

# Testing Administration

## Occupational Physical Assessment Test (OPAT)

*The purpose of this document is to assist OPAT administrators with general administrative requirements, selection and training of testing personnel, test site selection, equipment requirements and scorer responsibilities.*

### GENERAL ADMINISTRATIVE REQUIREMENTS

*The test administrator is responsible for ensuring the accuracy of test scores and safety of the test subjects. This is accomplished through proper planning and supervision. Planning for administration of the OPAT includes the following:*

- *Selection and training of test scorers and support personnel*
- *Test site selection*
- *Equipment procurement, inventory and functions check*
- *Rehearsals*
- *Pre-briefs*
- *Subject training*

### SELECTION AND TRAINING OF SCORERS AND SUPPORT PERSONNEL

*The test administrator is responsible for selecting and training all personnel involved in administering the OPAT. The number of testing personnel is scalable and depends on the number of individuals to be tested. Testing personnel will be trained by the test administrator prior to the administration of the OPAT. This training will include the following:*

- *Scorer and support personnel responsibilities*
- *Test site layout*
- *Equipment functions check*
- *Test event requirements and scoring*
- *Medical emergencies*

### TEST SITE SELECTION

*The OPAT was designed to be scalable based on the number of individuals to be tested. Test administrators should consider the following general requirements when selecting a facility or test site to execute the OPAT:*

- **Test Site** - *should be free of significant hazards such as personnel traffic, vehicle traffic, slippery surfaces and areas where heavy pollution is present. When space is a premium, the same area can be used for the briefing/preparation area, the standing long jump, the strength deadlift and the seated power throw. Electrical service is*

required to power the sound system or playback device for the interval aerobic run. An overhead speaker system, battery powered device, or automobile system with sufficient power may also be used as long as the tape sound is clearly audible to all participants.

- **Standing Long Jump Lane** - a flat dry area measuring three feet wide by fifteen feet long for each lane.
- **Seated Power Throw Lane** - a flat, dry area measuring three feet wide by thirty feet long for each lane with a minimum of fifteen feet of ceiling height and an attached vertical wall or other flat solid, immovable surface.
- **Strength Deadlift Lane** - a flat dry area measuring eight feet wide by eight feet long for each bar.
- **Interval Aerobic Run Lane** - a flat, dry area with a nonslip surface such as a basketball court, parking lot or any area that that will accommodate running lanes 20 meters (65.61 feet) long and 2 meters (6.56 feet) wide for each interval aerobic run lane. Ensure adequate space to accommodate change of direction on each end of the lane(s).

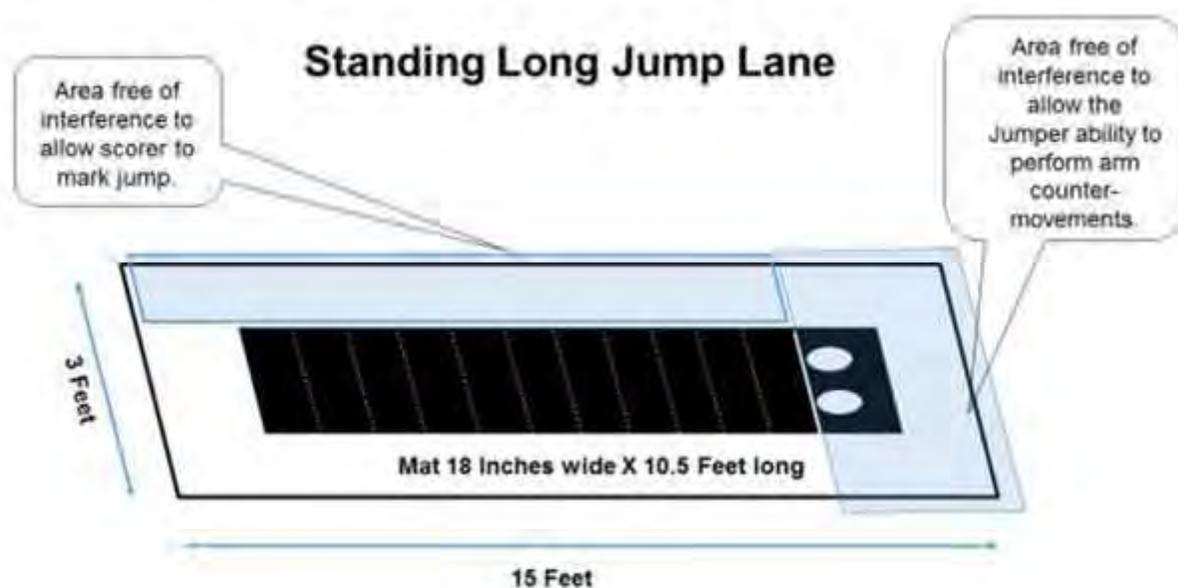


Figure 1. Standing Long Jump Lane

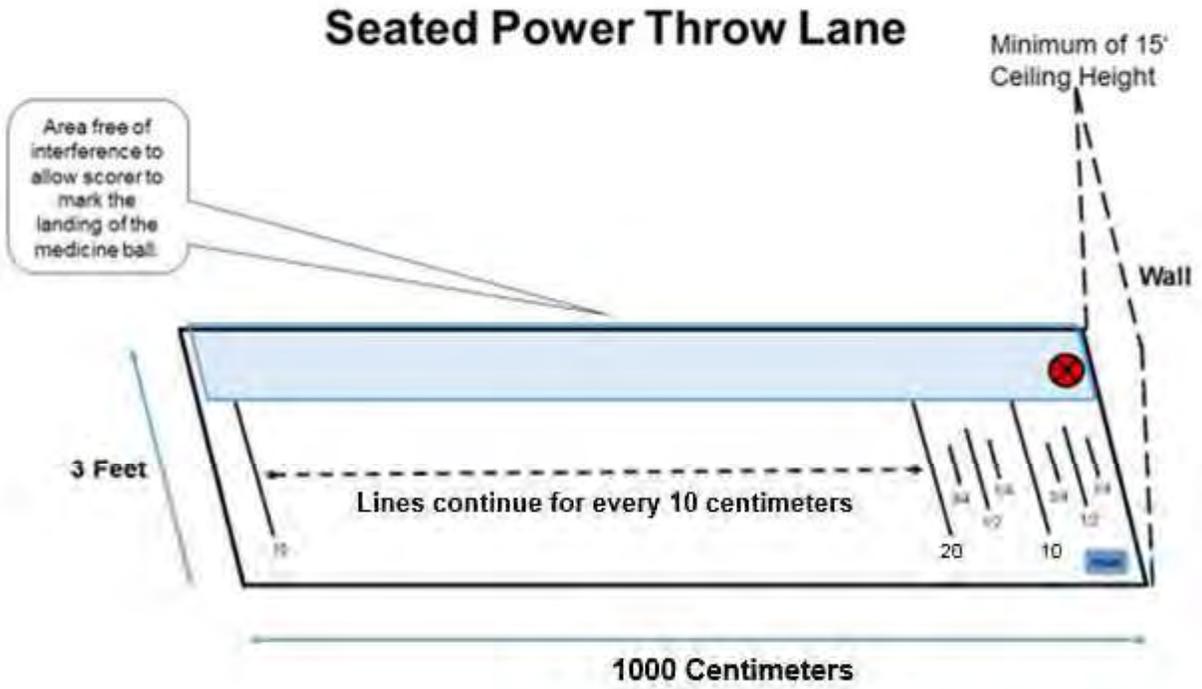


Figure 2. Seated Power Throw Lane

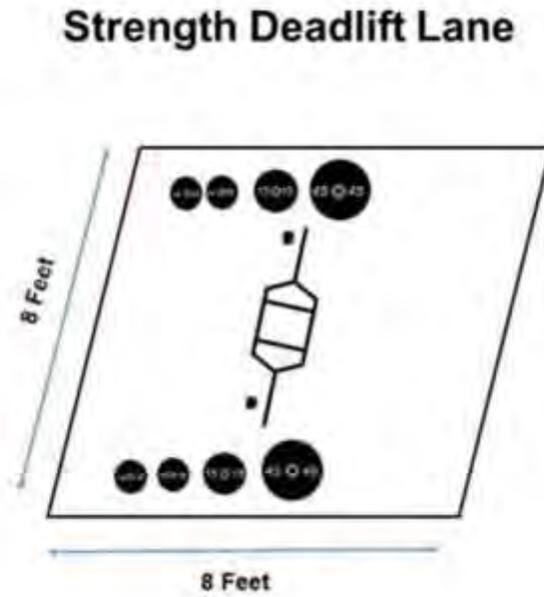


Figure 3. Strength Deadlift Lane

## Interval Aerobic Run Lane

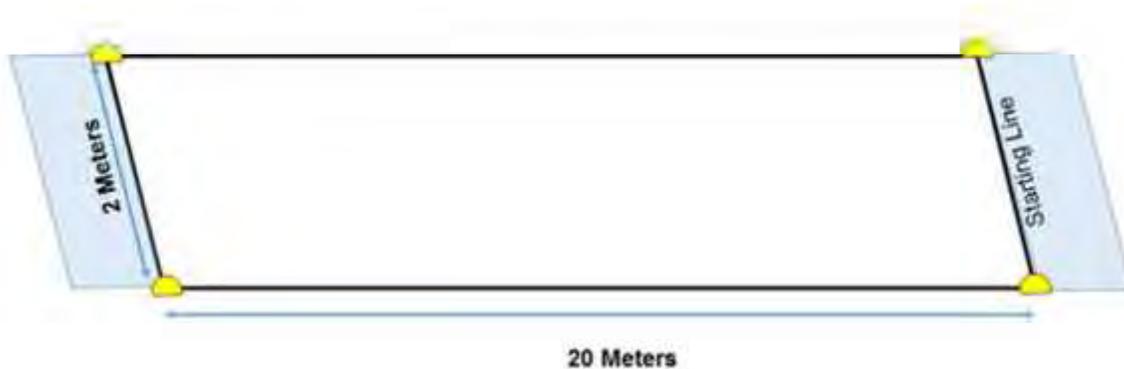


Figure 3. Interval Aerobic Run Lane

### EQUIPMENT PROCUREMENT, INVENTORY AND FUNCTIONS CHECK

The Army has developed a standardized equipment list for administration of the OPAT (see page 13). The test administrator will determine the number of equipment sets based on the number of individuals to be tested, time available to administer the test and number of testing and support personnel available to accommodate testing. The test administrator will secure and inventory required equipment sets prior to execution of the test. The equipment requirements listed below accommodate the set-up of **ONE** OPAT test lane:

#### Administrative Equipment Requirements

The following equipment is required to conduct the OPAT:

- Measuring Tape – 100 foot, vinyl coated fiberglass tape (standard and metric)
- Masking or 100 MPH Tape
- Spray Paint – used to mark ground when conducting test outdoors
- Pens – black
- Clipboards
- OPAT scorecards

#### Standing Long Jump Equipment Requirements

The following equipment is required to conduct the standing long jump:

- Standing Long Jump Mat – 18 inches wide by 10.5 feet long non-slip rubber mat with both standard and metric measurements (if no Standing Long Jump Mat is

available the test can be administered with on a flat, dry, non-slip surface using a metric tape measure affixed to the floor).

- *Marking Dowel* – wooden or plastic dowel to assist scorer in marking/measuring long jump
- *Towel* – allow individuals to wipe the bottom of their shoes before execution of the standing long jump (recommended, not required)

### **Seated Power Throw Equipment Requirements**

The following equipment is required to conduct the seated power throw:

- 20 meter measuring tape and making tape to affix the measuring tape to the floor. A "Power Throw Mat"(similar to the one produced by USAREC) is an excellent optional addition and make set up fast and easy.
- *Medicine Ball* - 2-kg (4.4 lbs.), textured rubber, limited bounce
- *Yoga Block* – 9 inches long, 6 inches wide and 3 inches deep (approximate)
- *Marking Dowel* – wooden or plastic dowel to assist scorer in marking/measuring seated power throw

### **Strength Deadlift Equipment Requirements**

There are multiple configurations of strength equipment that will satisfy the requirements to conduct one "lane" of the Strength Deadlift test event, only 1 bar is required and the weights can be changed for each lift. Multiple bars speed test administration but are not mandatory:

#### Configuration #1

- *Hexagon Bar* – 1 EA.
- *Bumper Plates, 15lb* – 4 EA.
- *Bumper Plates, 25lb* – 2 EA.
- *Bumper Plates, 35lb* – 2 EA.
- *Bumper Plates, 45lb* – 2 EA.
- *Barbell Collars* - 2 EA.

#### Configuration #2

- *Hexagon Bar* – 1 EA.
- *Bumper Plates, 10lb* – 6 EA.
- *Bumper Plates, 15lb* – 8 EA.
- *Barbell Collars* - 2 EA.

Listed below is the equipment required to build 1 Hexagon bar for each of the nine weights in the Strength Deadlift "lane":

#### Configuration #3

- *Hexagon Barbell* – 9 EA.
- *Bumper Plates, 15lb* – 16 EA.
- *Bumper Plates, 25lb* – 6 EA.
- *Bumper Plates, 25lb* – 8 EA.
- *Bumper Plates, 45lb* – 6 EA.
- *Barbell Collars* - 18 EA.

## **Interval Aerobic Run Equipment Requirements**

*The following equipment is required to conduct the interval aerobic run:*

- *Cones – 4 EA for Lane 1 (2 for each additional lane)*
- *Masking or 100 MPH Tape or Spray Paint – used to mark the floor or ground*
- *An audio device (CD, MP3 Player or Smart Phone)*
- *Interval aerobic run synchronized pace recording – 1 EA.*
- *PA Device – 1 EA. for testing large groups, as required*
- *Extension Cord – 1 EA, 100 FT, as required*
- *Manual Scoreboards – 2 EA. flip type with adjustable stand, or locally made*

## **PRE-BRIEFS**

*The test administrator should conduct a pre-brief to individuals being tested, in sufficient time prior to the test (12-24 hours) to allow individuals to properly dress and prepare. The pre-brief will include the following:*

- *Overview and purpose of the OPAT*
- *Scorecard preparation*
- *Appropriate testing attire (civilians: t-shirt, shorts, socks and running shoes; military: APFU and running shoes).*
- *Unauthorized attire or equipment (gloves, wraps, lifting belts, compression sleeves and garments, braces, nasal strips or ear buds/headphones)*
- *Conduct during the test*
- *Pre-testing requirements (hydration, nutrition, sleep and free from fatigue or illness)*

## **SCORER TRAINING AND RESPONSIBILITIES**

*The test administrator is responsible for training OPAT scorers and support personnel. Event specific information is provided below and will be used to assess a scorer's ability to accurately administer and score the OPAT.*

### **Standing Long Jump**

*The purpose of the standing long jump is to assess an individual's lower-body power. Scorer responsibilities include the following:*

- *Read event instructions, demonstrate the event and answer event questions*
- *Ensure individual's toes are behind the take-off line, feet are parallel and approximately shoulder-width apart*
- *Ensure individuals perform a countermovement (swinging arms forward and backward while bending the knees) and jump forward as far as possible*
- *Individuals will perform two sub-maximal practice jumps followed by three successful jumps*

- *If a jumper moves his/her feet upon landing or falls backward, the jump will be repeated. If the jumper falls forward, but does not move their feet, the jump is scored.*
- *The distance for each jump is recorded to the closest **centimeter (cm)** by measuring from the take-off line to back of the jumper's heel closest to the take-off line; it is helpful to lay down the marking dowel perpendicular to the lane touching the heel closest to the take-off line.*
- *Record the standing long jump results to the nearest centimeter and initial the OPAT scorecard.*

### **Seated Power Throw**

*The purpose of the seated power throw is to assess an individual's upper-body power. Scorer responsibilities include the following:*

- *Read event instructions, demonstrate the event and answer event questions*
- *Ensure the individual is sitting upright with their upper back against the wall, lower back against the yoga block, legs on the ground straight out in front and elbows comfortably out to the side*
- *Individuals will hold the ball with two hands, bring the ball to their chest, pause briefly, then, with even force from both arms, pushes the ball up and outward at an approximate 45-degree angle*
- *The individual should not be throwing the medicine ball as if they are shooting a basketball. In other words, one arm must not overpower the other arm*
- *During each throw, the individual's upper back must maintain contact with the wall while the lower back maintains contact with the yoga block. If the upper back or lower back lose contact, the throw will be repeated*
- *The individual will perform two practice throws and three maximal effort throws*
- *Record the seated power throw results to the nearest 10 centimeters (350, 470, 590) and initial the OPAT scorecard.*

### **Strength Deadlift**

*The purpose of the strength deadlift is to assess an individual's lower-body strength. Scorer responsibilities include the following:*

- *Read event instructions, demonstrate the event and answer event questions.*
- *Practice lifts are performed with an unloaded bar or a loaded bar with 20, 30, or 40 pounds (total practice/warm-up weight may not exceed 100 pounds).*
- *The individual will stand inside the hexagon bar with their feet shoulder-width apart and squat down, grasp the handles and complete three practice lifts; the scorer will ensure the individual is using the correct lifting form.*
- *The scorer will ensure the individual "squats" by bending simultaneously at the knees and hips, knees are in line with the toes and back is flat or slightly arched. The*

shoulders must remain above the hips throughout the lift. The head remains neutral throughout the lift and the heels remain flat on the ground.

- The lift begins with the individual's arms at his/her sides and fully extended while gripping the handles. When given the command, "Ready Lift", lift the bar straight up by extending the hips and knees in a slow, continuous movement at the same time. When the individual is standing with their hips and knees fully extended, the scorer will say, "Down". The individual will squat back down and place the bar on the ground in a controlled manner.
- If an individual displays poor lifting technique, he/she will be stopped immediately and will not receive credit for the lift.
- Individuals will be allowed a short rest between lifts.
- The lift sequence is: practice/warm-up -- unloaded or loaded with no greater than 40 lbs. for three practice lifts followed by lifts of 120 lbs., 140 lbs., 160 lbs., 180 lbs., 190 lbs., 200 lbs., 210 lbs., and 220 lbs..
- IF YOUR HEXAGONAL BAR HAS "D HANDLES" THEY MAY ONLY BE USED FOR THE PRACTICE LIFTS.
- If an individual fails to successfully complete a lift, they will be allowed to rest for up to one minute. At the completion of the rest period the individual will be allowed another attempt.
- Ensure individuals do not over-exert themselves. If the individual feels pain or discomfort have them place the bar on the ground
- Record success or failure of lift at each weight and mark the final weight achieved and initial the OPAT scorecard.

### **Interval Aerobic Run**

The purpose of the interval aerobic run is to assess an individual's aerobic capacity. Scorer responsibilities include the following:

- Read event instructions, demonstrate the event and answer event questions
- Individuals only need to touch the line with their foot.
- Encourage individuals to stay in the test and help them anticipate increases in pace.
- Support personnel should raise their hand and inform the person testing and then other scorer when the subject does not reach the line before the beep by raising his/her hand and stating the number of consecutive misses (warning one, warning two, and stop). If the runner fails to reach the line one or two times in a row (receives warning one and warning two), but reaches the line before the "Beep" on the next shuttle, the warning count starts over with "warning one".
- If an individual fails to touch the line before the beep, he/she must continue running and touch the line before turning to start the next shuttle.
- During the test, mark a "P" for each level – shuttle the individual successfully completes and an "F" for each level – shuttle the individual fails to reach the 20m line before the "beep" (i.e., receives a warning or test ends).
- Upon completion of the test (either the individual volunteers stops running or fails three consecutive shuttles), record the level # and shuttle # and the total # of shuttles

(upper right-hand corner of each cell) for the last successful shuttle in the designated boxes and initial the OPAT scorecard.

### Marking the Scorecard:

OCCUPATIONAL PHYSICAL ASSESSMENT TEST (OPAT) SCORECARD									
ID #:		NAME: LAST, FIRST, MI				UNIT/LOCATION:			
DATE: DDMMYYYY			GENDER: ___ MALE ___ FEMALE			AGE:			
STANDING LONG JUMP: Distance in centimeters (circle highest score)									
TRIAL 1	TRIAL 2	TRIAL 3	RETEST 1 (if needed)	RETEST 2 (if needed)	INITIALS				
CM:	CM:	CM:	CM:	CM:					
SEATED POWER THROW: Distance to closest 10 cm (circle highest score)									
TRIAL 1	TRIAL 2	TRIAL 3	RETEST 1 (if needed)	RETEST 2 (if needed)	INITIALS				
CM:	CM:	CM:	CM:	CM:					
STRENGTH DEADLIFT: Circle highest weight successfully lifted									
WARM-UP / FORM	120	140	160	180	190	200	210	220	INITIALS
CHECK WEIGHT:	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	
<small>No more than 100 LBS</small>									
INTERVAL AEROBIC RUN: Record Level and Shuttle completed.									
LEVEL #:	SHUTTLE #:		TOTAL # SHUTTLES:				INITIALS		
QUALIFICATION: CIRCLE LEVEL QUALIFIED IAW CURRENT POLICY									
Black // Gray // Gold // White									
PRINCIPAL GRADER:					SIGNATURE OF GRADER				
Name (Last, first, MI)		Grade/Rank	Unit						

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Record the distance for each jump to the nearest centimeter (cm)

Record the distance for each throw to the nearest 10 centimeters (cm)

Record the final level # and shuttle # in the appropriate boxes.

Initial each block once the scores have been recorded

Circle each weight the individual successfully lifts; "X" over weights that were not successfully lifted

Record the total number of shuttles from the IAR score chart

Be sure to sign the score card and confirm the individual's information above

## OPAT Scorecard (front):

OCCUPATIONAL PHYSICAL ASSESSMENT TEST (OPAT) SCORECARD									
ID #:		NAME: LAST, FIRST, MI				UNIT/LOCATION:			
DATE: DDMMYYYY		GENDER: ___ MALE ___ FEMALE				AGE:			
<b>STANDING LONG JUMP:</b> Distance in centimeters (circle highest score)									
TRIAL 1	TRIAL 2	TRIAL 3	RETEST 1 <i>(if needed)</i>	RETEST 2 <i>(if needed)</i>	INITIALS				
CM:	CM:	CM:	CM:	CM:					
<b>SEATED POWER THROW:</b> Distance to closest 10 cm (circle highest score)									
TRIAL 1	TRIAL 2	TRIAL 3	RETEST 1 <i>(if needed)</i>	RETEST 2 <i>(if needed)</i>	INITIALS				
CM:	CM:	CM:	CM:	CM:					
<b>STRENGTH DEADLIFT:</b> Circle highest weight successfully lifted.									
WARM-UP / FORM CHECK WEIGHT:	120 LBS	140 LBS	160 LBS	180 LBS	190 LBS	200 LBS	210 LBS	220 LBS	INITIALS
<i>No more than 100 LBS</i>									
<b>INTERVAL AEROBIC RUN:</b> Record Level and Shuttle completed.									
LEVEL #:	SHUTTLE #:	TOTAL # SHUTTLES:				INITIALS			
QUALIFICATION: CIRCLE LEVEL QUALIFIED IAW CURRENT POLICY									
Black // Gray // Gold // White									
PRINCIPAL GRADER: Name (Last, first, MI)    Grade/Rank    Unit						SIGNATURE OF GRADER			

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**OPAT Scorecard (back):**

**Interval Aerobic Run Tracking Sheet**

Subject ID: \_\_\_\_\_

		Shuttle #													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Level #	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	2	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	3	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	4	24	25	26	27	28	29	30	31	32	33	34	35	36	37
	5	33	34	35	36	37	38	39	40	41	42	43	44	45	46
	6	42	43	44	45	46	47	48	49	50	51	52	53	54	55
	7	51	52	53	54	55	56	57	58	59	60	61	62	63	64
	8	61	62	63	64	65	66	67	68	69	70	71	72	73	74
	9	71	72	73	74	75	76	77	78	79	80	81	82	83	84
	10	81	82	83	84	85	86	87	88	89	90	91	92	93	94
	11	91	92	93	94	95	96	97	98	99	100	101	102	103	104
	12	101	102	103	104	105	106	107	108	109	110	111	112	113	114
	13	111	112	113	114	115	116	117	118	119	120	121	122	123	124
	14	121	122	123	124	125	126	127	128	129	130	131	132	133	134
	15	131	132	133	134	135	136	137	138	139	140	141	142	143	144
	16	141	142	143	144	145	146	147	148	149	150	151	152	153	154
	17	151	152	153	154	155	156	157	158	159	160	161	162	163	164

Mark a "P" (pass) for each level/shuttle if the subject reaches the line prior to the beep.  
 Mark an "F" (fail) for each level/shuttle if the subject fails to reach the line prior to the beep.  
 The test ends when the subject fails three consecutive shuttles (3 "F" in a row)

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## OPAT Consolidated Equipment List

(Supports One Lane)

Item	Description
<i>Measuring Tape</i>	1 EA.-100 foot, vinyl coated fiberglass tape with standard and metric measurements
<i>Masking or 100 MPH Tape</i>	1 inch- and 2 inch-wide rolls
<i>Spray Paint</i>	used to mark ground when conducting test outdoors
<i>Markers</i>	1 EA.-permanent black to mark masking tape adhered to floor.
<i>Pens</i>	1 EA.-black ink for scorer
<i>Clipboards</i>	1 EA.- for every scorer
<i>OPAT Scorecards</i>	1 EA.- for every Individual
<i>Standing Long Jump Mat*</i>	1 EA.-18 inches wide by 10.5 feet long non-slip rubber mat with both standard and metric measurements
<i>Seated Power Throw Mat*</i>	1 EA. – rubberized mat with 10cm markings
<i>Marking Dowel</i>	1 EA.-wooden or plastic dowel to assist scorer in marking/measuring long jump
<i>Towel*</i>	1 EA.-to allow individuals to wipe the bottom of their shoes before execution of the standing long jump
<i>Hexagon Barbell</i>	1 to 9 EA.
<i>Bumper Plates – Config #1 (1 lane, 1 Hexagon Bar)</i>	15 pound – 4 EA. 25 pound – 2 EA. 35 pound – 2 EA. 45 pound – 2 EA.
<i>Bumper Plates – Config #2 (1 lane, 1 Hexagon Bar)</i>	10 pound – 6 EA. 15 pound – 8 EA.
<i>Bumper Plates – Config #3 (1 lane, 9 Hexagon Bars)</i>	15 pound – 16 EA. 25 pound – 6 EA. 35 pound – 8 EA. 45 pound – 6 EA.
<i>Barbell Collars</i>	2 – 18 EA.
<i>Cones</i>	4 EA.-per IAR lane
<i>CD, MP3 Player or Smart Phone</i>	1 EA.-for IAR
<i>IAR Test Audio</i>	1 EA.-sound recording in CD or MP3 format
<i>PA Device</i>	1 EA- to amplify IAR recording
<i>Extension Cord*</i>	1 EA.-100 FT
<i>Manual Scoreboards*</i>	2 EA.-flip type with adjustable stand to specify shuttle and level.
<i>* = optional</i>	<i>Recommended, not required</i>

**Standing Long Jump / Seated Power Throw**  
**Conversion from Inches to Centimeters (cm) Table**  
*(For Use When Metric SLJ/SPT Mats or Metric Tapes are Not Available)*

1	3	41	104	81	206	121	307	151	409	201	511	241	612
2	6	42	107	82	208	122	310	182	411	202	513	242	616
3	8	43	109	83	211	123	312	163	414	203	516	243	617
4	10	44	112	84	213	124	315	154	417	204	518	244	620
6	13	46	114	85	216	125	318	186	419	206	521	246	622
6	15	46	117	86	218	126	320	166	422	206	523	246	625
7	18	47	119	87	221	127	323	167	424	207	526	247	627
8	20	48	122	88	224	128	326	188	427	208	528	248	630
8	23	48	124	89	226	129	328	169	429	208	531	248	632
10	25	60	127	90	229	130	330	170	432	210	533	260	636
11	28	51	130	91	231	131	333	171	434	211	536	251	638
12	30	52	132	92	234	132	335	172	437	212	538	252	640
13	33	63	135	93	236	133	338	173	439	213	541	263	643
14	36	54	137	94	239	134	340	174	442	214	544	254	645
15	38	55	140	95	241	135	343	175	445	215	546	255	648
16	41	56	142	96	244	136	346	176	447	216	549	266	650
17	43	57	145	97	246	137	348	177	450	217	551	257	653
18	46	58	147	98	249	138	351	178	452	218	554	258	655
19	48	59	150	99	251	139	353	179	455	219	556	259	658
20	51	60	152	100	254	140	356	180	457	220	559	260	660
21	63	81	166	101	257	141	358	181	460	221	561	261	663
22	56	62	157	102	259	142	361	182	462	222	564	262	665
23	58	63	160	103	262	143	363	183	465	223	566	263	668
24	81	84	183	104	264	144	366	184	467	224	569	264	671
25	64	65	165	105	267	145	368	185	470	225	572	265	673
26	66	66	168	106	269	146	371	186	472	226	574	266	676
27	89	87	179	107	272	147	373	187	475	227	577	267	678
28	71	68	173	108	274	148	376	188	478	228	579	268	681
29	74	69	175	109	277	149	378	189	480	229	582	269	683
30	78	70	178	110	279	160	381	190	483	230	584	270	686
31	79	71	180	111	282	151	384	191	485	231	587	271	688
32	81	72	183	112	284	162	388	192	488	232	589	272	691
33	84	73	185	113	287	153	388	193	490	233	592	273	693
34	86	74	188	114	290	154	391	194	493	234	594	274	696
36	89	76	191	116	292	165	394	195	495	236	597	275	699
36	91	76	183	116	295	156	396	196	498	236	599	276	701
37	94	77	196	117	297	157	399	197	500	237	602	277	704
38	97	78	198	118	300	168	401	198	503	238	606	278	706
39	98	78	201	118	302	159	404	199	505	238	607	279	708
40	102	80	203	120	305	160	406	200	508	240	610	280	711