

Chapter 6



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Designing Sport-Specific Training Programs

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This final chapter is designed to give you examples of how to use the drills in this book. The sport-specific programs we have provided emphasize proper progression from basic to more complex speed, agility, and quickness drills. These programs are not intended to provide a “cookie-cutter” approach to program design. Every athlete has distinctive goals and needs, even those who play the same sport and position.

Speed, agility, balance, quickness, and reaction-time drills cover the complete spectrum of biomotor skill, from basic and low intensity to complex and high intensity. Some of the basic skills, like skipping, balance drills, and medicine-ball work, can be used while warming up for any training session. Other higher-intensity

exercises, like high-intensity jumping drills, can put enormous stress on both physiological structures and the central nervous system (CNS). These drills should be used wisely, and ample recovery between drills and training sessions that employ them should be provided.

The information derived from the needs analysis section in chapter 2 is the key to properly designing a safe and effective speed, agility, and quickness program. Only after an athlete's limiters are determined can a program be designed specifically for them. Each workout must have a defined goal and each drill should be chosen to meet that goal. Training just to train and randomly choosing drills will not provide the results you are looking for. **It is also important to remember the concept of specificity: speed, agility, and quickness training should attempt to closely mimic the movements performed by the athlete during competition. This will produce the greatest amount of improvement in performance.**

Once you have decided on the major goals for the year, several mesocycles can be programmed to more specifically address the objectives of the training program. The programs we have provided use mesocycles geared toward improving speed, agility, and quickness in various sports. Each mesocycle consists of six microcycles, each one week in duration. Adjustments can and should always be made to each microcycle to ensure that the training program stays on track and that consistent and safe progress is made.

It is important to note that speed, agility, and quickness training is just one segment of the total training plan, which also includes training for functional strength, flexibility, and proper restoration. Any of these components may be emphasized, depending on where you are in your athletic development or training cycle. For our purposes in this chapter, we assume that the major emphasis for the current mesocycle is speed, agility, and quickness. We also assume that basic locomotive mechanics have been mastered and that general conditioning has been completed.

Determining Program Elements

There are many variables that factor in when designing a training program, most of which go well beyond the scope of this book. Although we may advocate that one drill be performed twice per week, if the skill is mastered easily a more complex variation can be attempted to maintain progress. The first 3 weeks of a mesocycle included in the speed, agility, and quickness program are dedicated to mastering specific skills. In the second 3 weeks of this mesocycle, we mix and match several drills to create more complex drills. Here is the time to get creative with your program. Feel free to change a drill or to combine it with a sport-specific skill or another drill. All of these drills were developed through experimentation. However, it is important to make sure that the athlete masters the basic movement patterns before taking on more complex drills or combining them with another skill. If a complex drill is done sloppily, it will do more harm than good by reinforcing poor movement patterns.

The training session format can be tailored to meet the specific needs and goals of the athlete or the team as a whole. Here is a good way to break it down:

1. A 3- to 5-minute session introduction that lays out the main goals of the session
2. A 10-minute warm-up
3. The body of the session: 20 to 25 sets of drills with a 1-to-3 or 1-to-4 work-to-rest ratio

4. Three or four 3-minute breaks for water, especially in hot climates
5. Always a cool-down that focuses on flexibility work.

Warm-Up

After the session introduction, begin preparing with a dynamic warm-up. As the drills of a particular session are mastered, they can eventually be used in the warm-up. Many of the drills in this book, such as skipping and carioca can serve as warm-up exercises. Using simple speed, agility, and quickness drills in the warm-up serves two main objectives. First, it prepares the body and CNS for work. Second, it teaches and reinforces proper biomotor skill execution without taking time away from the main goal of the training session. Over the course of a mesocycle, these 15- to 20-minute warm-ups can have a profound effect on biomotor skill acquisition and conditioning, ultimately adding up to several hours of work per mesocycle.

Use the following guidelines to ensure a safe and effective progression in the warm-up and during the entire training cycle. Perform each drill 2 to 4 times over 15 to 20 yards (14 to 18 meters), always moving from

1. simple to complex drills,
2. slow to fast execution speeds,
3. low- to high-intensity drills, and
4. lower to higher volume.

Below is a sample of a 15- to 20-minute warm-up using the drills in this book:

- A-March Walk
- B-March Walk
- Light jog
- Backpedal
- Skipping
- Backward Skipping
- Straight-Leg Shuffle
- Butt-Kickers
- Side-Shuffle
- Carioca
- Four-Point Pop-Up
- Single-Leg Balance With Opposite-Leg Reach
- Single-Leg Balance With Opposite-Arm Reach
- Multiplane Lunges

Body of the Session

The body of the session should emphasize an athlete's or group's major weaknesses or limiters. Don't feel as if you need to do an equal number of sets for each drill. If a particular drill proves challenging, focus on it instead of one that has been mastered. Provide appropriate rest between each drill. Remember that the major focus is to develop speed, agility, and quickness. This cannot take place in a fatigued state. A 1-to-3 or 1-to-4 work-to-rest ratio should provide ample recovery. However, if

athletes are not well conditioned, they may need more time for recovery. In this case, lower the number of sets to be done per session and increase the rest periods. You'll get more out of the session with this approach. *More is not always better.*

When using speed, agility, and quickness training for conditioning, match the work-to-rest ratio of the target sport in order to make the training metabolically specific.

Because of individual differences, specific recommendations on the volume and intensity of exercises are impossible to make. However, ranges may be provided to serve as general guidelines. All exercises can be performed for the maximum number that can be accomplished in a specified period of time, usually between 5 and 10 seconds. Refer to chapter 1 for a fuller discussion of these variables.

Breaks and Cool-Down

Water breaks are a great way to provide rest and well-needed nourishment to the body, especially in hot climates. Keep water close by and provide a water break immediately after the warm-up, in the middle of the main body of the session, and at the end of the main body of the session (that is, right before flexibility work). Athletes are not always very conscientious about hydrating properly before a training session, so it's better for the coach to make sure they stay hydrated.

The cool-down, or flexibility session, is a time for gearing down, working on range-of-motion (ROM) issues using static flexibility exercises, and positively reflecting on the session. This session should not turn into a flexibility contest. Rather, it should focus on improving individual ROM deficits. Most stretching should be performed from a standing position so that gravity and ground reaction can load the muscles, joints, and connective tissues in a triplane environment consistent with what happens while competing and training.

Positive Reinforcement

Finish every session with positive affirmations. Focus on the successes of the session, not the failures. Speak of needed improvements in a positive manner and communicate an eagerness to accomplish your goals. No athlete likes to be reminded of or constantly badgered about his or her shortcomings. Athletes will respond better to a positive and respectful coaching style. Developing a good work ethic and desire to perform at the highest level possible begins with mutual respect and admiration between the coach and athlete.

Sample Sport-Specific Programs for Speed, Agility, and Quickness

The following pages list several examples of sport-specific speed, agility, and quickness programs. As stated above, when designing your own programs, it is important to focus on specificity of training and the needs of the athlete. One great way to improve specificity of training is to incorporate sport-specific tasks into your drills. For instance, programs for sports that require vertical jumping, like basketball and volleyball, should include vertical jumping drills. A football defensive back could catch a pass while performing reactive running drills. A creative mind and an understanding of the skills needed for each sport will ensure successful program design.

Customizable Sample Program Template

Goals:

	WEEK 1		WEEK 2		WEEK 3	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed						
Agility						
Quickness						
	WEEK 4		WEEK 5		WEEK 6	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness						
Speed and quickness						
Agility and quickness						
Comments:						

From *Training for Speed, Agility, and Quickness, Second Edition*, edited by Lee E. Brown and Vance A. Ferrigno, 2005, Champaign, IL: Human Kinetics.

Tennis Sample Program

Goals: Improve serving power, change of direction, and reaction time.

Needs	WEEK 1		WEEK 2		WEEK 3	
	Drill name	Number	Drill name	Number	Drill name	Number
Speed	Ankling	2	A-Skip for distance (v)	7	A-Skip for height (v)	7
	Wall Drills (Acceleration Marches)	24	Falling Starts	25	Heavy Sled Pulls	34
Agility	Icky Shuffle	82	Carioca	51	In-Out Shuffle	83
	20-Yard Shuttle	53	30-Yard T-Drill	54	15-Yard Turn Drill	63
Quickness	Side- Shuffle	177	Lateral Skaters	137	Lateral Skaters to sprint	137
	Medicine-Ball Wall Scoop Toss	128	Medicine-Ball Wall Side Toss	126	Medicine-Ball Wall Overhead Throw	127
Needs	WEEK 4		WEEK 5		WEEK 6	
	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Zigzag	68	Crossover Shuffle	85	Zigzag Crossover Shuffle	86
	Lateral 20-Yard Shuttle (v)	53	Sprint and Cut on Command	169	Star Drill	171
Speed and quickness	Sprint to Medicine-Ball Wall Side Toss	126	Medicine-Ball Overhead Throw to sprint	127	Side- Shuffle to Medicine-Ball Side-to-Side Pass (v)	177, 126
	V-Drill	78	Hop-Scotch Drill	150	V-Drill with ball drop (v)	78
Agility and quickness	Star Drill—Sprint, Backpedal, Shuffle	72	20-Yard Shuttle with ball pickup (v)	53	V-Drill while volleying (v)	78
Comments:						

(v) = variation

Note: Drills in weeks 4 through 6 should be performed on a tennis court using the court lines as markers. The court surface should be specific to what the player will be playing on.

Volleyball Sample Program

Goals: Defense—Increase vertical jump for blocks; improve reaction and level changes for digs; improve lateral quickness for digs. Offense—Improve vertical jump and core for spiking.

	WEEK 1		WEEK 2		WEEK 3	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed	Straight-Leg Shuffle	3	A-Skips	7	Skip for Height	40
Agility	Forward Roll Over Shoulder	96	Backward Roll Over Shoulder	97	Sprawl-to-Stand Pop-Up	175
	Carioca	51	20-Yard Shuttle with carioca (v)	53	Star Drill—Sprint, Carioca, Backpedal	73
Quickness	In-Place Ankle Jumps	135	In-Place Tuck Jumps	138	Pike Jumps (v)	138
	Medicine-Ball Wall Chest Passes	124	Medicine-Ball Wall Chest Passes, single arm (v)	124	Medicine-Ball Bull in a Ring, single arm (v)	113
	WEEK 4		WEEK 5		WEEK 6	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Three-Step Foot Tap Drill With Sprint Plus Ball Drop	163	Side-Shuffle to bounce and catch (v)	177	Side-Shuffle to Sprawl-to-Stand Pop-Up	177, 175
	Four-Point Pop-Up	172	Sit-to-Stand Pop-Up	173	Lying-to-Stand Pop-Up	174
Speed and quickness	Medicine-Ball Overhead Throw to sprint	127	Medicine-Ball Overhead Throw to Vertical Jump	127, 139	Medicine-Ball Overhead Throw to sprint	127
	Repeated Vertical Jumps (v)	139	Side-Shuffle to Repeated Vertical Jumps	177, 139	Side-Shuffle to Ball Drops	177, 117
Agility and quickness	Backward Roll Over Shoulder to Vertical Jump	97, 139	Forward Roll Over Shoulder to Vertical Jump	96, 139	Sprawl-to-Stand Pop-Up to Vertical Jump	175, 139
	Sprawl-to-Stand Pop-Up to H-Movement	175, 81	Lateral Skaters to bounce and catch (v)	137	Lateral Skaters to quick hands (v)	137
Comments:						

(v) = variation

Boxing, Karate, and Tae Kwon Do Sample Program

Goals: Improve rotational power for punching and kicking; develop quickness for body positioning; develop quickness in hand and eye coordination and reaction.

Needs	WEEK 1		WEEK 2		WEEK 3	
	Drill name	Number	Drill name	Number	Drill name	Number
Speed	Skip for Height	40	Skip for Distance	41	Split-Squat Jumps	42
	Stadium Stairs	32	Uphill Acceleration Run	33	Heavy Sled Pulls	34
Agility	Icky Shuffle	82	Carioca	51	In-Out Shuffle	83
	Lateral Skaters	137	Hexagon Drill	104	Bag Hops With 180-Degree Turn	92
Quickness	Rope-Skipping	134	In-Place Ankle Jumps	135	Scissor Jumps	136
	The Bob	181	The Parry	182	The Weave	183
Needs	WEEK 4		WEEK 5		WEEK 6	
	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Single-Leg Balance With Opposite-Leg Reach (3 planes)	106	Single-Leg Balance With Opposite-Arm Reach	107	Single-Leg Balance Dumbbell Presses	108
	Snake Jump	87	180-Degree Turn	88	Lateral Skaters	137
Speed and quickness	Focus Mitt	184	Focus Mitt	184	The Bob to Focus Mitt	181, 184
	The Bob to The Weave	181, 183	The Parry to The Weave	182, 183	The Weave to Focus Mitt	183, 184
Agility and quickness	Plyo Push-Ups	123	Medicine-Ball Wall Chest Passes	124	Medicine-Ball Wall Chest Passes, single arm (v)	124
	Forward Roll Over Shoulder to Scissor Jumps	96, 136	Backward Roll Over Shoulder to Vertical Jump	97, 139	Cartwheel to Barrier Jumps	100, 141
Comments:						

(v) = variation

Wrestling and Judo Sample Program

Goals: Develop explosive power; improve powerful rotational mechanics for throws; increase agility from athletic position and quick reaction.

	WEEK 1		WEEK 2		WEEK 3	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed	A-Skips	7	A-Form Runs (v)	7	Sand Running	18
	Stadium Stairs	32	Uphill Acceleration Run	33	Heavy Sled Pulls	34
Agility	Forward Roll–Backward Roll Combination	99	Sprawl-to-Stand Pop-Up	175	Sprawl, Roll, and Stand Up (v)	175
	Snake Jump	87	180-Degree Turn	88	Bag Hops With 180-Degree Turn	92
Quickness	Wheelbarrow	122	Stability-Ball Hops	121	Medicine-Ball Lateral Shuffle/Pass	114
	Weighted Rope-Skipping (v)	134	In-Place Tuck Jumps	138	Repeated Pike Jumps (v)	138
	WEEK 4		WEEK 5		WEEK 6	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Dodge Ball	185	Dodge Ball to Sprawl-to-Stand Pop-Up	185, 175	Dodge Ball to In-Place Tuck Jumps	185, 138
	The Bob	181	The Parry	182	The Weave	183
Speed and quickness	Medicine-Ball Wall Side Toss	126	Medicine-Ball Overhead Throw	127	Medicine-Ball Reverse Scoop Toss (v)	128
	Repeated Vertical Jumps (v)	139	Split-Squat Jumps	42	Alternating Split-Squat Jumps (v)	42
Agility and quickness	Directional Hand Movement	166	Directional Mirror Drill	167	Side-to-Side Skiers	94
	Sprawl-to-Stand Pop-Up to Medicine-Ball Lateral Shuffle/Pass	175, 114	Sprawl-to-Stand Pop-Up to Vertical Jump	175, 139	Sprawl-to-Stand Pop-Up to Barrier Jumps	175, 141
Comments:						

(v) = variation

Baseball, Softball, and Cricket (Infielders) Sample Program

Goals: Improve quick response and lateral movement for throwing speed and fielding range; improve acceleration and turning ability for faster base running; increase bat speed.

	WEEK 1		WEEK 2		WEEK 3	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed	A-Skips	7	Light Sled/Tire Pulls	15	Parachute Running	17
	Wall Drills (Acceleration Marches)	24	Acceleration Runs	30	Uphill Acceleration Run	33
Agility	20-Yard Shuttle	53	Figure Eights	66	Z-Pattern Run	67
	Zigzag	68	Crossover Shuffle	85	Zigzag Crossover Shuffle	86
Quickness	Ball Drops With a Partner	117	Partner Blind Tosses	119	Goalie Drill	118
	Medicine-Ball Overhead Throw	127	Medicine-Ball Wall Side Toss	126	Medicine-Ball Side-to-Side (v)	126
	WEEK 4		WEEK 5		WEEK 6	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Side-to-Side Skiers With Front Rotation	95	Side-to-Side Skiers With Front Rotation	95	Side-to-Side With Back Rotation (v)	95
	15-Yard Turn Drill	63	20-Yard Square	64	30-Yard Square (v)	64
Speed and quickness	Side-Shuffle	177	Backpedal	111	Sprint and Cut on Command	169
	Sprint to Medicine- Ball Overhead Throw	127	Sprint to Medicine- Ball Wall Side Toss	126	Medicine-Ball Wall Side Toss to sprint	126
Agility and quickness	180-Degree Turn	88	Snake Jump	87	Lateral Skaters	137
	Icky Shuffle while fielding ball (v)	82	Crossover Shuffle while fielding ball (v)	85	Half-Ladder Skill to pick up ball (v)	152
Comments:						

(v) = variation

Football (Running Back) and Rugby (Forward) Sample Program

Goals: Develop first-step quickness; increase acceleration; train change of direction.

	WEEK 1		WEEK 2		WEEK 3	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed	Straight-Leg Shuffle	3	Single-Leg Run-Through	12	Run-Through	13
	Wall Drills (Acceleration Marches)	24	Uphill Acceleration Run	33	Heavy Sled Pulls	34
Agility	Four-Point Pop-Up	172	Squirm	55	Squirm	55
	15-Yard Turn Drill	63	Z-Pattern Cuts	69	V-Drill	78
Quickness	Plyo Push-Ups	123	Stability-Ball Cyclic Impact Lockouts	120	Stability-Ball Hops	121
	Medicine-Ball Wall Chest Passes	124	Medicine-Ball Wall Chest Passes, single arm (v)	124	Medicine-Ball Lateral Shuffle/Pass	114
	WEEK 4		WEEK 5		WEEK 6	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Star Drill—Sprint, Backpedal, Shuffle	72	Star Drill—Sprint, Carioca, Backpedal	73	Star Drill—Sprint, Bear Crawl, Shuffle	74
	Bag Weave	89	Lateral Weave	91	Bag Hops With 180-Degree Turn	92
Speed and quickness	Medicine-Ball Lateral Shuffle/Pass to sprint	114	Sprint to Medicine-Ball Lateral Shuffle/Pass	114	Sprint to Plyo Push-Ups	123
	Medicine-Ball Wall Scoop Toss	128	Medicine-Ball Squat, Push Toss, Bounce, and Catch	115	Medicine-Ball Forward Scoop Toss, Bounce, and Catch	116
Agility and quickness	Forward Roll Over Shoulder to ball catch (v)	96	Sprint to Forward Roll Over Shoulder	96	Running Start and Tumbling Over Barrier (v)	102
	Four-Point Pop-Up to ball catch (v)	172	Sprawl-to-Stand Pop-Up to ball catch (v)	175	Sprawl-to-Stand Pop-Up to sprint (v)	175
Comments:						

(v) = variation

Basketball and Netball Sample Program

Goals: Defense—Improve jumping ability for rebounding and blocking; improve lateral mobility for coverage and change of direction. Offense—Improve jumping ability for shooting; improve first-step quickness and acceleration for breakaways.

Needs	WEEK 1		WEEK 2		WEEK 3	
	Drill name	Number	Drill name	Number	Drill name	Number
Speed	A-March Walk	6	A-Skips for distance (v)	7	A-Skips for height (v)	7
	A-Form Runs (v)	7	Partner-Resisted Starts	35	Bullet Belt	39
Agility	20-Yard Shuttle	53	Lateral 20-Yard Shuttle (v)	53	30-Yard T-Drill	54
	Medicine-Ball Wall Chest Passes	124	Medicine-Ball Overhead Throw	127	Medicine-Ball Wall Scoop Toss	128
Quickness	Repeated Vertical Jumps (v)	139	Standing Long Jump	140	Power Skips	142
Needs	WEEK 4		WEEK 5		WEEK 6	
	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Squirm	55	X-Pattern Multiskill	65	Z-Pattern Cuts	69
	Hexagon Drill	104	Hexagon Drill	104	Drop and Get Up	103
Speed and quickness	Ladder Speed Runs	10	Hop-Scotch Drill to catch a pass (v)	150	One-Leg Hop to dribble and lay-up (v)	151
	Repeated Vertical Jumps (v)	139	Vertical Jump to sprint	139	Sprint to Vertical Jump	139
Agility and quickness	Backward Icky Shuffle	192	Medicine-Ball Lateral Shuffle/Pass	114	Medicine-Ball Lateral Shuffle/Pass, with one partner leading (v)	114
	Four-Point Pop-Up to 20-Yard Shuttle	172	Sit-to-Stand Pop-Up to Z-Pattern Run	173, 167	Lying-to-Stand Pop-Up to 30-Yard T-Drill	174, 54
Comments:						

(v) = variation

Soccer and Lacrosse Sample Program

Goals: Improve lateral agility and quickness; train level changes during slide tackles; increase open field acceleration.

	WEEK 1		WEEK 2		WEEK 3	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed	Single-Leg Run-Through	12	Run-Through	13	Run-Through alternating fast legs (v)	13
	Gears	28	Uphill Speed Runs	16	Uphill-to-Flat Contrast Speed Runs	20
Agility	Figure Eights	66	Z-Pattern Run	67	Z-Pattern Cuts	69
	Four-Point Pop-Up	172	Sprawl-to-Stand Pop-Up	175	Sprawl, Roll, and Stand Up (v)	175
Quickness	Hop-Scotch to reaction sprint (v)	190	Quick Feet to reaction sprint (v)	148	Half Ladder Skill to reaction sprint (v)	152
	Repeated Vertical Jumps	139	Lateral Skaters	137	Vertical Jump to sprint	139
	WEEK 4		WEEK 5		WEEK 6	
Needs	Drill name	Number	Drill name	Number	Drill name	Number
Speed, agility, and quickness	Four-Point Pop-Up to 20-Yard Shuttle	172, 53	Sprawl-to-Stand Pop-Up to Squirm	175, 55	Forward Roll–Backward Roll Combination to Squirm	99, 55
	Forward Roll Over Shoulder	96	Backward Roll Over Shoulder	97	Cartwheel	100
Speed and quickness	Medicine-Ball Overhead Throw	127	Medicine-Ball Wall Scoop Toss	128	Medicine-Ball Squat, Push Toss, Bounce, and Catch	115
	Lateral Skaters	137	Repeated Vertical Jumps (v)	139	Sprint to Vertical Jump	139
Agility and quickness	Half Ladder Skill to ball control (v)	152	Half Ladder Skill to shoot (v)	152	Half Ladder Skill to trap and shoot (v)	152
	Sprint and Backpedal on Command	168	Sprint and Cut on Command	169	Star Drill	171
Comments:						
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