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Throwing Parameters

“How many pitches should I allow my child to throw?” This is one of the most common questions asked of sports medicine professionals by parents of youth baseball players. Many organized leagues have shared this concern and have adopted policies that limit the number of innings a child may pitch. However, the number of overall throws during a given period, rather than innings pitched is more important. USA Baseball Medical & Safety Advisory Committee commissioned a survey from baseball experts about pitching limits and other injury factors. There was only a 33% response rate but this survey is the most reliable data available at this time. Several conclusions were drawn from this survey.

- 1 Number of pitches is more important than number of innings when determining rest requirements. See Tables 1 and 2
- 2 The maximum number of pitches during a single outing should gradually increase with age.
- 3 A pitcher should be limited to two appearances per week.
- 4 Compared to younger pitchers, older pitchers can throw a few more pitches for a given number days of rest.
- 5 Participation in multiple leagues, playing other positions, and practice pitching should be considered when defining and regulating rest.
- 6 In general, a child can begin to throw a fastball at the age of 8, a change-up at 10, and a curveball at 14. See Table 3
- 7 Improper technique is a major factor in injury potential. Learning proper pitching mechanics is critical.
- 8 Conditioning of the throwing arm and entire body can reduce a young pitcher’s risk of injury.
- 9 While the number of pitches should be limited, the young pitcher should be encouraged to throw. This includes playing catch, playing other positions besides pitcher, and practicing pitching. Throwing is necessary for a young pitcher to strengthen and condition his/her arm and body.
- 10 Symptoms of discomfort or fatigue should be respected and longer periods of rest are recommended.

Table 1 Recommended maximum number of pitches
(mean +/- standard deviation)

AGE	Maximum pitches/ game	Maximum games/ week
8 - 10	52 +/- 15	2 +/- 0.6
11 - 12	68 +/- 18	2 +/- 0.5
13 - 14	76 +/- 16	2 +/- 0.4
15 - 16	91 +/- 16	2 +/- 0.4
17 - 18	106 +/- 16	2 +/- 0.6

Table 2 Recommended minimum rest periods for a given number of pitches
(mean +/- standard deviation)

AGE	1 Day Rest	2 Day Rest	3 Day Rest	4 Day Rest
8 - 10	21 +/- 18	34 +/- 16	43 +/- 16	51 +/- 19
11 - 12	27 +/- 20	35 +/- 20	55 +/- 23	58 +/- 18
13 - 14	30 +/- 22	36 +/- 21	56 +/- 20	70 +/- 20
15 - 16	25 +/- 20	38 +/- 23	62 +/- 23	77 +/- 20
17 - 18	27 +/- 22	45 +/- 25	62 +/- 21	89 +/- 22

Table 3 Recommended Age for throwing various pitches

PITCH	AGE (years)
Fastball	8 +/- 2
Change-up	10 +/- 3
Curve ball	14 +/- 2
Knuckle ball	15 +/- 3
Slider	16 +/- 2
Fork ball	16 +/- 2
Screw ball	17 +/- 2