

# Pitch Counts

*Practical Information  
for Injury Prevention*



Age	Pitch Count per Game		
	Max Pitches/game	Max Appearances/Week	Max Pitches/Week
9-10	50	2	100
11-12	50	2	140
13-14	75	2	150
15-16	90	2	180
17-18	105	2	210

- ◆ If your pitcher has thrown his maximum number of pitches, he should have 3 days rest
- ◆ Relief pitchers/closers, pitching less than ½ the recommended maximum, should have 24-48 hours recovery

Age	Maximum Pitches with Limited Recovery Time			
	1 Day Rest	2 Days Rest	3 Days Rest	4 Days Rest
9-10	21	34	43	50
11-12	27	35	55	70
13-14	30	40	56	75
15-16	30	40	60	90
17-18	30	50	70	106

- ◆ In addition to icing the shoulder and/or elbow after throwing, the American Sports Medicine Institute recommends 10-15 minutes of low grade aerobic activity

# Pitching Guidelines

Pitchers at all ages should throw every day. This can include warm-ups working up to long toss, or just playing catch. Every throw should be done with correct mechanics. Poor mechanics is the #1 cause of throwing injury. If you are not sure what proper mechanics are, contact your local pitching coach/instructor, or Cautilli Orthopaedics (215) 504-6101 , for information on learning proper pitching mechanics.

- ◆ Bullpen sessions should be done on the 2<sup>nd</sup> day after pitching in a game
- ◆ Bullpen sessions should be performed at 75-80% effort. Bullpen is a time to work on form/mechanics, pitches/grips, location and strategy.
- ◆ Bullpen is a great time to talk with your pitcher about pitch-by-pitch strategy for different types of hitters (when to throw off-speed, when to challenge etc).

Recommended Ages for Various Pitches	
Pitch	Age to Begin
<b>Fastball (4-seam, 2-seam)</b>	<b>9-10</b>
<b>Change-up (circle, fork)</b>	<b>10-11</b>
<b>Knuckleball</b>	<b>13-16</b>
<b>Curveball</b>	<b>14-16</b>
<b>Slider</b>	<b>16-18</b>
<b>Splitter</b>	<b>17-18</b>
<b>Screwball</b>	<b>17-19</b>

Remember, successful pitching is about location, location, location and changing speeds. Until a pitcher can locate his fastball where he wants, consistently there is no need to change speeds. Until a pitcher can locate his change-up where he wants, there is no need to throw a movement pitch.

- ◆ When a pitcher can locate his fastball and change-up, he will be a dominant pitcher.
- ◆ When a pitcher can locate his pitches and change speed at the right time, he will be a great pitcher.
- ◆ When a pitcher can locate all of his pitches, throw the correct pitch at the correct time and control his emotions on the mound, he is ready for the next level!!

Table 3. Pitcher throwing program for 13- to 14-year-olds.<sup>a</sup>

Phase I		Phase II		Return to Pitching	
	All throws are at 50% effort				
<i>Step 1</i>	Warm up toss to 60'		<i>Step 4</i>	Warm-up toss to 105'	
	15 throws at 30"			20 fastballs (50%)	
	15 throws at 30"			16 fastballs (50%)	
	15 throws at 30'			16 fastballs (50%)	
	20 long tosses to 60'			25 long tosses to 105'	
<i>Step 2</i>	Warm-up toss to 75'		<i>Step 5</i>	Warm-up toss to 120'	
	15 throws at 45"			20 fastballs (50%)	
	15 throws at 45"			20 fastballs (50%)	
	15 throws at 45'			20 fastballs (50%)	
	20 long tosses to 75'			25 long tosses to 120'	
<i>Step 3</i>	Warm-up toss to 90'		<i>Step 6</i>	Warm-up toss to 120'	
	15 throws at 60"			16 fastballs (50%)	
	15 throws at 60"			20 fastballs (50%)	
	15 throws at 60'			20 fastballs (50%)	
	20 long tosses to 90'			16 fastballs (50%)	
	Fastballs are from level ground following crow hop			25 long tosses to 120'	
Phase III		Intensified Pitching			
<i>Step 7</i>	Warm-up toss to 120'	<i>Step 11</i>	(Active rest)	<i>Step 14</i>	Warm-up toss to 120'
	20 fastballs (50%)		Warm-up toss to 120'		20 fastballs (100%)
	20 fastballs (75%)		20 throws at 60' (75%)		Throws to 1st (100%)
	20 fastballs (75%)		15 throws at 80' (75%)		15 fastballs (100%)
	20 fastballs (50%)	<i>Step 12</i>	20 throws at 60' (75%)		10 off-speed pitches (100%)
	25 long tosses to 160'		15 throws at 80' (75%)		20 fastballs (100%)
<i>Step 8</i>	Warm-up toss to 120'		20 long tosses to 160'		5 off-speed pitches (100%)
	20 fastballs (75%)		Warm-up toss to 120'		20 fastballs (75%)
	21 fastballs (50%)		20 fastballs (100%)		5 throws to 1st (75%)
	20 fastballs (75%)		20 fastballs (75%)		25 long tosses to 160'
	21 fastballs (50%)		6 off-speed pitches (75%)	<i>Step 15</i>	Batting practice
	25 long tosses to 160'		20 fastballs (100%)		100-110 pitches
<i>Step 9</i>	Warm-up toss to 120'	<i>Step 13</i>	20 fastballs (75%)		10 throws to 1st
	25 fastballs (50%)		6 off-speed pitches (75%)		Bunts and comebacks
	24 fastballs (75%)		25 long tosses to 160'	<i>Step 16</i>	Simulated game
	24 fastballs (75%)		Warm-up toss to 120'		
	25 fastballs (50%)		20 fastballs (75%)		
	25 long tosses to 160'		4 throws to 1st (75%)		
<i>Step 10</i>	Warm-up toss to 120'		15 fastballs (100%)		
	25 fastballs (75%)		10 off-speed pitches (100%)		
	25 fastballs (75%)		20 fastballs (100%)		
	25 fastballs (75%)		5 off-speed pitches (75%)		
	20 fastballs (75%)		20 fastballs (75%)		
	25 long tosses to 160'		4 throws to 1st (75%)		
			25 long tosses to 160'		

<sup>a</sup>Reprinted with permission by Lippincott Williams and Wilkins.<sup>6</sup>

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## INSTRUCTIONS

### A. Baseline/preseason

To establish a base for training and conditioning, begin with step 4 and advance one step daily following soreness rules.

### B. Nonthrowing arm injury

After medical clearance, begin step 4 and advance one step daily following soreness rules.

### C. Throwing arm—bruise or bone involvement

After medical clearance, begin with step 1 and advance program as soreness rules allow throwing every other day.

### D. Throwing arm—tendon/ligament injury (mild)

- After medical clearance, begin with step 1 and advance program to step 7 throwing every other day as soreness rules allow.
- Throw every third day on steps 8-12 as soreness rules allow.
- Return to throwing every other day as soreness rules allow for steps 13-21.

### E. Throwing arm—tendon/ligament injury (moderate, severe, or post op)

- After medical clearance, begin throwing at step 1.
- For steps 1-7, advance no more than 1 step every 3 days with 2 days of active rest (warm-up and long tosses) following each workout.
- Steps 8-12 advance no more than 1 step every 3 days with 2 days active rest (see step 14) following each workout.
- Steps 13-16 advance no more than 1 step every other day with 1 day active rest (see step 14) between steps.
- Advance steps 17-21 daily as soreness rules allow.

**SIMULATED GAME**

1. 10 minutes warm-up of 50-80 pitches with gradually increasing velocity
2. 5 innings
3. 22-27 pitches per inning, including 15-20 fastballs
4. 6 minutes rest between innings

Rest 6 minutes after these sets.

**INSTRUCTIONS**

**A. Baseline/preseason**

To establish a base for training and conditioning, begin with step 3 and advance one step daily to step 14 following soreness rules.

**B. Nonthrowing arm injury**

After medical clearance, begin step 3 and advance one step daily to step 16 following soreness rules.

**C. Throwing arm—bruise or bone involvement**

After medical clearance, begin with step 1 and advance program as soreness rules allow throwing no more than every other day.

**D. Throwing arm—tendon/ligament injury (mild)**

- After medical clearance, begin with step 1 and advance program to step 3 throwing every other day as soreness rules allow.
- Throw every third day on steps 4-8 as soreness rules allow.
- Return to throwing every other day as soreness rules allow for steps 9-16.

**E. Throwing arm—tendon/ligament injury (moderate, severe, or post op)**

- After medical clearance, begin throwing at step 1.
- For steps 1-3, advance no more than 1 step every 3 days with 2 days of active rest (warm-up and long tosses) following each workout.
- Steps 4-8 advance no more than 1 step every 3 days with 2 days active rest (see step 11) following each workout.
- Advance steps 9-16 daily as soreness rules allow.

Table 4. Throwing program for high school, college, and professional baseball pitchers.<sup>a</sup>

Phase I	Return to Throwing		Phase II	Return to Pitching <sup>b</sup>
	All throws are at 50% effort			
Step 1	Warm-up toss to 60'		Step 8	15 throws at 60'6" (75%)
	15 throws at 30"			20 throws at 60'6" (75%)
	15 throws at 30"			20 throws at 60'6" (75%)
	15 throws at 30'			15 throws at 60'6" (75%)
	20 long tosses to 60'		Step 9	20 throws at 60'6" (75%)
Step 2	Warm-up toss to 75'			
	15 throws at 45"			20 throws at 60'6" (75%)
	15 throws at 45"			20 throws at 60'6" (75%)
	15 throws at 45'		Step 10	20 fastballs (50%)
	20 long tosses to 75'			
Step 3	Warm-up toss to 90'			20 fastballs (50%)
	15 throws at 60"			20 fastballs (50%)
	15 throws at 60"			25 throws at 60'6" (75%)
	15 throws at 60'		Step 11	20 fastballs (50%)
	20 long tosses to 90'			
Step 4	Warm-up toss to 105'			20 fastballs (50%)
	15 throws at 75"			15 fastballs (75%)
	15 throws at 75"			25 throws at 60'6" (75%)
	15 throws at 75'			
	20 long tosses to 105'			

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Phase I		Return to Throwing		Phase II		Return to Pitching	
<i>Step 5</i>	Warm-up toss to 120'			<i>Step 12</i>	25 fastballs (50%)		
	15 throws at 90"				20 fastballs (75%)		
	20 throws at 90"				20 fastballs (75%)		
	15 throws at 90"				20 fastballs (75%)		
	20 long tosses to 120'				20 fastballs (75%)		
<i>Step 6</i>	Warm-up toss to 120'						
	20 throws at 105"						
	20 throws at 105"						
	15 throws at 105"						
	20 long tosses to 120'						
<i>Step 7</i>	Warm-up toss to 120'						
	20 throws at 120"						
	20 throws at 120"						
	20 throws at 120"						
	20 long tosses to 120'						
	Throws at effort level given						
Phase III		Intensified Pitching					
<i>Step 13</i>	25 fastballs (75%)	<i>Step 16</i>	20 fastballs (100%)	<i>Step 18</i>	(Active rest)		
	20 fastballs (100%)		15 fastballs (100%)		Repeat step 14		
	10 fastballs (75%)		5 off-speed pitches	<i>Step 19</i>	20 fastballs (100%)		
	15 fastballs (100%)		5 pickoff throws to 1st		5 off-speed pitches		
	25 fastballs (75%)		20 fastballs (100%)		20 fastballs (100%)		
<i>Step 14</i>	(Active Rest)		5 off-speed pitches		3 pickoff throws to 1st		
	20 throws at 80'		20 fastballs (100%)		20 fastballs (100%)		
	20 throws at 80'		5 off-speed pitches		3 pickoff throws to 2nd		
	20 throws at 80'	<i>Step 17</i>	15 fastballs (100%)		15 fastballs (100%)		
	20 throws at 80'		5 off-speed pitches		5 off-speed pitches		
<i>Step 15</i>	20 fastballs (75%)		15 fastballs (100%)		15 fastballs (100%)		
	20 fastballs (100%)		3 pickoff throws to 1st		5 off-speed pitches		
	5 off-speed pitches		20 fastballs (100%)	<i>Step 20</i>	Batting practice		
	15 fastballs (100%)		5 off-speed pitches		110-120 pitches		
	5 off-speed pitches		15 fastballs (100%)		Field bunts and comebacks		
	20 fastballs (100%)		3 pickoff throws to 2nd	<i>Step 21</i>	Simulated game		
	5 off-speed pitches		15 fastballs (100%)				
	Field bunts and comebacks		5 off-speed pitches				

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\*Rest 9 minutes after these sets.

†Begin steps in this phase with warm-up toss to 120'. All fastballs are from level ground after a crow hop. Finish steps in this phase with 25 long tosses to 160'.

‡Begin all steps in this phase with warm-up toss to 120'. Finish steps in this phase with 25 long tosses to 160'.

\*\*Relievers and closing pitchers can go to step 21 on the next throwing day after completing this step

#### SIMULATED GAME

1. 10 minutes warm-up of 50-80 pitches with gradually increasing velocity.
2. 5-8 innings for starters, 3-5 innings for relievers, 2-3 innings for closers.
3. 15-20 pitches per inning, including 10-15 fastballs
4. 9 minutes rest between innings

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