the process of Crow-Hopping off of your back leg.

When you do begin to Crow-Hop, you'll notice that you won't need to gain much ground at 75-90 feet. Though this may feel a bit less athletic, you are actually optimizing maximal ground forces by not gaining ground. Either way, you'll notice that as your distance increases incrementally, your Crow-Hop will also incrementally "gain a little bit more ground", "get a little bit more aggressive", and you'll become even more athletic. In short, the further you throw, the more athletic we want you to be, and the more likely you are going to gain ground and momentum when Crow-Hopping.

Crow-Hopping off of your back leg (as opposed to shuffling) provides *countless* benefits, including, 1) it takes stress off of your arm/elbow by optimizing the support from your body –

especially your lower half, 2) it encourages *optimal* hip and glute load, pelvic tilt, and ground forces, 3) it promotes athleticism, and 4) it best simulates how you throw off the mound.

On the other hand, shuffling your feet not only deprives you from optimizing these benefits, but actually leaves the arm in a vulnerable position because if the lower half moves too quickly, the pelvic tilt is compromised, a lot of the ground forces can be lost, and the arm is left to fend for itself without the support of this load.

This type of dynamic is eerily consistent with what happens when you are in a wave. One thing that you can clearly feel when you are body surfing is the awesome power of the wave “gathering”, and then the release of the wave’s energy out in front. This is no different than the feeling you get from Crow-Hopping off your back leg – just as your body gets full support of the powerful gathering of the wave, the energy that is released out in front (your arm) is the beneficiary of this optimal load. Thus, when you Crow-Hop off your back leg, your arm is “along for the ride”. When you shuffle your feet, the arm can “miss out” on the support of the wave.

Additionally, Crow-Hopping off of your back leg plays a key role in the Pull-Down phase of throwing. Loading off of your back leg helps you get “taller” as you load, and enables you to get downhill with more leverage and support of your legs, core and ground forces. When you shuffle your feet on the Pull-Down phase, it positions your body to work “uphill”, forcing your arm to work harder because it is much more difficult to get over your front side on flat ground. And this can put a lot of unnecessary pressure on the elbow/shoulder when the arm is having to work harder to “catch up” because the legs, core, and ground forces cannot be engaged nearly as well once the lower half glides forward without the optimal support of the gather and load.

Simply put, it is imperative to load off your back leg when throwing so your legs and core can take the brunt of the throw, rather than your arm. Proper Crow-Hopping is one of the single most important aspects of our throwing philosophy, and plays a vital role in ensuring you transition back to your throwing potential in the safest and most supportive way possible. This is something we feel very STRONGLY about.

For much more information regarding the major benefits of Crow-Hopping, here is a great explanation from Randy regarding the science behind these benefits, along with an in-depth discussion Alan had with Ben Brewster/Tread Athletics Podcast:

Randy: https://www.youtube.com/watch?v=529jG4_xCnE

Alan/Ben Brewster –Tread Athletics Podcast: <https://www.youtube.com/watch?v=uD-8-7BdTw8>

The Missing Link: The Magic That *Happens* Beyond 120 Feet

One of the most beneficial and revealing aspects of our throwing philosophy is what happens “beyond 120 feet”. In fact, one of the main catalysts to writing this Throwing Manual is due to the distance restrictions that some of the most influential, and standardized Return To Throwing Programs cap out at (e.g. 120 feet). From our perspective, what happens beyond 120 feet is where the *real* Health, Endurance, Strength, Athleticism and Feel is optimized, and the *real* magic happens.

One of the ironies of “only” throwing the ball out to 120 feet is that there isn’t much room to get air under the ball, or *Arc*. As mentioned earlier, arc is something that happens *innately* simply because it promotes a number of major benefits, including, relaxation, range of motion, greater athleticism, feel, and freedom.

Because athletes going through rehabilitation are typically training for 4-5 months in a Physical Therapy Clinic setting without throwing, and anywhere from an additional 2-3 months of throwing often in a relatively *linear* fashion simply because the proximity of their throwing partner caps at, e.g., 120 feet – which makes it difficult to get air underneath the ball – they can become quite rigid, restricted and mechanical.

Now when you contrast that number – 120 feet – with the distance an average Major League fastball (93mph) will travel (330 feet) with a 35-40 degree arc, you can begin to understand just how limiting and restricting 120 feet is to the *capacity* and *capability* of the arms range of motion, and the natural movement patterns of an athlete that is accustomed to training at 200 feet, 250 feet, or 300 feet or more (for more info, please see Ben Brewster’s Distance to Velocity Chart here: <https://twitter.com/TreadAthletics/status/1040365778598412288>).

Now this isn’t to assume that every athlete that throws 93mph is throwing the ball 330 feet – it’s just to say that there is a lot of *available* “Range of Motion” and “Energy” in the arm and “Athleticism” in the body that has to be contained and constricted in order to “only” throw the ball 120 feet. And though some have argued that you can “throw the ball 300 feet on a line and get the same effect” of throwing it 300 feet in the air, this couldn’t be further from the truth – they are two *completely* different throws and effects on the body and mind (as you will see below).

Another way of saying this is that throwing the ball in a linear fashion out to 120 feet not only prevents the athlete from finding out what is *in* the arm, but *restricts* the athleticism that comes from throwing the ball higher and farther. Therefore, it’s easy to understand why a player may feel especially rigid and limited if they are capped at 120 feet in their rehabilitation program...*especially* when their pre-surgery distance was at 200, 250, or 300 feet or more.

On the other hand, throwing the ball with Arc, gradually, as you move further away from your throwing partner provides *several* vital benefits, including, 1) Optimal Range of Motion – gradually throwing the ball uphill allows the arm, and its corresponding muscle groups, to progressively and incrementally stretch out (“open up”) in the most optimal way, 2) Proprioception/Variability – gradually throwing the ball uphill gradually changes the release point and promotes feel, variability and adaptability), 3) Optimal Glute, Hip, Pelvic Load – throwing the ball with greater arc promotes a greater activation of the glute, hip and pelvic

load, 4) Ground Forces – throwing the ball uphill promotes staying connected to the ground longer (*especially* when you crow hop off the back leg as discussed earlier).

Also, by throwing with arc, you are supporting your body because you are promoting low impact, low intent throws from the onset of throwing – especially as you gradually begin to introduce more effort. Throwing uphill also sends a signal to the body to “relax,” “loosen up” and be “free.” So, simply by throwing with arc, the body (and mind) are learning (relearning) what it feels like to throw with relaxation, looseness and freedom – which is an essential aspect of what we want athletes to focus on for the entire stretching out phase in Long Toss (as you gradually move away from your throwing partner), and eventually, the Pull-Down Phase (as you gradually move back in toward your throwing partner).

A Summary of Major Benefits that occur beyond 120 feet include

Volume/Conditioning – simply put, the further out you go, the more throws you are going to make. And the beautiful thing about this is that you are increasing your Volume in the most ideal way...with *low impact* throws. Low impact throws allow the arm to condition in the most optimal way because you are adding progressively lighter loads without “shocking” the arm. This is the best way to build endurance and the most ideal way to progressively build an arm into shape.

Recovery – better endurance provides for better recovery, so the next day of throwing is greatly benefitted. And optimal recovery is one of the most essential aspects of any type of training, promoting resiliency and long term health.

Athleticism – arc throwing leads to more distance, which leads to more athleticism. The more athletic you are, the more you activate your legs, core, pelvic tilt and ground forces. And the by-product of going out to further and further distances is the body gets more dynamic...and the further out you go, the closer these dynamics resemble who you are on the mound.

Cross Training/Blending – because you are training your body to go uphill and downhill, you are positioning your body to access a different level of variability and adaptability by activating different muscle groups. This is the same reason why sprinters *blend* their training by running uphill and downhill, and baseball and softball players over and under load with lighter and heavier balls. This also helps you avoid issues with overuse or repetitive movement scenarios.

Mental Freedom –From a *mental* point of view, arc throwing frees up the mind. Just as you are “opening up” the arm by expanding your distance, you are also opening up and expanding your mind. And this makes a lot of sense when you consider that 120 feet promotes a more linear throw, or “narrow focus”, which is akin to the logical side of our brain, or left brain. On the other hand, “open focus” has to do with space, and is very akin to the creative side of our brain, or right brain. That’s why by simply freeing up your body by throwing higher and farther, you are similarly freeing up your mind – you are tapping into your right brain, which, not so ironically, activates your instincts, athleticism and creativity.

Though the majority of the benefits beyond 120 feet come from the first phase of Long Toss – what we call the “Stretching Out Phase” – there is still another massive benefit that happens

once the athlete gets to their “peak” distance, and makes their way *back* in toward their throwing partner. This is what we call the “Pull-Down Phase” of throwing. Pulling-Down does not come into play until the last part of the Conditioning Phase of our Throwing Schedule, but at some point, the arm is going to be ready to start making semi-aggressive to aggressive throws on the way back in toward your throwing partner from the Stretching Out Phase.

What is vital about Arc Throwing and the Stretching Out Phase – *because* you are going beyond 120 feet – is that the arm *and* body are in the most optimal position to make aggressive throws *because* it’s been fully stretched out – *because* it’s been well-conditioned – *because* the athlete has been fully woken up – *because* the legs, core and pelvic tilt have been optimally engaged – and *because* of optimal ground forces that are best activated as a by-product of throwing it higher, and crow-hopping off the back leg. Additionally, throwing uphill promotes a type of leverage to throw downhill that is hard to access at 120 feet.

The bottom line is there are countless benefits that are simply not accessed and experienced when an athlete is capped at, e.g., 120 feet...countless benefits that can be accessed as a by-product of going *beyond* 120 feet.

Additional Notes Regarding Our Throwing Schedule

Soreness vs Pain

If at any point in the Throwing Schedule – especially in the beginning – you feel any type of “soreness”, give your arm a chance to work through this. Soreness may simply be part of the process, and something that you may easily be able to throw through. However, ALWAYS err on the side of conservatism and back off or shut your throwing down for the day if you aren’t able to decipher the difference between soreness and pain. A simple rule of thumb is soreness is something that will tend to *decrease* with each passing throw, and is something that you can “throw through” – pain is something that *increases* with each passing throw and is a sign to stop throwing *immediately*. Always Listen To Your Arm.

Transitions from one increment to the next

Please note that the “amount” of throws you make at each increment in our Throwing Schedule is designed to be used to *transition* or “get to” the next increment. For example, if the Schedule says to make “15 throws at 60 feet”, and then, the next increment is “15 throws at 75 feet”, be sure and “use” the 15 throws to *get to* the 75 foot mark. In other words, if you backed up 1 foot a throw from 60 feet, you would get to 75 feet “in” 15 throws. The reason we are making a huge deal of this is because often times in many of the standardized throwing programs, the instructions will have you make, e.g., 15 throws at 60 feet, and then 15 throws at 75 feet without this type of transition, which can be a bit of shock to the arm, compared to using the 15 throws as a gradual bridge to the next increment.

Keeping the effort light on your Pull-Downs (until you reach your maximum distance in the Throwing Schedule)

Once you get to your furthest distance on a given day, it is essential that you maintain loose arm action, relaxation, freedom, and some arc on the way back in toward your throwing partner as well – especially in Phase 1 of the process (out to 120 feet). The tendency may be to start using “more” intent, or even start “Pulling-Down” when your arm is still very early in the process of the Stretching Out Phase. Therefore, in Phase 1, think in terms of “Massage Throwing” on your way back in to your throwing partner, and Phase 2, “Light or Modified Pull-Downs” on your way back in to your throwing partner. True high intent throwing or Pull-Downs doesn’t come into play until you are at or near your maximum distance at the end of your Extension Phase (Phase 3), which may not occur in your Throwing Schedule for an additional 8-10 weeks beyond 120 feet. Therefore, please refrain from any type of high intent throwing or Pull-Downs until you get out to your maximum distance.

Here is a simple formula to ensure that you avoid throwing with too much intent, too soon, on the way back in to your throwing partner. Let’s say that 250 feet was your maximum throwing distance pre-surgery, and thus, is a good indication of where you can project your maximum distance to be once you get fully extended. In this scenario, if you go out to 125 feet on a given day, you can pretty much assume that you can use 50% effort or intent on the way back in to your throwing partner (125 feet being 50% of 250 feet), knowing that your arm is about 50% “stretched out” to its ultimate capacity. And if you are later on in your Throwing Schedule, and you get out to, per se, 200 feet in this same scenario, you can use 80% effort or intent on the way back in because 200 feet is 80% of 250 feet.

The idea here is that the “degrees of freedom” that your arm has been “opened up” to on a given day matches your “percentage of intent” on the way back in to your throwing partner. Not only does this formula help you avoid throwing with too much intent, too soon, but it also helps promote a great deal of relaxation in your arm knowing that you shouldn’t be throwing with *full* intent until your arm is *fully* stretched out to its maximum distance. The ability and awareness to refrain from throwing with too much intent, too soon is another *essential* principle of the entire Build-Up process. And this formula works any time you go out to throw – whether you are rehabbing or not.

The bottom line is that whatever distance you go out to on a given day, it is VITAL that you refrain from throwing with more intent than your arm is prepared to handle. Once you do start getting out to distances well beyond 120 feet, you will instinctively know when to start gradually adding more intent on your way back into your throwing partner. But the key word here is *gradually*! Keep in mind that it is *always* better to err on the side of throwing with *less*, rather than more intent until you start getting much deeper into the Extension Phase of the Throwing Schedule.

Day after Rest Day

If you are coming off a “rest” day, or “off” day, you may consider going a little less distance on the following scheduled day to throw than the Throwing Schedule suggests – especially once the work-load increases. For example, we have built in a day off on Sunday, so on Monday, you may consider going a bit lighter regarding distance on the day after the day off. The main idea is that we want to be sure that you don’t shock your arm by putting too many demands on it the day after a day off. This starts to become much less of a concern once you start adding days to the throwing schedule.

Pre-Surgery Max Distance Throwing Compared to Post-Surgery Max Distance Throwing

Because your elbow is coming back from surgery, you may not necessarily want to go out to your maximum distance in the Extension Phase of our Throwing Schedule (Phase 3) prior to the High Intent Pull-Down Phase. In other words, if your maximum distance pre-surgery was 300 feet, you may decide that 250-275 feet is sufficient to get your arm fully or comfortably stretched out. This is completely understandable because you are coming back from a surgery, and you may feel like you want to stay in more of a comfort zone. However, from years of experience, you will probably notice that your arm will want to get out to its maximum distance the next time you cycle your arm back into shape (i.e., the next Off-Season).

Integration of Off-Speed Pitches

Feel free to start working *lightly* on off-speed pitches on flat ground or the mound at the end of your throwing session starting around Week 16. Our philosophy is to ensure that the arm has been well conditioned prior to working on off-speed pitches, so whenever you feel like your arm is “getting close” to its max distance, you may consider to start lightly spinning the ball. Again, we highly recommend that anything you do, begin lightly, and then you can begin to gradually add more spin as you add more distance and intent to your throwing routine. As always, Listen To Your Arm, and let it help dictate when you are ready to start spinning the ball lightly.

How to Navigate this Throwing Schedule for the Youth Athlete

If you are a youth athlete, and aren’t physically able to throw beyond 120 feet, than we’d recommend that you go through our schedule “as is” out to 120 feet (Phase 1), and then add an additional 3 weeks or so at the 120 foot threshold to build more volume, athleticism and proprioception prior to beginning both the ramp up phase of your Pull-Downs, and eventually, the ramp up phase on the Mound. Again, our focus is on conservatism, and insuring that when you do get on a mound, you are in peak shape. As always, listen to your arm, and consult with both your Physical Therapist and Baseball Coach.

Glossary of Terms

Athleticism

Allowing your body to move naturally and freely. Not “trying” to throw according to any type of “mechanical form”. Pure Instincts.

Throwing Mechanics

As important as it is to have “proper” throwing mechanics, we’d prefer you focus on being athletic and natural. When you allow your “innate” movement patterns to take over, this is what best support your arm/body, and acclimates you to your most efficient and effective “mechanics”. If you have specific needs regarding “mechanical checkpoints”, by all means use them. Just keep the idea of being athletic at the forefront of your mind.

Low Intent Arc Throwing (Massage Throws)

Perhaps as important as any principle behind our throwing philosophy is Low Intent, Arc Throwing – *especially* from the onset of your throwing session each day. From your first throw until even your last throw each day, we want your mind-set to be focused on being loose, relaxed, free and effortless. The best way to do this is to throw with a great deal of relaxation in your arm, and with ARC. Arc provides relaxation, looseness, and freedom in the arm, body and mind. It also helps you load into your back side, optimally engage your back leg, hip, and glute, sets the tone to promote an optimal pelvic tilt, and optimize ground forces. A visual that may help you to comprehend this better is to imagine that you are a Quarterback throwing a short, gentle screen pass over the line to your running back with feel and touch.

Long Toss

Long Toss is broken down into two major phases: Stretching Out and Pulling Down. The main objective of Long Toss is to *stretch* out your arm, progressively, to its furthest distance by gradually throwing the ball *uphill* as you move away from your throwing partner (Stretching Out Phase), and then eventually downhill as you move back in toward your throwing partner (Pulling-Down Phase). This practice not only promotes optimal Range of Motion in the arm, but helps develop incredible feel, or *proprioception*, by making these micro-adjustments (variability) with your release point. Hence, feel and accuracy is another incredibly beneficial by-product of Long Toss. Long Toss also activates your maximum amount of *athleticism*. By progressively throwing the ball uphill, and then progressively downhill, you are allowing your most innate movement patterns to organize freely, and thus, your “mechanics” can synch naturally. This is one of the greatest ironies of Long Toss – your best mechanics “come out” of Long Toss as a by-product of “not” trying to be mechanical. Thus, variability actually promotes repeatable outcomes, rather than “trying” to repeat mechanically. This is a very liberating way to experience throwing.

Other major benefits of Long Toss: Conditioning, Endurance, Strength, Resiliency, Improved Recovery, Mental Freedom

Stretching Out Phase of Long Toss

The first phase of Long Toss is the Stretching Out Phase. The predominant goal is simply to stretch your arm out by throwing the ball progressively higher as you move away from your throwing partner. This is how the arm can stretch out in the most optimal way – slowly and gradually. By having full range of motion, your arm is not only best prepared for the more aggressive phase of Long Toss (the Pull-Down Phase), but it is also best protected. In other words, “optimal freedom prior to optimal explosiveness”.

Pulling-Down Phase of Long Toss

Pulling-Down is the second Phase of Long Toss. A true Pull-Down is to maintain the same intent of your maximum distance throw, and compress it into shorter distances as you get closer to your throwing partner. Thus, if your maximum distance is 250 feet, the idea is that you maintain the exact same effort or intent on the way back into your throwing partner. But Pull-Downs can in theory also be “modified” because there are going to be days in which you don’t get out to your maximum distance. For example, if your maximum distance is 300 feet, but you only went out to 150 feet, you can “Pull-Down” with 50% effort (since 150 feet is 50% of your typical maximum distance). Also, on days that you do get out to your furthest distance, we highly encourage you to refrain from Pulling-Down with full intent until you start getting into the 2nd half of your Pull-Downs (i.e. 150 feet if you were out to 300 feet). You can still “Pull-Down” from 300 to 150 feet in this example – just reduce your effort to 80% or so. This helps to reduce your workload as well on flat-ground – especially on days you are going to be throwing off the mound.

Progressive Pull Downs

Be sure that once you begin the “Pull Down” phase of your throwing program, which in your Throwing Schedule, begins once you have reached your peak distance, be sure to also incorporate your “higher intent” Pull Downs *progressively*. For example, on your first Pull Down day, use only 80% effort (even though the arm is fully stretched out), and then add 5% on your next Pull-Down Day so that it takes you 3-4 more throwing sessions to get to your full intent, Pull Down effort (you theoretically don’t need to ever get to “100%” effort of your Pull-Downs until 120 feet and in). It is only at THIS point in the Throwing Schedule that you are ready to throw off the mound with full intent. Please keep in mind that for safety reasons, be sure and stay at least 70 feet away from your throwing partner. You may not be able to appreciate how much life, carry, and velocity you have on the ball once you get to the end of this Throwing Schedule. We highly recommend that if you want to get closer to pitching distance for your Pull-Downs, to please do so with a catcher that is fully geared up, including face mask.

Note: Although you can still get on the mound much earlier than your first full intent day, be sure that you *match* the effort off the mound with the same intent of your Pull-Downs that day (ie, if you Pull Down at 80% on your first Pull Down day, you can throw with 80% intent off the mound).

Perceived Effort vs Actual Effort

Because there is quite a distinction between “perceived effort” and “actual effort”, be very mindful of erring on the side of throwing with *less*, rather than more effort. Studies have shown that when an athlete uses what they “perceive” as “x” amount of effort (i.e. 50%), they are actually using much more “actual” effort than they realize. Therefore, the use of a radar gun can be extremely helpful by taking the guesswork out to give you accurate feedback as to the difference between “actual effort” and “perceived effort”.

Effort level regarding Cool Down on the Mound

Once you are ready to begin cooling down on the mound at the end of your throwing session, be sure and navigate this transition like everything else we have suggested – slowly and surely. As mentioned above, because it may be difficult to understand the difference between real and perceived effort, always err on the side of throwing with “less” effort – especially when you first start getting on the mound in Phase 2. A good way to ensure this is to throw with some type of objective measurements, like radar. Either way, be sure to throw with extremely loose and relaxed arm action. The initial goal of throwing off the mound is simply to give your body a chance to get the feel of the slope so you can acclimate to your natural movement patterns on the mound. But the mound can also give you a false sense of security to throw the ball firmer. So keep in mind the earlier formula we used for “Pulling-Down” – if you are at, for example, 150 feet on a given day, and your pre-surgery throwing distance was 300 feet, use 50% effort during your cool down since 150 feet is 50% of your projected max distance of 300 feet. If you went out to 225 feet in this same scenario, then you can use 75% effort off of the mound, considering that 225 feet is 75% of 300 feet. And remember, be sure to have FULL Range of Motion PRIOR to making any FULL intent throws...whether that is on or off the mound.

Mound Ramp Up/Live Inning

The Mound Ramp up (with FULL intent) phase doesn’t begin until your arm has been *fully* stretched out to its maximum distance, and you are through at least 4 solid Pull-Down Sessions. Once you are ready for the Mound Ramp Up phase, you will then go into a 6 day cycle of throwing, which includes a heavier workload on Tuesday and Friday, a lighter workload on Wednesday and Saturday, and a medium workload on Monday and Thursday. You will have the option of taking Sunday off or going light. Based on this new schedule, your Mound days will be on Tuesday and Friday. As you will see, we have scheduled you for at least 6, high intent bull-pens prior to a competitive inning. At that point, we’d suggest that you add approximately 10-15 pitches a week to your “game situation” Ramp Up.

Note: The reason that we want you throwing 6 Days a week is because once you start incorporating heavier workloads off of the mound, we want your body to “move” essentially every day...even if it’s light. This is especially the case when you consider that the Throwing Schedule is designed for you to build-up so much endurance that your arm should recover much more effectively than you may be accustomed to. Therefore, be sensitive to the idea that you’ve been conditioned for this, and therefore, you may notice that your arm wants to “move” and throw more often.

Low Intent Day

Once you integrate a heavier workload, including Bull-Pens and Game situations, you will tend to see each throwing session has a specific theme. Low Intent Days will almost always follow a Bull-Pen or Game situation because the main focus is on “recovery and rebuilding”. Therefore, Low Intent days will involve almost exclusively, low effort, massage-type throwing.

Medium Intent Day

Medium Intent Days will tend to follow Low Intent Days, and be a precursor to High Intent Days. Medium Intent Days will still focus predominately on “recovery and rebuilding”, except it will tend to garner more distance throwing and even the potential of medium intent Pull-Downs.

High Intent Day

High Intent Days are designed to be your heaviest workload days, and typically include a full extension Long Toss to maximum distance, Modified to Full intent Pull-Downs, and either a Bull-Pen or Bull-Pen plus a Game appearance. High Intent Days will tend to follow Medium Intent Days.

Note: As a reminder, you can modify your Pull-Downs on High Intent Days until you get about half way back into your throwing partner (e.g. 120 feet if you maxed out at 240 feet). Then, you can resume your High Intent Pull-Downs as you make your way in from 120 feet.

Davis’ Law/Tissue Repair

According to Davis’ Law, all human tissue adapts and aligns in response to the stresses to which it is exposed, including why the introduction of stress can be a positive. Here’s a little excerpt from an article on the topic from Randy: “the microscopic trauma to tendons, ligaments, and muscles is a necessary phase to go through so the body can repair the damage by specialized cells (UMC’s) that float around in the bloodstream with no responsibility until they sense damage to another cell. At this point, they have the miraculous ability to morph themselves” (Article – <https://floridabaseballarmory.com/shut-it-down-or-keep-throwing-maybe-theres-an-alternative/>).

Questionnaire – Pre-Surgery Throwing History & Routine

In order to truly optimize the success of your return to throwing, it is of extreme importance to go over, *in great detail*, your pre-surgery throwing history. Not only is it vital to know such elements as distance and volume, but how you *moved* innately and athletically as a by-product of your throwing routine. In addition, any other types of training modalities you used with regard to Arm Care and Arm Preparation would be essential to note as well. All of this information is extremely important for you to utilize moving forward, and naturally, share with both your Physical Therapist and Pitching Coach.

- 1) Off-Season Build-Up
 - a) How many weeks did it take you to get into peak shape prior to your first full intent bull-pen?
 - b) On your more aggressive days, how far out would you go, distance-wise, regarding Long Toss (i.e. 120 feet, 240 feet, 300 feet, 330 feet, 330+ feet)
 - c) How many days a week did you go out this far?
 - d) How many years have you been Long-Tossing (if applicable)?

- 2) In-Season Throwing
 - a) * What does your In-Season routine look like as a Starting Pitcher (5, 6, or 7 Day Cycle) regarding distance and volume for each day?
 - b) * What does your In-Season routine look like as a Relief Pitcher regarding distance and volume each day?

* Please use approximate distance (feet) and volume measurements for each day

- 3) Long Toss
 - a) Please Define Long Toss
 - b) Did you typically throw with or without an Arc?
 - c) How many days a week do you typically throw in the Off-Season?
 - d) How many days a week do you typically throw, In-Season?

- 4) Please feel free to share any other information about your throwing routines or types of training you incorporated as part of your Arm Care and Arm Development

Jaeger/Sullivan Coalition

1. Sean Allen, Pitching Coach, University of Southern California
2. Kevin Barr, RSCC, RSRS, Former MLB Head Strength & Conditioning Coordinator, Rays, Marlins, Royals, Reds
3. Peter Bayer, Founder & Pitching Coach, Endless Pitching
4. Preston Benedict, Director of Player Development & Pitching Coach, Valley Sports Academy
5. Mike Bell, Head Coach, University of Pittsburgh
6. Vic Black, Minor League Pattern & Throwing Coordinator, Pittsburgh Pirates
7. Eugene Bleecker, Founder, 108 Performance
8. Kyle Boddy, Founder, Driveline, Special Assistant, Boston Red Sox
9. Chris Bodishbaugh, Pitching Coach, University of California, Berkeley
10. Deskeheh Bomberry, Pitching Coach, Sacramento City College
11. Michael Bradshaw, Pitching Coach, University of Nebraska Omaha
12. Ben Brewster, Founder, Tread Athletics
13. Jim Brower, Founder, Brower Baseball, Former MLB Pitcher & Pitching Coordinator, Chicago Cubs
14. George Brown, Pitching Coach, St. Johns University
15. Scott Brown, Pitching Coach, Vanderbilt University
16. Ezra Bye, Director of Player Development/Pitching Lab Coordinator, Wake Forest University | Former Assistant, Pitching Development and Analysis, Cleveland Guardians (2025) | Former Rehab Coordinator, Los Angeles Dodgers (2023 – 2024)
17. Todd Carrol, Pitching Coach, Massachusetts Institute of Technology, Falmouth Commodores
18. Will Carroll, Author, Carrol Guide to Sports Injuries
19. Butch Chaffin, USA National Team Coach, Tennessee Baseball Coaches Association Hall of Fame Member (2024)
20. Ryan Chapman, Owner, Chapman Baseball Compound
21. Anthony Claggett, Pitching Coach, Wichita State University
22. Woody Clifford, Owner, Sports West Performance
23. Dan Cevette, President, Prep Baseball New York & Pennsylvania
24. Dave Coggin, Founder, PFA Baseball, Pocket Path
25. Nate Cole, Pitching Coach, Harvard University
26. Shaun Cole, Former Head Coach, San Diego State University
27. Rocky Collis, CEO, Team Mustard
28. Dick Cooke, Associate Director of Athletics, Former Head Coach, Davidson College
29. Carson Cross, Co- Founder 603evo, Head Coach, St. Thomas Aquinas High School
30. Ryan Crotin, PhD, CSCS, RSCC, Executive VP, aremcare.com
31. Owen Cuffe, Director of Pitching Development & Recruiting, University of Arizona
32. Pat Day, Pitching Coach/Director of Player Development, Ranger College

33. Anthony Deleo, Assistant Coach, New Jersey Institute of Technology Pitching Coach, Great Britain u18's, u23's
34. John DeRouin, Pitching Coach, University of Arizona
35. Chad Durbin, Former MLB Pitcher (14 Years), Director of Pitching, Performance Pitching Academy (PPA)
36. Thomas Eager, Pitching Coach, Stanford University
37. Seth Etherton, Former Pitching Coach, University of Southern California
38. Aaron Everett, Pitching Coach, Wallace State Community College
39. Chris Fetter, Pitching Coach, Detroit Tigers
40. Casey Fisk, Owner, Fisk Performance Training
41. Scott Foxhall, Director of Player Development, Auburn University
42. Russ Frantz, NASM-CPT, Founder/Owner, Next Play Sports Performance
43. Drew French, Pitching Coach, Baltimore Orioles
44. Rob Friedman, Founder, Pitching Ninja
45. Ismael Gallo, DPT, OCS, Founder, Baseball Flows™
46. Bryant Gaines, Pitching Coach, University of North Carolina
47. Rolando Garza, Former Pitching Coordinator, Tampa Bay Rays
48. Jared Gaynor, Owner, Pitching Coach "U"
49. Scott Hacker, PT, DPT, Major League Physical Therapist, San Diego Padres
50. Chris Ham, Associate Athletic Director, Sport Performance and Student-Athlete Well Being, Former Athletic Trainer, Vanderbilt University
51. Evan Hauger DPT, CSCS, XPS, SFG I, Owner, KIME Performance Physical Therapy
52. Kyler Harris, Pitching Coach, Pitt Community College
53. Blake Hawkworth, Pitching Coach, Oklahoma State University
54. Ross Hawley, Founder/Owner & Podcast Host, Baseball Forward
55. Josh Heenan, CSCS, SFMA, Founder, Advance Therapy and Performance
56. Chris Hernandez, Pitching Coach, University of Redlands
57. Josh Herzenberg, Director of Player Development/Pacific Rim Operations, Ballengee Group
58. Jason Hirsh, Former MLB Pitcher, Houston Astros, Colorado Rockies
59. Matt Hobbs, Pitching Coach, University of Arkansas
60. George Horton, Former Head Coach, University of Oregon, CSU Fullerton, USA Baseball, ABCA Hall Of Fame
61. Sarah Howard, Founder/Owner, Elite Mobility Training
62. Jimmy Jackson, Pitching Coach, University of Maryland
63. Steve Janssen, Founder #BaseballActionID, Former Head Coach, Dutch National Team
64. Derek Johnson, Pitching Coach, Cincinnati Reds
65. Wes Johnson, Head Coach, University of Georgia
66. Eric Junge, Pitch IQ Founder, Special Assignment Throwing Coach, San Diego Padres
67. Jason Kelly, Pitching Coach, Texas A&M University
68. Sean Kenny, Pitching Coach, University of Houston
69. Eric Kibler, Former Head Coach, Verizon HS, ABCA Hall Of Fame Member
70. Ben King, Former Pitcher, Georgia Tech, Current Student, Emory University School of Medicine

71. Carl Lafferty, Assistant Coach, University of Mississippi
72. Jim Leggett, Pitching Coach, Appalachian State University
73. Joel Mangrum, Pitching Coach, University of Mississippi
74. Chris Martin, Head of Strength & Conditioning, Baseball, Louisiana State University
75. Michael McCarthy, Founder McCarthy Sports Performance, Former Assistant MLB Pitching Coach, Oakland Athletics
76. Jake McFarland, PT, DPT Physical Therapist, Biomechanics and Business Educator, Consultant, Entrepreneur
77. Jake McKinley, Head Coach, University of Reno
78. Skylar Meade, Head Coach, Troy University
79. Ricky Meinhold, Coordinator, Pitching Development, Toronto Blue Jays
80. Steve Merriman, Director of Pitching Development, Texas Tech University, Former Pitching Coordinator, Chicago Cubs & Kansas City Royals
81. Billy Mohl, Pitching Coach, Creighton University
82. Seth Moir, Pitching Coach, Cal Poly, San Luis Obispo
83. Greg Moore, Founder, Sevenwins, former Head Coach, St. Mary's University
84. Deven Morgan, Director of Youth Baseball, Driveline
85. Will Morris, Director of Pitching Development, Ohio State University
86. Casey Mulholland, Founder/Lead Developer, KineticPro Performance
87. Corey Muscara, Head Coach, Duke University
88. Tyler Naquin, Knights Knation, Director of Player Development & Recruiting, PPA Co-Founder
89. Mike Neu, Head Coach, University of California, Berkeley
90. Josh Newman, Pitching Coach, Purdue University, Former MLB Pitcher, Colorado Rockies, Kansas City Royals
91. Kelly Nicholson, Head Coach, Orleans Firebirds, Cape Cod Baseball League
92. Ruben Noriega, CAA Sports, MLBPA Certified Agent
93. Ricky Norton, MS of Sports Science and Rehabilitation, Founder, Norton Performance
94. Christian Ostrander, Head Coach, University of Southern Mississippi
95. Dustin Pease, Founder, Pease Baseball Professionals
96. Sam Peraza, Pitching Coach, Arizona State University
97. David Pierce, Head Coach, Rice University
98. Pat Pinkman, Former Pitching Coach, Seton Hall University
99. Anthony Pla', Former Head Coach, Lincoln University Pro Scout, Head Coach, West Chester Dragons
100. Chris Pollard, Head Coach, University of Virginia
101. Micah Posey, Pitching Coach, Florida State University
102. Chris Prothro, Former Head Coach, Eastern Kentucky University
103. Nolan Rappe, PT, DPT, CSCS, FRCms, Founder, Fortify Performance
104. Josh Reidt, FAFS, Founder, Reidt Fitness Systems
105. Adam Revelette, Pitching Coordinator, Champions Sports / Editor, Inside Pitch magazine
106. Tyler Robinson, Assistant Head Coach/Pitching Coach, Ohio State University
107. Terry Rooney, Pitching Coach, University of South Carolina

108. Dan Roszel, Pitching Coach, University of Kentucky
109. Kirk Saarloos, Head Coach, TCU
110. John Savage, Head Coach, UCLA
111. Daniel Schlereth, Pitching Coach, University of South Florida
112. Andrew See, Head Coach, Ohio University
113. Jeremy Sheeting, Head Coach, Georgia Gwinnett College
114. Nunzio Signore, CSCS, CPT, FMS, Founder, Rockland Peak Performance
115. R.D. Spiehs, Pitching Coach, Tarleton State University
116. Carl Stocklin, MS, ATC, UCLA Baseball
117. Bobby Stroupe, CSCS, RSSC*D, Founder, Athlete Performance Enhancement Center (APEC)
118. Jake Sullivan, Physical Therapist, Clinic Director at Rehabilitation & Performance Institute
119. Zack Sultar, Pitching Coach, Recruiting Coordinator, Stonehill College
120. Matt Swope, Head Coach, University of Maryland
121. Matt Tabor, Former Pitcher, Arizona Diamondbacks/Seattle Mariners, Co-Founder & CEO, PitchSafe Baseball
122. Drew Thomas, Pitching Coach, University of Central Florida
123. Butch Thompson, Head Coach, Auburn University
124. Peyton Traywick, University of Arkansas Rich Mountain
125. Nate Trosky, Founder, Trosky Baseball
126. Flint Wallace, Coordinator of Pitching Strategies, Colorado Rockies
127. Max Weiner, Pitching Coach, University of Texas
128. Jon Wentz, Pitching Coach, Sacramento State University
129. Lantz Wheeler, Founder, Baseball Think Tank
130. Holden White, Pitching Coach, Long Island University
131. Tyler White, Performance Therapist, Founder of Invictus & World Pitching Congress
132. Karsten Whitson, Pitching Coach, Florida International University
133. Roger Williams, Associate Head Coach/Pitching, University of Louisville
134. Ron Wolforth, Founder, Texas Baseball Ranch
135. Chris Wojick, Pitching Coach, Yale University
136. Robert Woodard, Head Coach, Charlotte University
137. Nate Yeskie, Pitching Coach, Louisiana State University
138. Ryan Yoshida PT, DPT, CSCS, Founder, Armored Heat
139. Josh Zeid, Director of Pitching, Israel Baseball Americas, Former Rehab Coordinator, Chicago Cubs, Owner, Fuel Academy
140. Keith Zuniga, Associate Head Coach, University of Hawaii

Return To Throwing Schedule – 27 Weeks

“Everyone Heals & Develops Differently”

--Gabi Nilles

Though our Throwing Schedule is based on a great deal of our personal experience and input from many highly respected professionals, the ultimate barometer is YOU. Use this Throwing Schedule as a guide, but please listen to your body and trust your instincts. Lastly, though the Throwing Schedule is based on a “calendar” that has several phases and thresholds, we urge you to take the focus off of where the calendar says you “should” be, and focus on where you actually are. This may take some time to get the “feel” for it, but just know that the deeper you get into the throwing progression, the more “feel” you are going to have for your arm. In short, “eliminate the calendar” (future), and focus on the present (process) – avoid thinking that you “should” be at a certain distance or effort level by a certain date, and trust your feel.

Disclaimer:

The contents of this Throwing Manual and Schedule are not intended as medical advice. As with any exercise program or throwing regimen, always consult your physician or a qualified medical provider before beginning this Throwing Manual.

Timeline: 5 Phases of Our Return to Throwing Schedule

Phase 1: Weeks 1-6 (30 Feet – 120 Feet) – “Base Building, the Stretching Out Phase, and the Introduction of Athleticism, Variability, Volume, and Massage Throwing”

Phase 2: Weeks 7-16 (120 + Feet) – “Stacking the Base and the Extension Phase”

Phase 3: Weeks 19-21 – “Self-Regulation and the Introduction of the Pull-Down Phase”

Phase 4: Weeks 22-27 – “Mound Ramp Up/Live Inning Build-Up”

Phase 5: Weeks 28 and Beyond – “Pitch Count Build-Up”

Phase 1: Weeks 1-6 (30 Feet – 120 Feet)

Base Building, the Stretching Out Phase, and the Introduction of Athleticism, Variability, Volume, and Massage Throwing

When it comes to any type of training and development, how you build your Base and Foundation is imperative. Throwing is no different. Therefore, the major emphasis of Phase 1 of your Throwing Progression is to *Build Your Base* in the most optimal way. This will be done in a number of ways, including, by slowly and progressively *Stretching Your Arm Out* through Light, Incremental Loading, Low Intent Volume Build-Up or what we call “Massage Throwing” (see video), Variability, and Athleticism. Because, essentially, all throws are being made “Uphill” as you move *away* from your throwing partner, the arm (and body) is able to throw with a great deal of Relaxation, Freedom, Range Of Motion, and *Stretching*. Uphill throwing also promotes a great deal less Intent, which is also essential. The bottom line is that nothing should be thrown with any kind of intent, or “on a line” throughout the first 2 Phases of our Throwing Schedule.

As referenced earlier, you’ll notice from Day 1 of our Throwing Progression that it is based on a “Day to Day, rather than a traditional “Weekly” format. For example, you’ll be throwing “every other day” for the first 4 weeks, rather than “x” times per week. This format allows you to be in a more consistent rhythm, and not have to figure out how to “fit” throwing sessions “into” a weekly schedule. This also helps you avoid the possible scenarios in which you either have to take an unnecessary day off, or throw in back to back days because of the “structure” that a “7 Day Week” puts you in. It is simply a major benefit to build your arm into shape based on a *continual* “day to day” approach from a continuity perspective, and is something that we feel makes our approach significantly more effective compared to the standardized Return To Throw Protocols we’ve seen, that are often based on “Weekly” schedules (though for strategic reasons, you will end up going back to a traditional “7 Day Schedule” once you begin your Mound Ramp Up, beginning in Week 22).

You’ll also notice that in Week 5, the throwing schedule changes as we begin to introduce a 2 Days On, 1 Day Off format. Because you have had 4 Weeks (14 Sessions) of extremely Low Intent throwing and Volume Building, your arm is almost certainly going to be ready (wanting) to throw with more frequency. When you take into consideration that you have only extended out to 75 feet at this point, we feel strongly that your arm is ready for this adaptive load of an additional day of throwing. As always, Listen To Your Arm.

Finally, you’ll notice that the first “increment” of each throwing session begins at 30-45 feet. This “range” will give you the freedom to start at a distance that is comfortable for you. For example, 30 feet may feel too close for you if you are a more mature athlete, and/or you have above average arm strength. This “range” from 30-45 feet will give you the flexibility to start out further than 30 feet if you like, knowing that the ultimate goal is to distribute the allotted amount of throws anywhere in this 30-45 foot “range”. Also, because it is *highly* recommended

that you throw with *arc*, the ball will actually travel “further” with the same amount of effort as it would on a line simply because of the angle. As a reminder, arc throwing promotes relaxation, freedom and athleticism. And this is why we want you to have the freedom to start at a further distance if need be...the extra space can actually promote more freedom, rather than restriction. Either way, the option is there for you to start anywhere within the range of 30-45 feet, and distribute the throws in any manner that feels right. As always, listen to your arm.

Phase 2: Weeks 7-18 (120 + Feet)

“Stacking the Base and the Extension Phase”

The Focus of Phase 2 is to continue to “Stack The Base” that has been built in Phase 1 by building more Volume and Athleticism with “Massage Throwing” as you continue to *extend* out, distance wise, from your throwing partner. Like everything else we do, the main goal is to also do this slowly and progressively. Naturally, as the distance and “Range Of Motion” increases, (Phase 2 is built out to 240 feet), the effort will also increase. But it is essential in Phase 2 to continue to focus on “Stretching” your arm out (even though you’ll be adding in more effort) by throwing with Arc, Relaxation, Freedom, Variability and Athleticism as you move away from your throwing partner.

One of the major goals of Phase 2 is to *first* fully stretch your arm out to its’ maximum distance with this approach prior to making any type of high intent, linear throws (which will begin in Phase 3, the “Pull-Down Phase”). This isn’t to say that you won’t be making some type of throws in a linear fashion on your way back into your throwing partner prior to Phase 3 – you can make very low intent throws on your way back into your throwing partner that may have less arc in them. But the main difference is that until your arm is *fully* stretched out, we want you to refrain from any type of medium to higher intent throws on your way back into your throwing partner.

You’ll also notice that in Week 9, our format changes to 3 Days On, and 1 Day Off. Again, because the intent is still relatively low, and the distance is relatively close, we are placing a major emphasis on volume, endurance, conditioning, and optimal recovery by adding in more throwing, rather than less at this point. You’ll also notice that the “middle day” of the 3 Days On is designed to be a “lighter” day. As always, you have the option of going lighter, heavier, or taking a day off at any point. As always, Listen To Your Arm.

Note: Depending on your Age and Arm Strength, by the end of either the 13th Week (180 feet), 14th Week (195 feet), 15th Week (210 feet), 16th Week (210 feet), 17th Week (225) or beginning of the 18th Week (240 feet), you may feel that you have reached your Maximum Distance, i.e., your arm is “Fully Stretched Out”, and are ready to transition into the “Pull-Down Phase” or

Phase 3, which has been scheduled for Weeks 19-21 (approximately 240 feet). You may also find that your “maximum distance” has not occurred yet (which is why we’ve built out our Throwing Schedule to at least 300 feet), and that you need a few more weeks to get to your maximum distance.

The bottom line is to BE SURE that you have “extended out” FULLY to what you feel is, comfortably, your approximate Maximum Distance (this is often reflected by what your approximate, pre-surgery Maximum Distance was) prior to transitioning to Phase 3, the Pull-Down Phase. Though you may not know what your maximum distance is until you get there, you will start to get a “feel” for it “instinctively” because you have spent so much time getting to know your arm over this 3-5 month progression. The main emphasis here is to not be in a rush to “get to” the Pull-Down Phase, and allow your arm to continue to slowly and progressively stretch out organically until you know that it is *fully* stretched out. At that point, you can transition into Phase 3, The Pull-Down Phase (which also has a 3 Week progression). As with everything we recommend, err on the side of being conservative, and take your time. If you are patient and truly listen to your arm, it will let you know when it is “fully” stretched out (opened up).

Transitioning into the Pull-Down Phase is also a potentially vulnerable transition because your arm may be feeling so healthy, strong and durable due to the amount of volume, conditioning and endurance you’ve built over these first 2 Phases that you may feel eager to “get to” the Pull-Down Phase. From a great deal of experience, we are pleading with you to be patient, take your time, and allow your arm to “properly” stretch out FULLY to its Maximum Distance prior to transitioning to the Pull Down Phase.

Phase 3: Weeks 19-21

“Self-Regulation/Introduction of the Pull-Down Phase”

One of the major goals of our Manual is to best position you to truly get to *know* your arm by learning how to “listen to it”, and develop an “intimate” feel for it so that, instinctively, it becomes your “guide”. This is called Self-Regulation, and it is something that you have almost certainly done prior to your surgery, and throughout your life. You could say that it’s “what you would do” if you simply went out to throw with a friend without any type of time, distance or volume constraints on you. Based on the kind of “shape” you were in, you’d adjust to “how much”, “how far”, and with “what type of intent” to throw with based on your feel and instincts on a given day.

Thus, we feel that by the time you get to Week 19 (approximately 240 feet), you have spent so much time getting to know your arm *intimately* well, and you’ve had so many throwing sessions that have been designed to gradually and progressively get you to this stage, that you are ready

to transition into Self-Regulation. Again, this doesn't mean that you are "at" your maximum distance yet, and ready to begin the Pull-Down Phase. It just means that you now have a great deal of experience and awareness of how to approach your throwing each day, and we want your arm to dictate the amount of throws each day (Volume) and how far it wants to extend out to (Distance) prior to beginning the Pull-Down Phase.

Though, there will still be guard rails and guidance as we continue to Build Out the Throwing Progression to 300 feet (and beyond) once the Self-Regulation begins, we feel that you are in such great shape at this point – and have the experience to truly understand the feel and rhythm of your throwing session each day based on 3 months of experience – that we simply want you to *Trust Your Instincts* by "Listening To Your Arm", and allowing it to dictate what it wants and needs each day.

As part of Phase 3, once you begin the Progressive Pull-Down Phase, you will notice that the Throwing Schedule shifts again to a 6 Days On, 1 Day Off format. 3 of these days are considered to be your "Higher Intent" days, or Pull-Down Days, and each of these days is followed by a Lighter or "De-load" Day. You will then have the option on Day 7 to take off or go lighter. As always, you have the option of going lighter or taking a day off on any given day throughout the week.

*Note: Once you begin Phase 3, please be sure to always focus on *stretching* your arm out FIRST as you move away from your throwing partner by throwing with Relaxation, Arc, Variability, Athleticism, Freedom, etc., i.e., Massage Throwing.

The Integration Of Pull-Downs

Once you have attained your maximum distance and your arm is *fully* stretched out – whether this occurs at Week 19 (240 feet), or earlier or later than Week 19 – you are ready to begin the Pull-Down Phase. The Pull-Down Phase, like everything else we do, is done in 3 Steps, progressively, over a 3 Week span to ensure that there is a gradual adaptive load to the high intent phase of your Throwing Schedule. Thus, even though your arm is "fully" stretched out to its' maximum distance prior to beginning the Pull-Down Phase, we still want you to progressively "build into" Pull-Down shape.

That's why the first week of your Pull-Down Phase is labeled "Low Intent" even though you'll still be using approximately 80-85% effort on your way back in to your throwing partner. We simply want your arm to have a buffer to *gradually* adapt to high intent throwing as well. Week 2 of your Pull-Down Phase will increase to 85-90% intent, and Week 3 will increase to 90-95% intent.

Please keep in mind that if you have attained your maximum distance *prior* to Week 19, or you feel like your arm is still wanting to stretch out more *after* you get to Week 19, the 3 Step

process of the Pull-Down Phase doesn't change once you get there. It's still a 3 Week process. And once you have gone through all 3 steps of the Pull-Down Phase, you will be ideally positioned to transition into Phase 4, the Mound Ramp-up Phase.

Again, the Pull-Down Phase assumes you are at your maximum distance. Whether you need more or less time to get there is based on your arm.

Phase 4: Weeks 22-27

“Mound Ramp Up/Live Inning”

Like all of the other Phases, the first goal of the Mound Ramp-Up Phase is to *gradually* build up your intent and pitch count in a Bull-Pen setting over a 4-5 Week period so that you are eventually ready to throw 15 pitches in a competitive setting (once you attain this benchmark, you will then be ready to transition into Phase 5, and add approximately 10-15 pitches to your “live” pitch count each week).

You'll also notice that the Throwing Schedule will transition into a different rhythm at this point – Low, Medium and High workload days. The main reason for this is because we want you to start to acclimate to the traditional 5, 6, or 7 Day Cycle for a Starting Pitcher, which tends to mimic this type of rhythm (we also address Relief Pitchers below). As you'll see in this new format, we have arbitrarily picked Tuesday and Friday to be your “heavier” workload days, and they include, full extension Long Toss, Pull-Downs, and Bull-Pen work – Wednesday and Saturday are your “lighter” workload days, where the focus is on recovery and restoration, and Monday and Thursday are your “medium” workload days as they are designed to gradually add more work load, and set up your heavier work days the following day. Sunday is an optional day for you to go light, or take the day off. Naturally, you can schedule Monday/Thursday or Wednesday/Saturday be your heavier days – the idea is that the format will be the same – it's your choice as to “which days” you make “light, medium, and heavy”. With this new rhythm, keep in mind that you always have the option on any day to go lighter, heavier, or take the day off.

Everything now is based on *Self-Regulation* – listening to your arm, body, and instincts.

Weeks 28 and Beyond – “Pitch Count Build-Up”

At this point, if you are a Starting Pitcher, you can now continue to follow the same weekly format as you Build-Up your pitch count. As stated earlier, we would recommend adding approximately 10-15 pitches a Week, which means you could be at approximately 40-60 pitches

in 4 additional weeks (traditionally, pitchers will add 15 pitches a week once they are built up to 15 live or competitive pitches).

For Relief Pitchers, we'd recommend that you stay on an "every third day" rhythm off the mound until you feel that you are getting ready to transition into a "season", at which point, you may consider incorporating some "every other day" bull-pen sessions. Like everything else we have strongly suggested, be sure and listen to your arm to see what feels right, and make all of these transitions *gradually*.

Be sure and continue to consult with any of your Coaches that have been integral with your process to this point, and as you continue to add and adapt to your Pitch Count Build-Up.

Throwing Schedule Begins

Phase 1 (Weeks 1-6): "The Stretching Out & Base Building Phase" (Massage, Variability, Volume, and Athletic Throwing)

*Reminder Regarding Arc, Freedom, Feel, and 30-45 Foot Range

You may find it comfortable and natural to begin your throwing session each day at 30 feet. But as referenced earlier, if you feel that 30 feet is too close, and you prefer to start out further away from your throwing partner, feel free to do so. Especially considering how much time you spent going through your Clinical work, and how common it is for athletes to do a comprehensive Arm Care Routine prior to throwing. Either way, you have the option (at this first increment) of "disbursing" your allotment of throws anywhere in the 30-45 foot "range".

You will also notice that by throwing with some Arc, the ball will tend to travel further than throwing it on a line. Ironically, by starting off at a little further distance, you will actually be freed up to throw with *less* effort with Arc, rather than *more* effort on a line. Thus, Arc throwing will not only tend to promote more *relaxation* and *freedom* in your throws (see video on massage throwing), but it will tend to free up and relax your *mind*. Freedom and Relaxation are two of our main objectives as you begin to acclimate yourself back to throwing after a great deal of time off. However, if for any reason, you feel more comfortable starting closer, or throwing with less Arc, please feel free to follow your instincts. Whatever distance you do decide to start at, always listen to your arm.

**Note Regarding Mechanical Variables

While most people would agree that throwing mechanics can be important contributors to injury prevention or injury, and those variables need to be individually investigated and addressed, that concept is beyond the scope of our approach. Please be sure to confer with both your Pitching Coach and Rehab Specialist. Our advice is to throw according to feel, instincts and athleticism.

Week 1: Massage Throwing (Target Intensity: Build up to 15-20% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 1: 30 @ 30-45 ft (30 throws total)

Day 2: Rest

Day 3: 30 @ 30-45 ft (35 throws total)

Day 4: Rest

Day 5: 40 @ 30-45 ft (40 throws total)

Day 6: Rest

Day 7: 40 @ 30-45 ft (40 throws total)

Week 2: Massage Throwing (Target Intensity: Build up to 20-25% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 8: Rest

Day 9: 40 @ 30-45 ft (45 throws total)

Day 10: Rest

Day 11: 20 @ 30-45 ft, 10 @ 60 ft, 15 @ 45 ft (45 throws total)

Day 12: Rest

Day 13: 20 @ 30-45 ft, 10 @ 60 ft, 15 @ 45 ft (45 throws total)

Day 14: Rest

Week 3: Massage Throwing (Target Intensity: Build up to 25-30% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 15: 20 @ 30-45 ft, 15 @ 60 ft, 15 @ 45 ft (50 throws total)

Day 16: Rest

Day 17: 20 @ 30-45 ft, 15 @ 60 ft, 15 @ 45 ft (50 throws total)

Day 18: Rest

Day 19: 15 @ 30-45 ft, 15 @ 60 ft, 10 @ 75 ft, 10 @ 60 ft, 5 @ 45 ft, (55 throws total)

Day 20: Rest

Day 21: 15 @ 30-45 ft, 15 @ 60 ft, 10 @ 75 ft, 10 @ 60 ft, 5 @ 45 ft, (55 throws total)

Week 4: Massage Throwing (Target Intensity: Build up to 30-35% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 22: Rest

Day 23: 15 @ 30-45 ft, 15 @ 60 ft, 15 @ 75 ft, 10 @ 60 ft, 5 @ 45 ft, (60 throws total)

Day 24: Rest

Day 25: 15 @ 30-45 ft, 15 @ 60 ft, 15 @ 75 ft, 10 @ 60 ft, 5 @ 45 ft, (60 throws total)

Day 26: Rest

Day 27: 15 @ 30-45 ft, 15 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (65 throws total)

Day 28: Rest

*Week 5: Massage Throwing (Target Intensity: Build up to 35-40% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

*Format changes to 2 Days On, 1 Day Off

Day 29: 15 @ 30-45 ft, 15 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (65 throws total)

Day 30: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (55 throws total)

Day 31: Rest

Day 32: 15 @ 30-45 ft, 15 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (65 throws total)

Day 33: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (55 throws total)

Day 34: Rest

Day 35: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 90, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (70 throws total)

Week 6: Massage Throwing (Target Intensity: Build up to 40-45% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 36: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (55 throws total)

Day 37: Rest

Day 38: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (70 throws total)

Day 39: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (55 throws total)

Day 40: Rest

Day 41: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (70 throws total)

Day 42: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (55 throws total)

Phase 2 (Weeks 7-18): “The Extension Phase” (120 + Feet)

Week 7: Massage Throwing

(Target Intensity: Build up to 45-50% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 43: Rest

Day 44: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 105 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (75 throws total)

Day 45: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft, 5 @ 45 ft (60 throws total)

Day 46: Rest

Day 47: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 105 ft, 5 @ 120 ft, 5 @ 105, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (80 throws total)

Day 48: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 75 ft, 5 @ 60 ft (60 throws total Day)

49: Rest

Week 8: Massage Throwing (Target Intensity: Build up to 50-55% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 50: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 105 ft, 10 @ 120 ft, 5 @ 105, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (85 throws total)

Day 51: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 75 ft, 5 @ 60 ft (60 throws total Day)

Day 52: Rest

Day 53: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 105 ft, 10 @ 120 ft, 5 @ 105, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (85 throws total)

Day 54: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 15 @ 90 ft, 10 @ 75 ft, 5 @ 60 ft (65 throws total Day)

Day 55: Rest

Day 56: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 105 ft, 10 @ 120 ft, 5 @135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @75 ft, 5 @ 60 ft (87 throws total)

*Week 9: Massage Throwing (Target Intensity: Build up to 55-60% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

*Format changes to 3 Days On, 1 Day Off

**Add in optional Cool Down on the Mound with LOW EFFORT at the end of your throwing session

Note: 3 Days on, 1 Day off (Middle day of 3 Consecutive Days is Lighter)

Day 57: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 90 ft, 5 @75 ft, 5 @ 60 ft, (65 throws total)

Day 58: Rest

Day 59: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @75 ft, 5 @ 60 ft (77 throws total)

**Cool Down off the Mound, 10 @ 45 feet (55-60% effort)

(87 throws total)

Day 60: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (65 throws total)

Day 61: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @75 ft, 5 @ 60 ft (77 throws total)

**Cool Down off the Mound, 10 @ 45 feet (55-60% effort)

(87 throws total)

Day 62 Rest:

Day 63: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 10 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @75 ft, 5 @ 60 ft, (90 throws total)

Week 10: Massage Throwing (Target Intensity: Build up to 60-65% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 64: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 105 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (75 throws total)

Day 65: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 5 @ 60 ft, (85 throws total),

**Cool Down off the Mound, 15 @ 45 ft (60-65% effort)

(100 throws total)

Day 66: Rest

Day 67: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 5 @ 60 ft, (85 throws total)

Day 68: 15 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 105 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (75 throws total)

Day 69: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 5 @ 60 ft,

(83 throws total)

**Cool Down off the Mound, 15 @ 45 ft (60-65% effort)

(98 throws total)

Day 70: Rest

Week 11

(Target Intensity: Build up to 65-70% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 71: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 5 @ 60 ft, (88 throws total)

Day 72: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 105 ft, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (70 throws total)

Day 73: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @75 ft, 5 @ 60 ft (83 throws total)

**Cool Down off the Mound, 15 @ 45 ft (65-70% effort)

(98 throws total)

Day 74: Rest (Optional Light Throw)

Day 75: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @75 ft, 5 @ 60 ft, (78 throws total)

Day 76: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 105, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (70 throws total)

Day 77: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 3 @ 180 ft, 3 @ 165 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @75 ft, 5 @ 60 ft (89 throws total)

**Cool Down off the Mound, 15 @ 45 ft (65-70% effort)

(104 throws total)

Week 12

(Target Intensity: Build up to 65-70% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 78 Rest (Optional Light Throw):

Day 79: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (82 throws total)

Day 80: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 105, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (70 throws total)

Day 81: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 3 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft (82 throws total)

**Cool Down off the Mound, 20 @ 45 ft (65-70% effort)

(102 throws total)

Day 82: Rest (Optional Light Throw):

Day 83: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (82 throws total)

Day 84: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 105, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (70 throws total)

Week 13

(Target Intensity: Build up to 70-75% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 85: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft (84 throws total)

**Cool Down off the Mound, 20 @ 45 ft (70-75% effort)

(104 throws total)

Day 86: Rest (Optional Light Throw):

Day 87: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (82 throws total)

Day 88: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 105, 5 @ 90 ft, 5 @ 75 ft, 5 @ 60 ft (70 throws total)

Day 89: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft (89 throws total)

**Cool Down off the Mound, 20 @ 45 ft (70-75% effort)

(109 throws total)

Day 90: Rest (Optional Light Throw):

Day 91: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (89 throws total)

Week 14

(Target Intensity: Build up to 70-75% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 92: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (75 throws total)

Day 93: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft (89 throws total)

**Cool Down off the Mound, 20 @ 45 ft (70-75% effort)

(109 throws total)

Day 94: Rest (Optional Light Throw):

Day 95: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (89 throws total)

Day 96: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (75 throws total)

Day 97: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft (89 total throws)

**Cool Down off the Mound, 20 @ 45 ft (70-75% effort)

(109 throws total)

Day 98: Rest (Optional Light Throw):

Week 15

(Target Intensity: Build up to 75-80% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 99: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (89 throws total)

Day 100: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (75 throws total)

Day 101: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 2 @ 195, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft (94 total throws)

**Cool Down off the Mound, 10 @ 45 ft, 10 @ 60 ft (75-80% effort)

(114 throws total)

Day 102: Rest (Optional Light Throw):

Day 103: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 5 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (96 throws total)

Day 104: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 105: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 2 @ 195, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft (94 total throws)

**Cool Down off the Mound, 10 @ 45 ft, 10 @ 60 ft (75-80% effort)

(114 throws total)

Week 16

(Target Intensity: Build up to 75-80% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 106: Rest (Optional Light Throw):

Day 107: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (94 throws total)

Day 108: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (83 throws total)

Day 109: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 2 @ 195, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft (94 total throws)

**Cool Down off the Mound, 5 @ 45 ft, 15 @ 60 ft (75-80% effort)

(114 throws total)

Day 110: Rest (Optional Light Throw):

Day 111: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (94 throws total)

Day 112: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (83 throws total)

Week 17: Massage Throwing on the way out, Light Pull-Downs on the way back in to your throwing partner (Target Intensity: Build up to 80-85% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 113: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 2 @ 210, 2 @ 195, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (104 throws total)

**Cool Down off the Mound, 5 @ 45 ft, 15 @ 60 ft (80-85% effort)

(124 throws total)

Day 114: Rest (Optional Light Throw):

Day 115: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (94 throws total)

Day 116: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (83 throws total)

Day 117: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 2 @ 210, 2 @ 195, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @75 ft, 5 @ 60 ft, (104 throws total)

****Cool Down off the Mound, 20 @ 60 ft (80-85% effort)**

(124 throws total)

Day 118: Rest (Optional Light Throw):

Day 119: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (94 throws total)

Week 18: Massage Throwing on the way out, Light Pull-Downs on the way back in to your throwing partner (Target Intensity: Build up to 85-90% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

Day 120: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (83 throws total)

Day 121: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 2 @ 210, 2 @ 195, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (104 throws total)

****Cool Down off the Mound, 20 @ 60 ft (80-85% effort)**

(124 throws total)

Day 122: Rest (Optional Light Throw)

Day 123: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 2 @ 180 ft, 2 @ 165 ft, 2 @ 150 ft, 2 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (94 throws total)

Day 124: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (83 throws total)

Day 125: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 3 @ 240 ft, 1 @ 225 ft, 1 @ 210, 1 @ 195, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (102 throws total)

****Cool Down off the Mound, 20 @ 60 ft (80-85% effort)**

(117 throws total)

Day 126: Rest (Optional Light Throw)

Phase 3 (Weeks 19-21)

Self-Regulation/Introduction of the Pull-Down Phase

*Self-Regulating Begins

As mentioned earlier, one of the major goals of our Manual is to best position you to truly get to know your arm well, learn how to “listen to it”, and develop an “intimate” feel for it so that, instinctively, it becomes your “guide”. This is called Self-Regulation, and it is something that you have probably done prior to your surgery. You could say that it’s “what you would do” if you went out to throw with a friend and there wasn’t any type of time constraint on you. Based on the kind of “shape” you were in, you’d adjust to “how much”, “how far”, and with “what type of intent” to throw with based on your feel and instincts.

Therefore, starting in Week 19, if you haven’t begun to Self-Regulate, we highly recommend that you begin this process now. Now that you’ve spent 18 weeks getting to know your arm and body intimately well, and the rhythm of the gradual progression and workload, you are in an optimal position to simply allow your arm to dictate the distance and throwing volume on the way out from your throwing partner, and the volume on the way back in to your throwing partner (once you complete the 3 Step Pull-Down Phase, we also recommend you begin to Self-Regulate the Pull-Down Phase). This includes even the “suggested number” of throws to make. Besides, chances are that if you’ve followed the guidelines pretty closely, your arm, body, and instincts are going to take over unconsciously with regard to what your arm wants and needs on a given day based on the progression over the past 18 Weeks. Again, the Throwing Schedule will continue to be there as a reference point and guide as you continue to move through the Pull-Down Phase, Mound Ramp-Up Phase, and the Pitch Count Build-Up Phase.

You’ll also notice that we have started the process of minimizing your throws on the way back into your throwing partner. Because you have built up so much volume and distance on your *way out* in your throwing progression, we want you to reduce the volume of high intent throws on your way back into your throwing partner – especially considering that your Pull-Down days are often on your mound days. Also, the further out you get from your throwing partner, the “more” throws you would theoretically need to make on the way back in. So this is a way of lowering your higher intent Pull Downs on flat ground, and maximizing them on the mound (especially because we are transitioning into the Mound Ramp-Up soon), and eventually, in game situations. Plus, you can always cool down off the mound with additional high intent throws if need be.

In short, because of the rhythm of our Throwing Schedule leading up to this point, your arm will tend to want to condition in a very similar manner, with or without pre-determined,

incremental throwing thresholds. If you prefer to continue following the Throwing Schedule, the recommendations will continue in a similar rhythm out to 300 feet and beyond.

As a reminder, your “pre-surgery distance” is a great barometer as to how far your arm will likely want to extend out to. Therefore, if that distance was beyond 240 feet, and your arm is telling you that it needs to go beyond the 240 foot parameter in our Throwing Schedule to get “fully opened up or stretched out”, we suggest that you keep following our guidelines (which essentially adds 15-30 feet a week) until you get to your peak distance.

The Integration Of Pull-Downs

As a reminder, transitioning into the Pull-Down Phase of our Throwing Schedule should not occur until your arm is FULLY stretched out to its’ maximum distance, or close to it. Again, one of the most important aspects of our Throwing Schedule is to refrain from any type of high intent Pull-Downs until the arm has reached its maximum distance, or full Range of Motion.

Because everyone is different, we have arbitrarily started the Pull-Down Progression in Week 19, based on a simple formula: a 90 mph throw at a 35 degree angle will travel approximately 270-300 feet. Therefore, we feel that a high percentage of the population from 14-18 years of age will be ready to start the Pull-Down Progression around Week 19 (240 feet). But for those College and Professional Athletes (18 years and older), the Throwing Schedule is built out to 300 feet and beyond because you may not be ready to begin the Pull-Down Progression Phase at this point.

However, if you feel that you are fully stretched out around Week 19 (240 feet), you can begin to integrate the Low, Medium, and High Intent Pull-Down Progression Phase over the next 3 Weeks. If you need to go beyond 240 feet, then simply delay Phase 3 until you are “fully” stretched out to your maximum distance (you can add approximately 15-30 feet a week until you feel that your arm is *fully* stretched out). As we mentioned earlier, spending extra time to *properly* build up your arm into optimal shape is still the fundamental objective when you consider that your ultimate goal is to be fully stretched out and optimally conditioned prior to starting the Pull-Down Phase. And if you attained your maximum distance prior to Week 19, then you can begin the 3 Step, Pull-Down Progression Phase then.

In either case, the main emphasis here is that “whenever” your arm is fully stretched out to its maximum distance, we want you to introduce Pull-Downs *progressively*. Because your arm will tend to feel great at this point of the Throwing Schedule, the tendency will be to start Pulling-Down with a great deal of intent right away. But like everything else we do, we want you to build into your Pull-Downs as well, starting with 80-85% (Low Intent) the first week of your progression (Week 19), 85-90% (Medium Intent) the second week of your progression (Week 20), and 90-95% (High Intent) the third week of your progression (Week 21). Again, this 3 Week progression may change based on “when” your arm attains its maximum distance. But when it does, just know that there is a 3 Step process to go through regarding your Pull-Down Phase.

Note Regarding Pull-Downs Once You Get To Your High Intent Days (e.g., Week 22):

Please keep in mind that on days that you are FULLY stretched out, and have gone through each of the 3 Steps in the Pull-Down Phase (Phase 3), we recommend that you refrain from high intent Pull-Downs *until* you start closing in on, i.e., the 150 or 120 foot mark, *or* approximately halfway in from your furthest throw that day, i.e., the 300 or 240 foot mark. You can still Pull Down with a relatively high level of intent, ie, 80-90%, until you reach the, i.e., 120-150 foot range. At that point, you can begin to increase your Pull-Down intensity to 95% or more.

The reasoning behind coming back in to your partner with less intent until you get to the 120-150 foot mark is to minimize high intent throws on Flat Ground, where it may be a bit more stressful on your arm/elbow than off the mound. Plus, as you get closer to your throwing partner, you are able to get “out in front” more easily because the closer distance helps you get “taller” on your backside (especially if you are Crow-Hopping off your back foot), which additionally helps you get a better hip/glute load, and better ground forces – all of which takes a load off of your arm. This also helps you optimize your higher intent throws off the Mound in a more economical way. Also, because you are Self-Regulating at this point, feel free to come in at your own pace during the Pull-Down phase. But a good rule of thumb that has worked for decades is to come in about 10-15 feet a throw.

Please be sure to remember that whatever type of throwing session it is, that you always focus on *stretching* your arm out FIRST with Relaxation, Arc, Variability, Athleticism, Freedom, and Massage Throwing as you move away from your throwing partner. Also, once you transition into the High Intent Pull-Down Phase (e.g., Week 22), keep in mind that on days that you don't fully stretch your arm out, be sure to refrain from using high intent on those days. A good rule of thumb is to use the same amount of intent that “matches” the percentage of how far you went out that day based on what you consider to be your maximum distance. For example, if 240 feet is your Maximum Distance, and you go out to 240 feet, than you can use High Intent (95-100% Intent) to Pull Down that day because you are FULLY stretched out. If 240 is your Maximum Distance and you go out to 180 feet, than you should only be using 75% effort on your way back in (Medium Intent Pull Downs) because 180 feet is 75% of 240 feet. And if 240 feet is your Maximum Distance, but you go out to 120 feet, than you should only be using 50% effort on your way back in (Light Intent Pull Downs) because 120 feet is 50% of 240 feet.

Week 19: Massage Throwing on the way out, *Low Intent Pull-Downs on the way back in to your throwing partner (Target Intensity: Build up to 90-95% perceived intensity based on Throwing Distance recommendations – See Ben Brewster's Perceived Intensity Progression & Target Velocity Charts above).

*Considering this is the first week in which you will begin to Pull-Down, the tendency will tend to be to throw with a great deal of intent because your arm may feel extremely healthy, strong, and ready for higher intent throws. But please remember that everything is done “progressively” ...including the Pull-Down Phase. So even though you may feel that you are ready to throw with Higher Intent, please be sure to throw with Lighter Intent the first week of Pull-Downs (80-85%). Week 2 will increase to Medium Intent (85-90%), and Week 3 will increase to High Intent (90-95%).

As a reminder, please keep in mind that we highly recommend that you go a little lighter on your Pull-Downs until you get to approximately 120 feet, and then you can use 80-85% Intent throws from 120 feet on in. And for *safety* reasons, we highly recommend that you get no closer than 70 feet on your Pull Downs, as this can put your partner in harm’s way because your throws may have greater velocity and life than you are accustomed as a result of gaining such optimal range of motion and freedom *prior* to Pulling Down.

Day 127: Self-Regulate 30 – 240 Feet with Light Intent Pull Downs (80-85% effort)

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 3 @ 240 ft, 1 @ 225 ft, 1 @ 210, 1 @ 195, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (102 throws total)

**Cool Down off the Mound, 25 @ 60 ft (80-85% effort)

(127 throws total)

Day 128: Optional: Light Throw or Rest

Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 129: Self-Regulate 30 – 240 Feet with Light Intent Pull Downs (80-85% effort)

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 3 @ 240 ft, 1 @ 225 ft, 1 @ 210, 1 @ 195, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (102 throws total)

Day 130: Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 131: Self-Regulate 30 – 240 Feet with Light Intent Pull Downs (80-85% effort)

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 3 @ 240 ft, 1 @ 225 ft, 1 @ 210, 1 @ 195, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (102 throws total)

**Cool Down off the Mound, 25 @ 60 ft (80-85% effort)

(127 throws total)

Day 132: Optional Light Throw or Rest

Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 133: Self-Regulate 30 – 240 Feet with Light Intent Pull Downs (80-85% effort)

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 5 @ 165 ft, 5 @ 180 ft, 3 @ 195 ft, 3 @ 210, 3 @ 225, ft, 3 @ 240 ft, 1 @ 225 ft, 1 @ 210, 1 @ 195, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 2 @ 120 ft, 2 @ 105, 2 @ 90 ft, 2 @ 75 ft, 5 @ 60 ft, (102 throws total)

Week 20: Massage Throwing on the way out, **Medium Intent Pull-Downs on the way back in to your throwing partner (Target Intensity: Build up to 95% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

**Assuming that you feel that you are ready to increase your intent level, you can begin to use 85-90% intent on your way back into your throwing partner on your Pull-Down days. As a reminder, we highly recommend that you go a little lighter on your Pull-Downs until you get to approximately 120 feet, and then you can use 85-90% Intent throws from 120 feet on in. And for *safety* reasons, we highly recommend that you get no closer than 70 feet on your Pull Downs, as this can put your partner in harm’s way because your throws may have greater velocity and life than you are accustomed as a result of gaining such optimal range of motion and freedom *prior* to Pulling Down.

Day 134: Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 135: Self-Regulate 30 – 255 Feet with Medium Intent Pull Downs (85-90% effort)

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 165 ft, 3 @ 180 ft, 3 @ 195 ft, 3 @ 210 ft, 3 @ 225 ft, 3 @ 240 ft, 2 @ 255 ft, 1 @ 240 ft, 1 @ 225 ft, 1 @ 210 ft, 1 @ 195 ft, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 1 @ 120 ft, 1 @ 105 ft, 1 @ 90 ft, 1 @ 75 ft, 5 @ 60 ft (97 throws total)

**Cool Down off the Mound, 25 @ 60 ft (85-90% effort)

(122 throws total)

Day 136: Optional Light Throw or Rest

Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 137: Self-Regulate 30 – 255 Feet with Medium Intent Pull Downs (85-90% effort)

10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 165 ft, 3 @ 180 ft, 3 @ 195 ft, 3 @ 210 ft, 3 @ 225 ft, 3 @ 240 ft, 2 @ 255 ft, 1 @ 240 ft, 1 @ 225 ft, 1 @ 210 ft, 1 @ 195 ft, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 1 @ 120 ft, 1 @ 105 ft, 1 @ 90 ft, 1 @ 75 ft, 5 @ 60 ft (97 throws total)

Day 138: Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 139: Self-Regulate 30 – 255 Feet with Medium Intent Pull Downs (85-90% effort)

10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 5 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 165 ft, 3 @ 180 ft, 3 @ 195 ft, 3 @ 210 ft, 3 @ 225 ft, 3 @ 240 ft, 2 @ 255 ft, 1 @ 240 ft, 1 @ 225 ft, 1 @ 210 ft, 1 @ 195 ft, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 1 @ 120 ft, 1 @ 105 ft, 1 @ 90 ft, 1 @ 75 ft, 5 @ 60 ft (92 throws total)

**Cool Down off the Mound, 25 @ 60 ft (85-90% effort)

(117 throws total)

Day 140: Optional Light Throw or Rest

Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Week 21: Massage Throwing on the way out/***High Intent Pull-Downs on the way back in to your throwing partner (Target Intensity: Build up to 95+% perceived intensity based on Throwing Distance recommendations – See Ben Brewster’s Perceived Intensity Progression & Target Velocity Charts above).

*** Assuming that you feel that you are ready to increase your intent level, you can begin to use 90-95% intent on your way back into your throwing partner on your Pull-Down days. As a reminder, we highly recommend that you go a little lighter on your Pull-Downs until you get to approximately 120 feet, and then you can use 90-95% Intent throws from 120 feet on in. And for *safety* reasons, we highly recommend that you get no closer than 70 feet on your Pull Downs, as this can put your partner in harm’s way because your throws may have greater velocity and life then you are accustomed as a result of gaining such optimal range of motion and freedom *prior* to Pulling Down.

Day 141: Self-Regulate 30 – 270 Feet with High Intent Pull Downs (90-95% effort)

10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 165 ft, 3 @ 180 ft, 3 @ 195 ft, 3 @ 210 ft, 3 @ 225 ft, 3 @ 240 ft, 2 @ 255 ft, 2 @ 270 ft, 1 @ 255 ft, 1 @ 240 ft, 1 @ 225 ft, 1 @ 210 ft, 1 @ 195 ft, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 1 @ 120 ft, 1 @ 105 ft, 1 @ 90 ft, 1 @ 75 ft, 5 @ 60 ft (100 throws total)

Day 142: Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 143: Self-Regulate 30 – 270 Feet with High Intent Pull Downs (90-95% effort)

10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 165 ft, 3 @ 180 ft, 3 @ 195 ft, 3 @ 210 ft, 3 @ 225 ft, 3 @ 240 ft, 2 @ 255 ft, 2 @ 270 ft, 1 @ 255 ft, 1 @ 240 ft, 1 @ 225 ft, 1 @ 210 ft, 1 @ 195 ft, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 1 @ 120 ft, 1 @ 105 ft, 1 @ 90 ft, 1 @ 75 ft, 5 @ 60 ft (100 throws total)

**Cool Down off the Mound, 25 @ 60 ft (90-95% effort)

(125 throws total)

Day 144: Optional Light Throw or Rest

Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 145: Self-Regulate 30 – 270 Feet with High Intent Pull Downs (90-95% effort)

10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 165 ft, 3 @ 180 ft, 3 @ 195 ft, 3 @ 210 ft, 3 @ 225 ft, 3 @ 240 ft, 2 @ 255 ft, 2 @ 270 ft, 1 @ 255 ft, 1 @ 240 ft, 1 @ 225 ft, 1 @ 210 ft, 1 @ 195 ft, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 1 @ 120 ft, 1 @ 105 ft, 1 @ 90 ft, 1 @ 75 ft, 5 @ 60 ft (100 throws total)

Day 146: Self-Regulate 30 – 150 Feet

Sample Schedule: 10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 3 @ 135 ft, 3 @ 150 ft, 3 @ 135 ft, 3 @ 120 ft, 3 @ 105, 3 @ 90 ft, 3 @ 75 ft, 10 @ 60 ft (81 throws total)

Day 147: Self-Regulate 30 – 270 Feet with High Intent Pull Downs (90-95%)

10 @ 30-45 ft, 10 @ 60 ft, 10 @ 75 ft, 10 @ 90 ft, 5 @ 105 ft, 5 @ 120 ft, 5 @ 135 ft, 5 @ 150 ft, 3 @ 165 ft, 3 @ 180 ft, 3 @ 195 ft, 3 @ 210 ft, 3 @ 225 ft, 3 @ 240 ft, 2 @ 255 ft, 2 @ 270 ft, 1 @ 255 ft, 1 @ 240 ft, 1 @ 225 ft, 1 @ 210 ft, 1 @ 195 ft, 1 @ 180 ft, 1 @ 165 ft, 1 @ 150 ft, 1 @ 135 ft, 1 @ 120 ft, 1 @ 105 ft, 1 @ 90 ft, 1 @ 75 ft, 5 @ 60 ft (100 throws total)

*Cool Down off the Mound, 25 @ 60 ft (90-95% effort)

(125 throws total)

Phase 4: Weeks 22-27 – Mound Ramp Up/Live Inning

*Assuming you are at your peak distance

As you can see, the last throwing session extended out to 270 feet, so “assuming” that you are at your maximum distance, and completed all 3 Steps of your Pull-Down Phase, we are going to move forward with the Mound Ramp-Up Schedule at this point. HOWEVER, if you still need more distance, as mentioned earlier, keep following the same schedule above and simply add 15-30 feet a week until you feel that your arm is *fully* stretched out (at which point, you’d begin the 3 Step, Progressive Pull-Down Phase). Again, one of the most critical aspects of this program is that you refrain from “full intent” throwing on flat ground or off the mound until your arm is “fully” stretched out (opened up).

As mentioned earlier, you can continue to work off the mound with the intent that is consistent with the “percentage” of what your arm is stretched out to, relative to what your maximum distance would theoretically be (75% effort off the mound if you stretched your arm out to 250 feet, and you consider your maximum distance to be 300 feet – even if the Throwing Schedule recommends, e.g., 80% or 90% intent based on other variables) – and keep using this formula of “matching this percentage” until your arm is fully stretched out to 100% of its potential.

Like all of the other Phases, the goal of the Mound Ramp-Up Phase is to *gradually* build up your intent and pitch count so that you are ready to throw 15-20 pitches in a competitive setting. Once you attain this benchmark, you can then add approximately 10-15 pitches to your “live” pitch count every week in Phase 5, which is the last phase of our Throwing Schedule (traditionally, pitchers will add 15 pitches a week once they are built up to 15 live or competitive pitches).

You’ll also notice that the Throwing Schedule will now transition into a different rhythm – Light, Medium and Heavy workload days. The main reason for this is because we want you to start to acclimate to what a traditional 5, 6, or 7 Day Cycle is like for a Starting Pitcher, which tends to mimic this type of rhythm. Also, because your arm will tend to be in great shape at this point in your Throwing Schedule, you may find that you want to start out your throwing session each day beyond 30 feet. That is completely up to you.

As you’ll see below, Tuesday and Friday has arbitrarily been designated as your “Heavier” workload days, as they include, full extension Long Toss, Pull-Downs, and Bull-Pen work – Wednesday and Saturday are your “Lighter” days, where the focus is on recovery and restoration, and Monday and Thursday are your “Medium” intent days as they are designed to gradually add more work load from the previous day, and set up your heavier work days the following day. Sunday is an optional day for you to go light, or take the day off (you can also follow this format starting with your Heavier days on, e.g., Monday and Thursday, or Wednesday and Saturday, and then simply follow the same format). And with this new rhythm, keep in mind that you always have the option on any day to go lighter, heavier, or take the day off.

Everything now is based on *Self-Regulation* – listening to your arm, body, and instincts. So be sure to work at your own pace, and according to the needs of your arm as you move away from your throwing partner in the “Stretching Out Phase”, and back into your throwing partner in the “Pull-Down Phase”.

Reminder regarding High Intent Pull-Downs and Safety:

Again, please keep in mind that we want you to refrain from high intent Pull-Downs until you start closing in on the 120-150 foot mark, *or* approximately halfway in from your furthest throw that day. You can still Pull-Down with a relatively high level of intent, ie, 80-90%, until you reach 120-150 feet. At that point, you can begin to increase your Pull-Down intensity to 95% or more.

Also, because you are Self-Regulating at this point, feel free to come in at your own pace during the Pull-Down phase. But again, a good rule of thumb is to come in about 10-15 feet a throw.

And for *safety* reasons, we highly recommend that you get no closer than 70 feet on your Pull Downs, as this can put your partner in harm's way because your velocity may have greater velocity and life than you are accustomed as a result of gaining such optimal range of motion and freedom *prior* to Pulling Down.

Note: As a reminder, feel free to reference the "suggested" throwing guidelines from the previous week of the Throwing Schedule if that makes you feel more comfortable moving forward.

Week 22: Massage Throwing/Pull-Downs (95% effort) & Mound Ramp-Up Begins

Day 148: Medium

Modified Extension Long Toss, 30 – 225 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 149: Heavy

Full Extension Long Toss, 30 – 285 feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 20 @ 60 ft (95% Effort) REST 3-5 mins, 10 @ 60 ft (95% effort)

Day 150: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 151: Medium

Modified Extension Long Toss, 30 – 225 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 152: Heavy

Full Extension Long Toss, 30 – 285 feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 20 @ 60 ft (95% Effort) REST 3-5 mins, 10 @ 60 ft (95% effort)

Day 153: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 154: Optional Light Throw or Rest

Week 23

Day 155: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 156: Heavy

Full Extension Long Toss, 30 – 300 feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 20 @ 60 ft (95% Effort) REST 3-5 mins, 15 @ 60 ft (95% effort)

Day 157: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 158: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 159: Heavy

Full Extension Long Toss, 30 – 300 feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 20 @ 60 ft (95% Effort) REST 3-5 mins, 15 @ 60 ft (95% effort)

Day 160: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 161: Optional Light Throw or Rest

Week 24

Day 162: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 163: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 20 @ 60 ft (95-100% Effort) REST 3-5 mins, 20 @ 60 ft (95-100% effort)

Day 164: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 165: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 166: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 20 @ 60 ft (95-100% Effort) REST 3-5 mins, 20 @ 60 ft (95-100% effort)

Day 167: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 168: Optional Light Throw or Rest

Week 25

Day 169: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 170: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 25 @ 60 ft (95-100% Effort) REST 3-5 mins, 20 @ 60 ft (95-100% effort)

Day 171: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 172: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 173: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 25 @ 60 ft (95-100% Effort) REST 3-5 mins, LIVE Batting Practice 20 @ 60 ft (95-100% effort)

Day 174: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 175: Optional Light Throw or Rest

Week 26

Day 176: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 177: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 30 @ 60 ft (95-100% Effort) REST 3-5 mins, 20 @ 60 ft (95-100% effort)

Day 178: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 179: Medium

Modified Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 180: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 90% effort the last 120 feet)

* Mound Work, 30 @ 60 ft (95-100% Effort) REST 3-5 mins, LIVE Batting Practice 20 @ 60 ft (95-100% effort)

Day 181: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 182: Optional Light Throw or Rest

Week 27

Day 183: Medium

Full Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 184: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 35 @ 60 ft (95-100% Effort) REST 3-5 mins, 20 @ 60 ft (95-100% effort)

Day 185: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 186: Medium

Full Extension Long Toss, 30 – 240 feet

70% Pull-Downs, 1 throw every 10-15 feet on your way back in toward your throwing partner

Day 187: Heavy

Full Extension Long Toss, 30 – 300+ feet

Pull-Downs: 1 throw every 10-15 feet on your way back in toward your throwing partner (only use 80% effort until you get to 120 feet – then 95% effort the last 120 feet)

* Mound Work, 35 @ 60 ft (95-100% Effort) REST 3-5 mins, 20 Pitches In Game Competition @ 60 ft (95-100% effort)

Day 188: Light

Stretching Out Phase only, 30 –180 feet

70% effort on the way back in toward your throwing partner

Day 189: Optional Light Throw or Rest

Phase 5: Weeks 28 and Beyond – Pitch Count Build-Up

Pitch Count Build-Up

At this point, if you are a Starting Pitcher, you can now continue to follow this format as you Build-Up your pitch count. We would recommend adding 10-15 pitches a Week, which means you could be at approximately 40-60 pitches in 4 additional weeks.

For Relief Pitchers, we'd recommend that you continue to throw off the mound "every third day" until you start getting ramped up for the "season". At that point – especially for College and Professional Pitchers, who may throw in game situations more often than every third day, you may consider incorporating some "every other day" bull-pen sessions as well. Like everything else we have strongly suggested, be sure and listen to your arm to see what feels right, and make all of these transitions *gradually*.

Be sure and continue to consult with any of your Coaches that have been integral with your process to this point, and as you continue to add and adapt to your Mound Build-Up.

Transitioning into a 5, 6 or 7 Day Cycle for Starting Pitchers

Please note that with the completion of our Throwing Schedule, and the transition into your "Live Pitch Count Build-Up", you may now need to *alter* your cycle based on whether or not you are on a 5, 6, or 7 Day Rotation. Also, as your pitch count increases on your Start Day, this will tend to have an effect on your workload for the rest of your 5, 6, or 7 Day cycle. Though you may find that the basic principles of Light, Medium, and Heavy Days still apply, you will also find additional recommendations for a very specific 5, 6, and 7 Day Cycle below to help you best transition into any of these potentially new cycles (please note that the distances below are based on a 300 feet being a pitchers maximum distance, and thus, gauge these numbers based on *your* maximum long toss distance).

Relief Pitcher Protocols

For Relief Pitchers transitioning into the season, here is an article that presents a number of ideas to help Relief Pitchers best optimize their routine on game days. One of the major principles that this article illuminates is the importance of "preparing" rather than "saving" your arm for the game:

"Relief Pitcher Protocols": https://www.abca.org/magazine/magazine/2018-1-January_February/Last_Inning_What_Pitching_Coaches_Probably_Forgot_to_do_This_Fall.aspx

In short, if you are a Relief Pitcher you may actually find that your arm wants to do *more* throwing (volume) before the game than you are accustomed to because of all of the conditioning that's been established through this Throwing Schedule. In addition your arm may be a lot more apt to throw more distance simply because it has become accustomed to it. In short, your arm may simply want (need) more throwing than you are accustomed to prior to the game. Traditionally, Relief Pitchers tend to "save their arm for the game". We believe strongly that your arm will be so durable, and recover so well from day to day that it will tend to want to throw more, rather than less, even on days you may go into the game. Naturally, listen to your arm.

In-Season Protocols – Summary

How you transition from your Return To Throwing Schedule into the “Season” is clearly an important transition. That’s why we’ve included a number of resources – based on a great deal of experience – for both Starting and Relief Pitchers to help you optimize this transition. We strongly believe that these recommendations will help you optimize your Health, Conditioning, Strength, and Recovery as you transition into the “In-Season” mode.

5, 6 & 7 Day Sample Schedules for Starting Pitchers

Note: You’ll notice that on all 3 Cycles, Bull-Pens always occur at least 2 full days *after* your start. We believe strongly in an *extra* day of rest, recovery and restoration after your start, and prior to your next Bull-Pen.

5 Day Cycle (Based on approximately 300 feet)

- Day 1: Start Day: Long Toss (~ Max Distance, Stretch Out + Pull Down)
- Day 2: 120-200 feet (Light/Stretch Out Only)
- Day 3: 200-300 feet (Medium/Stretch Out Mainly)
- Day 4: Full Long Toss + Pen (Possibly Lighter to Medium Pull Downs/Pen Based On Previous Start Pitch Count/Stage Of Season)
- Day 5: 60-150 feet (Stretch Out Only)
- Day 6: Start Day

6 Day Cycle (Based on approximately 300 feet)

- Day 1: Start Day: Long Toss (~Max Distance Stretch + Pull Down)
- Day 2: 120-200 feet (Light/Stretch Out Only)
- Day 3: 200-300 feet (Medium/Stretch Out Mainly)
- Day 4: Full Long Toss + Pen (Possibly Lighter to Medium Pull Downs/Pen Based On Previous Start Pitch Count/Stage Of Season)
- Day 5: 150-225 feet (Light to Medium/Stretch Out Only)
- Day 6: 60-180 (Light/Stretch Out Only)
- Day 7: Start Day

7 Day Cycle (Based on approximately 300 feet)

- Day 1: Start Day: Long Toss (~Max Distance Stretch + Pull Down)
- Day 2: 120-200 feet (Light/Stretch Out Only)
- Day 3: 200-300 feet (Medium/Stretch Out Mainly)
- Day 4: Full Long Toss + Pen (Possibly Lighter to Medium Pull Downs/Pen Based On Previous Start Pitch Count/Stage Of Season)

- Day 5: 150-225 feet (Light/Stretch Out Only)
- Day 6: 200-300 feet (Medium/Stretch Mainly, Light Pull Downs)
- Day 7: 60-150 feet (Light/Stretch Out Only)
- Day 8: Start Day

Note: “Stretch Out Only” is suggesting that you only “stretch out the arm” by throwing with Arc, Freedom, Range of Motion and without *any* type of Pull-Downs.

Note: “Stretch Out Mainly” is suggesting the same as above, except that the distance may end up being greater, and some light to medium pull down’s may be suitable as well. A lot of this is based on a pitcher’s mound workload from the previous pen or game.

Summary

Congratulations! You have now officially completed our Throwing Schedule and are completely on your own to Self-Regulate based on the workload you have built up. Please keep in mind that as you introduce ANY type of new variables to your throwing routine that you do so slowly, gradually and progressively.

We hope you that you have found our Throwing Manual easy to follow, clear, flexible, and that it has positioned you to get very intimate with your arm, body and instincts. We also hope that you feel that your arm is in the best shape of your life, and moving forward, you have a deep understanding of how to optimally navigate the Build-Up progression of your throwing routine, and how to best maintenance it.

We appreciate your trust in our Throwing Manual, and wish you all of the best for a healthy and prosperous career, on and off the field!

Best Wishes, Alan and Randy

About The Authors

Alan Jaeger is the founder and CEO of Jaeger Sports, and has co-authored this Throwing Manual on behalf of Jaeger Sports. Along with Jim Vatcher, President, and China McCarney, Vice President, Jaeger Sports has dedicated 33 years to helping athletes optimize their performance on and off the field. Alan is the author of *Getting Focused*, *Staying Focused (Mental approach to Sports and Life)*, along with the *Throwing Videos*, “*Thrive On Throwing 1 & 2*”, the “*Year Round Throwing Manual*”, and “*The Professional Off-Season Throwing Manual*”, and co-authored the *Off-Season Throwing Program* with the Tampa Bay Rays Pitching Department (2021-22, 2022-23). Alan has consulted with several High Schools, Colleges, and a number of Major League Organizations, including the Los Angeles Dodgers, Texas Rangers, Houston Astros, Chicago Cubs, Tampa Bay Rays, Cleveland Guardians, along with several Professional Players, including Hunter Greene, Jack Flaherty, Matt Shaw, Cam Caminiti, Kevin Parada, Mike Montgomery, Barry Zito, Dan Haren.

Randy Sullivan is the founder and CEO of the Florida Baseball ARMory, and has co-authored this Throwing Manual on behalf of the Florida Baseball ARMory. As a Physical Therapist in private practice and a Certified Strength and Conditioning Specialist, Randy has over 30 years of experience in rehabilitation and high performance training of throwing athletes. He has authored 8 books on baseball pitching including “*Start With the Pain: The Complete Guide to Managing Arm Pain in The Elite Throwing Athlete*” and “*SAVAGE Revolution: Overthrow the Status Quo in Baseball Pitcher Development.*” Randy has consulted with dozens of high school and college programs and Major League Organizations (Tampa Bay Rays, Minnesota Twins, Detroit Tigers, Pittsburgh Pirates, and Cincinnati Reds). The Florida Baseball ARMory’s Annual Baseball Skill Acquisition Summit has been attended by representatives of nearly every MLB club. Major League clients have included, Logan Gilbert, Kyle Gibson, Justin Verlander, Jake Odorizzi, Chien-Ming Wang.

Additional Resources

Randy Sullivan Blog: Overhauling early Post-Op Rehab: Floridabaseballarmory.com/rehab

In Season Maintenance: “Bridging The Gap: 5, 6, 7 Day Throwing Routines”:
<https://www.jaegersports.com/bridging-the-gap-making-a-safe-and-effective-transition-from-high-school-college-baseball-into-professional-baseball/>

Inside Pitch Magazine/Adam Revelette: Relief Pitcher Protocols:
https://www.abca.org/magazine/2018-1-January_February/Last_Inning_What_Pitching_Coaches_Probably_Forgot_to_do_This_Fall.aspx

E-book on recovery including info about Davis’ Law: Floridabaseballarmory.com/recovery1

Blog on the myth of “tendonitis”: Floridabaseballarmory.com/itis

Blog: How Not Long Tossing and Throwing Weighted Balls Could Get You Hurt:
Floridabaseballarmory.com/longtoss

Crow Hop vs Shuffling -- The Science behind it (Randy Sullivan):
https://www.youtube.com/watch?v=529jG4_xCnE&t=26s

Crow Hop vs Shuffling – Tread Athletics Podcast: <https://www.youtube.com/watch?v=uD-8-7BdTw8&t=1102s>

The Origin of the 120 Foot Throwing Program: <https://www.jaegersports.com/the-origin-of-throwing-programs-mechanical-myth-post-rehab-throwing-advice/>

Resources by Jaeger Sports: jaegersports.com

Resources by Randy Sullivan: Floridabaseballarmory.com/books

Return Support Group

For anyone who is interested in joining a support group for players going through the Rehabilitation process, feel free to contact Ian McMahon. Ian has a great of experience in the rehabilitation field, and has built a great platform through his passion and platform to provide community, comfort and education for those who are navigating rehabilitation – especially those going through it for the first time – and are looking for support and resources through this process. For more information, Ian can be contacted on X at: @IanMcmahon, and you can also join “The Return” group on GroupMe. Here is the link:
https://groupme.com/join_group/68621649/GZuiyi6d