

Supplementary Table 1 – Demographics of Included Studies

Eligible Studies	Source of Information Describing Athletes Return to Play	Subject Population/ Demographics	Sport type (number of patients)	Mean Follow Up
Anakwenze et al. (2010)(28)	Publically available data from: Press releases NBA game summaries Player profiles Weekly injury reports between 1997-2007	<p>Surgical group Age = 27.8 y Ht: 207.16 cm Wt: 107.15 kg BMI: 24.9</p> <p>Control group Age: 28.5 y Ht: 204.27 cm Wt: 106.50 kg BMI: 25.4</p>	24 NBA players with pathology; 48 controls NBA players	1 y
Earhart et al. (2012)(24)	Press releases Newspaper articles Team injury reports between 1980-2009	<p>Surgical group <u>Pitchers</u> Age: 32.9 y BMI = 25.6 Exp= 9 y</p> <p><u>Hitters</u> Age = 31.8 y BMI = 26.5 Exp= 9 y</p> <p>Conservative group <u>Pitchers</u> Age: 28.1 y BMI = 24.9 Exp= 4 y</p> <p><u>Hitters</u> Age = 29.3 y BMI = 26.9 Exp= 6.2 y</p>	69 MLB athletes 40 surgical: (20 pitchers and 20 hitters further stratified to 13 infielders 7 outfielders) 29 conservative: (9 pitchers and 20 hitters)	Post treatment performance statistics averaged at 1 and 3 y
Hsu et al.	Newspaper archives, team injury reports, player	Surgical group	137 NFL players:	Minimum 2 y follow up

(2010)(22)	profiles, press releases between 1979-2008	Age: 27.5 y BMI = 32 NFL exp: 4.4 y Conservative group Age: 29.4 y BMI = 29.4 NFL exp: 6.4 y	8 QB 7 RB 11 WR 9 TE 3 kickers 35 Offensive line 31 Defensive line 19 LB 13 Defensive second 96 surgical 34 treated conservatively	
Hsu et al. (2011)(23)	Newspaper archives, team injury reports, player profiles, press releases team medical records between 1972-2008	<u>NFL:</u> Age: 27.9 y BMI: 32.1 <u>NBA:</u> Age: 28.0 y BMI: 24.6 <u>NHL:</u> Age: 29.2 BMI: 26.4 <u>MLB:</u> Age: 30.7 BMI: 26.2	342 professional athletes NFL: 138 NHL: 86 MLB: 68 NBA: 50 226 surgical 116 treated conservatively	Minimum 2 y follow up
Matsunaga et al. (1993)(31)	Surgeons patient files	20 men, 8 females Surgical groups: <i>Simple disc excision</i> N = 11 Age = 34.5 +/- 8.5 <i>Percutaneous discectomy</i> N = 15 Age = 33.4 +/- 4.9 <i>Disc excision with</i>	Students and workers belonging to club teams (2 professional cyclists)	Mean = 2.9 y

		<i>spinal fusion</i> N = 2 Age = 36.2 +/- 7.9		
Mochida et al. (2001)(30)	Surgeon patient files. Elite athletes that underwent surgery for lumbar disc herniation from 1989 – 1995	Elite athletes: 24 m 6 f Age: 23.6 y Non-athletes: 30 m 12 f Age: 25.6 y	30 elite athletes: 7 professional or semi-professional; 15 collegiate; 8 HS (judo, track and field, tennis swimming, baseball, rugby, Fencing, wrestling Comparison group of 42 selected non-athletes	Range = 2-7.4 y Mean = 3.5 y
Sakou et al. (1993)(32)	Athletes that underwent surgery for lumbar disc herniation and compete at national level from 1989 – 1992	11 m 2 f Age range: 14 – 34, mean = 18.6 y	13 athletes 2 Soccer 2 judo 2 baseball 1 boxing 1 karate 1 gymnastics 2 rugby 1 basketball 1 cyclist	Range = 2.3 to 3.9 y Mean = 3.1 y
Savage et al. (2010)(35)	NFL players diagnosed with an LDH using information from team injury reports, game summaries, player profiles, press releases, newspaper archives, team medical records from 1986-2008	23 m Age = 28.5 y BMI = 28.5	23 NFL offensive skill position players- 4 QB 4 RB 5 TE 10 Wide receivers	Minimum 2 y follow up
Schroeder et al. (2013)(25)	Team medical records, newspaper archives, weekly injury reports, player profiles, press releases from 1967 - 2009	Surgical group 56 m Age = 28.7 y Conservative group 31 m Age = 28.8 y	87 NHL players	Minimum 2 y follow up
Wang et al. (1999)(14)	Surgeon's patient files. NCAA athletes that underwent surgery for lumbar disc herniation from	Surgical group: 14 subjects(12 m; 2	14 NCAA division 1 varsity collegiate athletes	Mean follow up = 3.1 y

	1988 to 1995.	f) Age range: 18-25, mean = 20.7 y Conservative group: 37 subjects Age: NR	Football = 4 Basketball = 2 Swimming = 2 Water polo = 2 Soccer = 1 Track and field = 1 Volleyball = 1 Diving = 1	
Watkins et al (2003)(33)	Surgeon's patient files. Athletes that underwent surgery for lumbar herniated nucleus pulposus from 1984 to 1998	60 professional and Olympic athletes Age range: 19-37, mean = 26.8 y	Ballet = 1 Baseball = 21 Basketball = 7 Football = 20 Hockey = 7 Olympic skiing = 1 Olympic swimming = 1 Olympic water polo = 2	Minimum 2 y follow up
Watkins et al. (2012)(34)	Athletes that underwent surgery for lumbar herniated nucleus pulposus from 1996 to 2010	85 but dropped to 75 professional athletes Age = 28.1 y	Football = 33 Hockey = 13 Baseball = 19 Basketball = 7 Other = 3	1 y
Weistroffer (2011)(26)	Publically available data from: Press releases NBA game summaries Player profiles Weekly injury reports between 1982-2009	66 professional athletes <u>Offensive linemen</u> n = 36 Age = 26.8 +/- 3.8 y BMI = 36.1 +/- 2.4 <u>Defensive linemen</u> n = 30 Age = 28.6 +/- 3.6 BMI = 34.4 +/- 2.7	66 NFL linemen (36 offensive, 30 defensive) Surgical group = 52 (31 offensive, 21 defensive) Conservative group = 14 (5 offensive, 9 defensive)	NR
Yoshimoto et al (2013)(29)	Surgeon's patient files. Athletes that underwent surgery for lumbar disc herniation nucleus from 2005 to 2011	25 athletes (20 m, 5 f) Age = 19.4 +/- 7.0 y Ht = 173.5 +/- 6.8 cm Wt = 66.0 +/- 11.3 kg BMI = 21.9 +/- 2.9	Baseball = 5 Basketball = 4 Badminton = 3 Soccer = 2 Volleyball = 2 Rugby = 2 Others = 7	Range = 12-64 m Mean = 22.8 m

M = males, N = number, f = females, BMI = body mass index, y = year(s), ht = height, wt = weight, exp = experience, kg = kilograms, m = meters, cm = centimeters, vs = versus, NFL = National Football League, NHL = National Hockey League, NBA = National Basketball Association, MLB = Major League Baseball, HS= high school, NCAA = National Collegiate Athletic Association, ADL = activities of daily living, RTS = return to sport, NR = not reported, , ERA= earned run average, IP= innings pitched, K= strikeouts, WHIP= Walks plus hits divided by innings pitched, RBI = runs batted in, QB = quarterback, RB = running back, WR = wide receiver, TE = tight end, LB = linebacker