PEDIATRIC CLINICAL FITNESS TESTING

Fitness Mini-Clinic© Model

Developed in partnership:

University of Florida Departments of Pediatrics and Physical Medicine & Rehabilitation

PROCEDURES, MATERIALS AND SCORING

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The Fitness Mini-Clinic was founded and first implemented in August of 2020 in the College of Medicine at the University of Florida.

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Introduction

These materials and procedures were designed for use in the medical clinic setting to track physical fitness changes related to adoption of small focused goals about physical activity and lifestyle. The development of this test battery and related patient assessment forms and exercise handouts are the scholarly output of the program founders. For use and utility in other settings, please obtain permission and recommended use for standardization of reporting and implementation for best effectiveness.

In children, cardiorespiratory fitness (CRF) in childhood and adolescence is a significant determinant of present and future health status.(Smith et al., 2014) Low CRF in adolescence is related to comorbid obesity and metabolic syndrome, risk for cardiovascular disease(Hurtig-Wennlöf et al., 2007) and chronic disability in adulthood.(Mintjens et al., 2018; Henriksson et al., 2021) The CRF, strength and flexibility tests chosen here represent components of fitness that correspond with overall well-being, disease risk reduction and functionality. Higher scores in each of these tests, or improvements in these tests, indicate better health status. Children with high CRF and physical function have better quality of life, learning capacity, resilience and psychological wellbeing (lower anxiety and depression) than children with low physical fitness.(Raine et al., 2013; Ikävalko et al., 2018; Li et al., 2020; Alves Donato et al., 2021)

Careful tracking of fitness goals, changes in body weight and disease risk factors are critical to ensure documentation of effects of the fitness measures. Moreover, monitoring of fitness goal adoption and behavioral changes are vital to program implementation.

Portions of this work and initial implementation of this clinical model and its materials and training were presented at the University of Florida's Innovations in Primary Care conference in 2021 and at the American College of Sports Medicine annual meetings from 2021.

The 3-Minute Step Test (3MST)

What this test measures: This test assesses the aerobic, or cardiopulmonary, fitness level based on how quickly the heart rate recovers after exercise. The higher the fitness level, the more quickly the heart rate will return to normal after exercise is finished. The 1-minute post-exercise heart rate is compared to age and sex standards to find the category of fitness. From the clinical perspective, the 3-minute test enables the child to experience exercise sensations without burdening clinical flow in a busy clinic setting.

Equipment needed:

- Stopwatch or clock with a second hand
- A 12-inch bench, box, or step
- A metronome
- Rating of Perceived Exertion scale (RPE; 0-10 points, provided in Figure 1)

Goal: Have the patient step on and off the bench for 3 minutes straight while keeping a consistent pace and then see how quickly the heart rate slows. The faster the heart rate recovery, the fitter the person. This test is based on a 12-inch step, so use one as close to 12 inches as possible, otherwise the results will be skewed. If the child is short or very young, you can use a shorter step (between 6-8 inches). If the child is not able to maintain the rhythm of the stepping, encourage the child as best as possible to keep up. If the child is too tired and needs to take a break, have the child remain standing until they can resume and finish. Make a notation of what happened to improve interpretability of the test.

Performing the test:

1. Describe the general test to the participant before starting and demonstrate the stepping pattern on the step.

2. Capture a resting heart rate in the seated position.

3. Set the metronome to 96 beats per minute and have the participant stand up and face the step.

4. When ready to begin, start the clock or stopwatch and have the participant march up and down on the step to the metronome beat (“up, up, down, down”) for 3 consecutive minutes. (reminder: the participant can rest if they need to, but they must remain standing.)

5. At minutes 1, 2 and 3 ask the participant how hard they feel they are working using the RPE scale. (This number is simply used to educate sedentary participants about what exercise should feel like.)

6. When the 3 minutes are up, stop immediately, have the participant sit down, and count the pulse (use your wrist or neck) for one full minute. Alternatively, a heart rate monitor can be used to capture the immediate post-test heart rate value and one -minute post value.

7. At 1-minute post-test, assess heart rate again and then compare this value to the age and sex standardized fitness chart to obtain the fitness category level.

Scoring: The score is recorded as the 1-minute post exercise Heart Rate and corresponding category of fitness.

Standard instructions to the participant:

“Thank you for checking out your fitness level today. We are going to take a look at how fit your heart, lungs and muscles are. The way we do this is to have you perform a 3-minute step test. In this test, I will set a tempo or beat for you to follow while you step up and down on this step. The step activity will look like this:

- *Demonstrate the up, up, down, down movement for the participant*

“Your stepping will match a beeping sound that I will set for you. Do the best you can to keep matching your steps with the tempo. If you need to rest, you can, just stay standing. When you are ready, start stepping again. The goal is to try and keep the stepping going for the 3 minutes.”

“At minutes 1, 2 and 3, I am going to ask you how hard your muscles and body are working using this scale.”

- *Show the RPE scale (Figure 1)*

“Here, 0= no muscle or body effort (like standing or sitting) and 10=hardest muscle or body effort you can do, (you can’t exercise any harder, like an all-out run until you are exhausted). When I ask you how hard you are working, pick a number that best describes what you are feeling. There is no right or wrong. This just tells us what the step test feels like to you. Any questions on that?”

“OK. Finally, at the end of the three minutes, I will have you sit down and rest and I will measure your heart rate after resting for one minute. Then we can find out what your fitness level is.

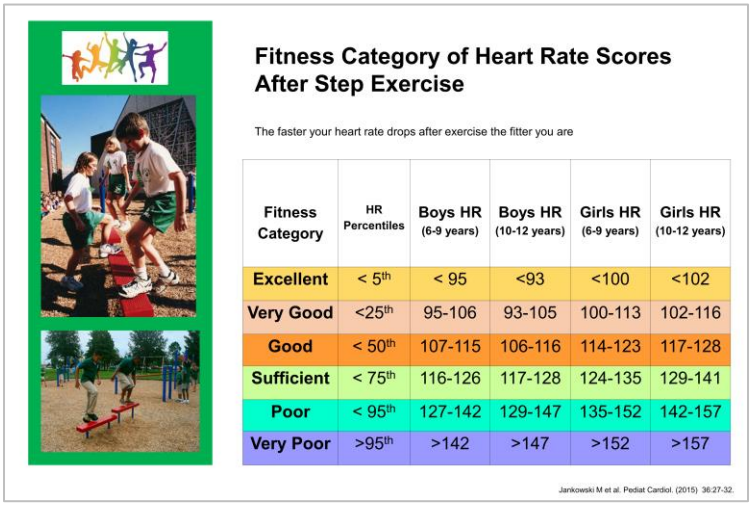
Before we start, I am going to take your resting heart rate. Any questions before we begin?”

Figure 1. The 11-point numerical rating of perceived exertion (RPR) scale.

Once complete, take the heart rate obtained at one minute and find the number in the age and sex-adjusted chart below.

Figure 2a. Age and sex-adjusted fitness category scores for CRF. Heart rates are in beats per minute.

This table is used to provide participants a 'category' of fitness.



Fitness Category of Heart Rate Scores After Step Exercise

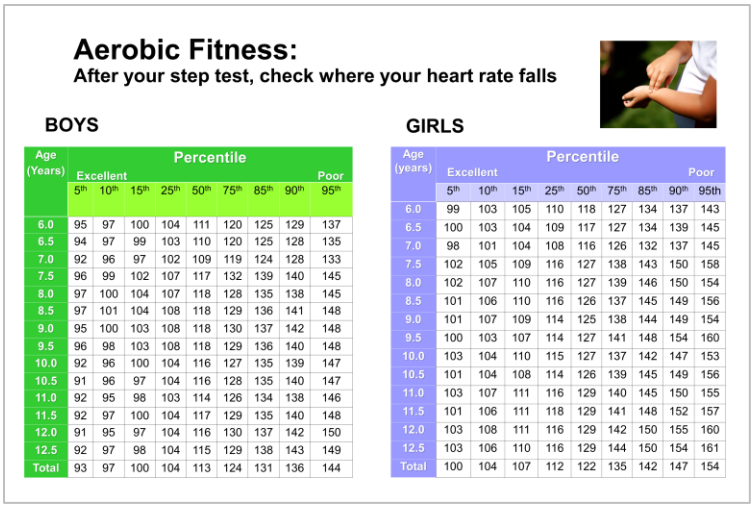
The faster your heart rate drops after exercise the fitter you are

Fitness Category	HR Percentiles	Boys HR (6-9 years)	Boys HR (10-12 years)	Girls HR (6-9 years)	Girls HR (10-12 years)
Excellent	< 5th	< 95	<93	<100	<102
Very Good	<25th	95-106	93-105	100-113	102-116
Good	< 50th	107-115	106-116	114-123	117-128
Sufficient	< 75th	116-126	117-128	124-135	129-141
Poor	< 95th	127-142	129-147	135-152	142-157
Very Poor	>95th	>142	>147	>152	>157

Jankowski M et al. Pediat Cardiol. (2015) 36:27-32.

Figure 2b. Specific age and sex adjusted percentile scores for CRF. Values are in beats per minute.

This table is used to provide a specific trackable percentile score for comparison in future tests. The higher the CRF, the lower the percentile (Meaning that a lot more people are of lower fitness)



Aerobic Fitness:

After your step test, check where your heart rate falls

BOYS

Age (Years)	Percentile								
	Excellent								Poor
	5th	10th	15th	25th	50th	75th	85th	90th	95th
6.0	95	97	100	104	111	120	125	129	137
6.5	94	97	99	103	110	120	125	128	135
7.0	92	96	97	102	109	119	124	128	133
7.5	96	99	102	107	117	132	139	140	145
8.0	97	100	104	107	118	128	135	138	145
8.5	97	101	104	108	118	129	136	141	148
9.0	95	100	103	108	118	130	137	142	148
9.5	96	98	103	108	118	129	136	140	148
10.0	92	96	100	104	116	127	135	139	147
10.5	91	96	97	104	116	128	135	140	147
11.0	92	95	98	103	114	126	134	138	146
11.5	92	97	100	104	117	129	135	140	148
12.0	91	95	97	104	116	130	137	142	150
12.5	92	97	98	104	115	129	138	143	149
Total	93	97	100	104	113	124	131	136	144

GIRLS

Age (years)	Percentile								
	Excellent								Poor
	5th	10th	15th	25th	50th	75th	85th	90th	95th
6.0	99	103	105	110	118	127	134	137	143
6.5	100	103	104	109	117	127	134	139	145
7.0	98	101	104	108	116	126	132	137	145
7.5	102	105	109	116	127	138	143	150	158
8.0	102	107	110	116	127	139	146	150	154
8.5	101	106	110	116	126	137	145	149	156
9.0	101	107	109	114	125	138	144	149	154
9.5	100	103	107	114	127	141	148	154	160
10.0	103	104	110	115	127	137	142	147	153
10.5	101	104	108	114	126	139	145	149	156
11.0	103	107	111	116	129	140	145	150	155
11.5	101	106	111	118	129	141	148	152	157
12.0	103	108	111	116	129	142	150	155	160
12.5	103	106	110	116	129	144	150	154	161
Total	100	104	107	112	122	135	142	147	154

Discuss with the participant: "Your number falls in this range: _____(find the category of fitness in Figure 2a above). The higher your heart rate at one minute, the lower the fitness."

How to interpret: Ex: If participant is a 10-year old boy, and the one-minute heart rate is 112, this means the boy falls in the “Good” fitness category and 50% of children his age have lower fitness than he does.

Using Figure 2b, record the specific percentile score for future tracking as a research value. Remember, higher CRF = lower percentile as this means ‘upper tier of fitness

If the participant did not complete the test, scoring will not be possible (CRF = very poor). Record as unable to complete, what the RPE score was and record how long the child could do the stepping – then this can be used the next time they are tested for comparison to monitor for progress.

Handgrip Strength

What this test measures: This test estimates the body's strength level based on grip strength. Handgrip strength strongly correlates with leg muscle strength and overall muscle function and can be quickly used in clinic. The greater the grip strength, the higher the overall muscle strength.

Equipment needed:

- Grip dynamometer (Jamar Hydraulic Hand Dynamometer, registers maximal kilograms or pounds of force)
- Standard chair with an arm rest, or a chair and a table that the child can rest their arm on.

Goal: The goal is to squeeze the dynamometer as hard as possible, twice. You can measure strength of both hands if you have the time, but if you are very short for time – choose the dominant hand. The handgrip dynamometer is a device that measures the isometric strength of the hand grip, or the maximal force of the grip on the trigger.

Performing the test:

1. Have the participant clean their hands with sanitizer or wash hands with soap and water.

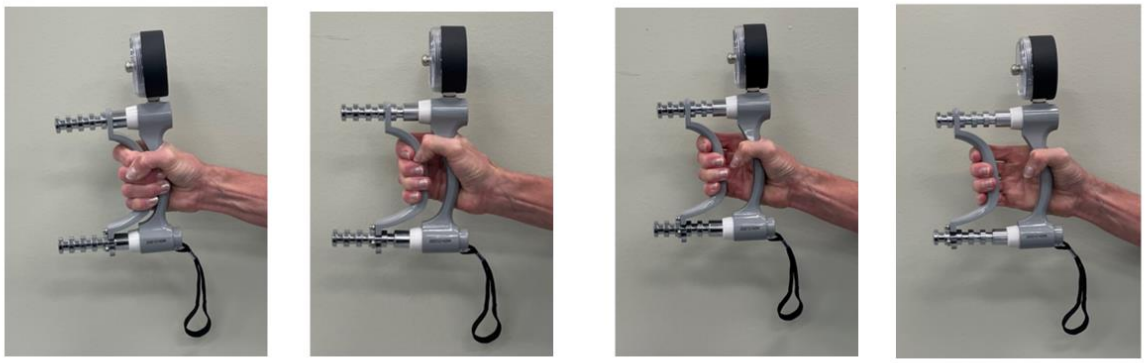
2. Have the participant sit with their dominant elbow held at a 90-degree angle. This position is important to get the right measurement.

3. The upper arm should be resting comfortably against the trunk and arm resting on a chair rest. If the child is small, the dynamometer can be supported by the tester (see image, right).

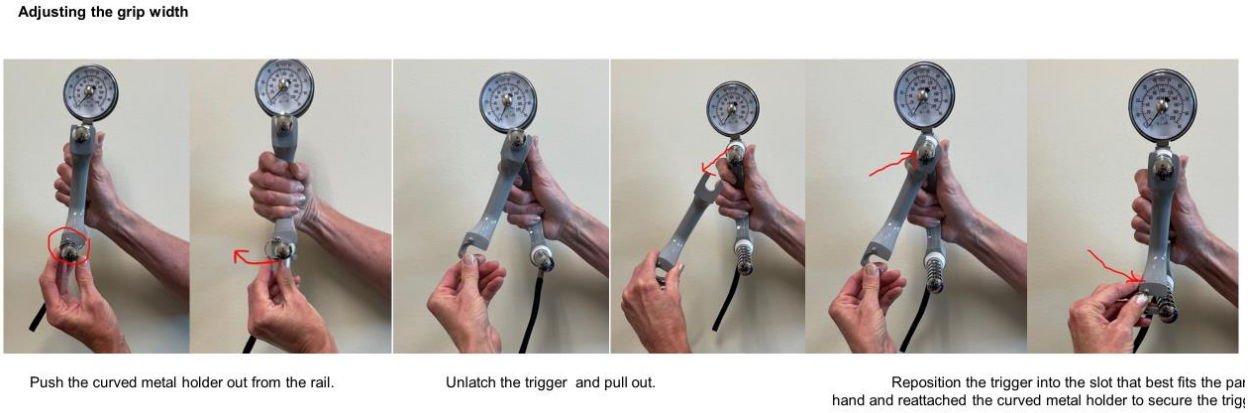
4. Feet should be flat on the floor.

5. Place the dynamometer in the participant's hand and be sure to adjust the grip so that the fingers of the hand aren't squeezing into the palm of the hand. See the position should be as shown in image at bottom right. If the fingers cannot close comfortably to make a good grip, adjust the trigger to create the optimal grip shown in the panel on the following page.

To change the grip width, see the picture panel sequence on the next page.



If you need to adjust the grip width, please do the following:



6. Start with the right hand and then repeat the measurement with the left hand. Alternate hands.
7. If the reading is exactly between two readings on the scale, round up to the next higher even number. Reset the dial in the center of the gage to “0” after each trial.
8. Perform three trials with at least 15 to 20 seconds rest in between.
9. Record in POUNDS.

Scoring: The score is recorded as the highest pounds of force produced by each hand.

Standard instructions to the participant:

“We are going to perform a hand grip test now. This test will help us see how much strength your muscles have when you squeeze this device.”

“For safety reasons, have you had any recent hand surgery or do you have any hand pain? (*IF NO, then proceed*, *IF YES then do not perform the test)*

“Before we begin, let’s go ahead and clean your hands.”

- *Use hand sanitizer*

“OK. Now, let’s see how this device fits in your hand. We want to make sure that you can grip it comfortably.

- *Make any adjustments to the grip as needed (usually the hand trigger is in the second notch setting)*

“Now try it once just to get the feel of it. For this practice, just squeeze gently. It won't feel like the bars are moving, but your strength will be recorded. Are the bars the right distance apart for a comfortable grip?

OK I’d like you to take your arm, rest it on the table, and bend your elbow. Grip the two bars in your hand, like this. Please slowly squeeze the bars as hard as you can.”

- *Test the grip*

“We’ll do this grip two times for your hand that you write with. This time it counts, so when I say squeeze, squeeze as hard as you can and hold the grip for a few seconds.

Ok, Ready? Squeeze! …. keep going as hard as you can! Now, stop.”

- Record number and reset the needle to 0.

Compare the hand grip strength in pounds to the age and sex standardized handgrip strength chart to obtain strength category level.

Figure 2. Age and sex adjusted percentile scores for handgrip strength. Values listed in the chart are in pounds of force.

The better the grip strength, higher the percentile ranking.

How strong is your grip?

BOYS

Age (Years)	Percentile										
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6 – 7	11.3	12.9	15.1	16.7	18.1	19.5	20.9	22.4	24.1	26.4	28.3
8 – 9	16.0	18.2	21.0	23.0	24.8	26.5	28.2	30.1	32.2	35.2	37.7
10 - 11	23.6	26.8	30.7	33.5	35.9	38.1	40.3	42.7	45.7	49.9	53.4
12 - 13	33.2	37.6	42.8	46.5	49.5	52.3	55.2	58.3	62.1	67.7	72.6
14 – 15	42.4	47.8	54.2	58.6	62.2	65.5	68.8	72.5	77.1	83.9	89.9
16 - 17	50.0	56.2	63.4	68.3	72.3	75.9	79.6	83.7	88.8	96.5	103.3
18 - 19	55.7	62.3	70.0	75.3	79.5	83.3	87.2	91.5	97.0	105.1	112.4

GIRLS

Age (Years)	Percentile										
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6 – 7	10.5	12.0	13.9	15.4	16.7	17.9	19.2	20.6	22.3	24.5	26.4
8 – 9	16.3	18.3	20.8	22.7	24.3	25.8	27.3	29.0	31.0	33.9	36.3
10 - 11	22.4	25.0	28.0	30.3	32.1	33.9	35.7	37.7	40.1	43.6	46.6
12 - 13	27.8	30.7	34.3	36.8	39.0	41.0	43.0	45.2	48.0	52.0	55.5
14 – 15	32.0	35.2	39.1	41.8	44.2	46.4	48.6	51.1	54.1	58.4	62.2
16 - 17	34.9	38.3	42.4	45.3	47.8	50.2	52.5	55.1	58.3	62.9	66.8
18 - 19	36.8	40.2	44.4	47.4	50.0	52.5	54.9	57.6	60.9	65.6	69.7

Source: Canadian Health Measures survey cycle 5 (2016-2017)

Flexibility

What this test measures: The sit and reach test is a common measure of flexibility, and specifically measures the flexibility of the lower back and hamstring muscles. This test is important because tightness in this area is implicated in lumbar lordosis, forward pelvic tilt and lower back pain. Flexibility is also related to other fitness measures and cardiovascular health.

Equipment needed:

- Sit and reach box

Goal: To reach as far forward with the hands in a seated position, legs extended. Typically, the sit and reach is done three times, and with each reach maneuver, the distance tends to get better. The score will be the best reach distance.

Performing the test:

1. This test involves sitting on the floor with legs stretched out straight ahead.
2. Shoes should be removed. The soles of the feet are placed flat against the box. Both knees should be locked and pressed flat to the floor (see image below for correct positioning). The tester may assist by holding the knees down.
3. With the palms facing downwards, and with the hands placed on top of each other or side by side, the participant will reach forward along the measuring line as far as possible. Ensure that the hands remain at the same level, not one reaching further forward than the other.
4. After some practice reaches, the participant will reach out and hold that position for at least one-to-two seconds while the distance is recorded. Ask the participant to exhale out while reaching to help them bend forward and sink into the reach.
5. Make sure there are no jerky movements during the reach.

Scoring: The score is recorded to the nearest centimeter or half inch as the distance reached by the hand.

Standard instructions to the participant:

“We are going to perform a flexibility test now. This test will help us see how far you can stretch forward when you sit with your legs out straight.

Before we begin, let’s go ahead and clean your hands.”

- *Use hand sanitizer*

“Please go ahead and remove your shoes and sit on the floor with your hips and back and head against the wall. Be sure that your legs are completely straight with no bend in the knees. Toes pointing up and knees pointing up”

“Go ahead and slowly breathe out and stretch those arms out as far as you can while you take your back and head from the wall. Push this forward along this track as far out as you can.”

- *Point to the tab on the track on the top of the box.*

“Let’s do that again two more times, with a nice and slow reach.”

“On this last reach, I want you to hold for two seconds while I get your measurement.

- *Read the number and round up to the nearest half inch*.

Compare the furthest reach measurement in centimeters to the age and sex standardized flexibility chart to obtain flexibility percentile.

Figure 3. Age and sex adjusted percentile scores for flexibility. Values in the chart are in centimeters (cm).

The better the flexibility, higher the percentile ranking.

How flexible are you?

Reach your hands out as far as you can

BOYS

Age (Years)	Percentile										
	Poor										Excellent
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	9.5	13.2	17.5	20.4	22.8	24.9	27.0	29.4	32.4	36.8	40.7
8-9	9.0	12.3	16.5	19.5	22.0	24.4	26.8	29.3	32.3	36.4	39.9
10-11	8.8	12.0	16.0	19.0	21.7	24.3	27.0	29.5	32.5	36.4	39.6
12-13	8.8	11.8	15.7	18.8	21.6	24.3	27.1	29.7	32.7	36.6	39.5
14-15	8.8	11.7	15.6	18.7	21.6	24.4	27.3	29.9	33.0	36.8	39.6
16-17	8.8	11.7	15.6	18.7	21.6	24.4	27.4	30.1	33.2	37.0	39.7
18-19	8.8	11.7	15.6	18.7	21.6	24.5	27.5	30.3	33.4	37.1	39.8

GIRLS

Age (Years)	Percentile										
	Poor										Excellent
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	15.1	19.3	23.8	26.7	29.0	30.9	32.8	35.0	37.6	41.6	45.1
8-9	15.0	19.2	23.7	26.6	28.9	30.9	32.9	35.1	37.8	41.7	45.2
10-11	14.9	19.1	23.6	26.6	28.9	31.0	33.0	35.2	37.9	41.9	45.3
12-13	14.9	18.9	23.5	26.5	28.9	31.0	33.1	35.3	38.1	42.0	45.3
14-15	14.8	18.8	23.4	26.4	28.8	31.0	33.1	35.5	38.2	42.1	45.4
16-17	14.7	18.7	23.3	26.4	28.8	31.1	33.2	35.6	38.4	42.3	45.5
18-19	14.6	18.6	23.1	26.3	28.7	31.1	33.3	35.7	38.5	42.4	45.6

Source: Canadian Health Measures survey cycle 5 (2016-2017)

Identification of Area of Focus for SMART Goal

Once the testing is complete, evaluate the relative percentile scores for the three fitness components. The area for focus for the SMART goal will be the component that has the lowest percentile ranking. If two components are equally low, you may choose two areas that can be coordinated together.

For documentation, record the area of focus for the SMART goal, and then specifically write what the selected activity was.

Counseling Based on SMART Goals

When counseling a participant, ask the following questions to give you ideas on choosing a SMART goal with them:

1. What time do you have during a typical day to incorporate a fitness goal?
2. Are there chunks of time that you could fit in a few fitness activities for 5 minutes a few times a day, or a 20-30 minute window for participating in an activity?
3. How confident are you in doing a fitness goal regularly?
4. Do you like to be outside or inside?
5. Using this activity sheet "*Simple Ways to Improve Your Fitness*", are there any activities on there that you like to do or would be interested in trying?
6. If there are no exercise activities that the participant chooses, ask what are some activities you DO like to do?

Share some ideas that they can incorporate into the daily routine that are reasonable, easy to remember and are more likely to be attractive to the age of the participant. A few examples are below.

Examples:

Casey: A 14-year old girl with high body mass index and little interest in exercise scored the worst on the CRF testing (90th percentile) and average percentiles on handgrip strength and flexibility (50th percentiles). She lets you know she is not interested in exercise programs and does not like sports. What might you choose for a SMART goal?

After talking a bit, she tells you that she likes talking on the phone with friends and listening to music. She has time after school each day when she comes home that she could do an activity. Ask if she would be willing to any of the following to improve her CRF:

- Walk for 15 min (~1 mile) outside 3 X week while talking to a friend on the phone.
- Walk around in the house (do not sit down) anytime she is chatting on the phone.
- Walk briskly for 10 minutes every day in the neighborhood

- In the privacy of your house or your own room, dance to your favorite music for 15 minutes 3X each week

If she doesn't like any of these, ask her what would SHE be willing to try?

Jamal: A 10-year old boy with very high body weight scored the worst on CRF and flexibility (both in lowest 20th percentiles), but very high handgrip strength (>90th percentile). He wouldn't mind trying out a few things for exercise more regularly. He tells you he has a bike at home and his mom has an aerobics stair bench in the garage. Ask him if he would be willing to try any of the following:

- Bike riding for 15 min 3 X a week
- Doing stair stepping in the garage to some music, 10 min 3 X a week to get his heart rate up
- Playing basketball/ shooting hoops with his brother for 20 min 2 X week
- Walking the family dog 3 X week for 20 min

If he doesn't like any of these, ask him what would HE be willing to try?

Lawrence: A 17-year old boy who is a self-proclaimed gamer and does not participate in sports. Despite a CRF in the lowest bracket (he had difficulty completing his 3-minute step test), he does have average flexibility (40th percentile) and good strength (70th percentile). This individual may need to start with something more basic and with less long-term sitting. Based on his lifestyle patterns, this participant may need to start with conscious inclusion of movement into each day. Ask if he would be willing to do the following:

- For every 1 hour of video gaming, take a 5-minute break, stand up and do 20 jumping jacks and 5 side stretches
- Each day, walk for 10 minutes straight and take the stairs at school between classes
- Help his parents to do yard work 1 X week (~30 min) and 2 X week walk briskly for 15 min

If he doesn't like any of these, ask him what would HE be willing to try?

Gabriela: Gabby is an 9-year old girl with diabetes who participates in after-school activities, does a dance class twice a week and is in good spirits. She scored 30th percentile for CRF, 70th for flexibility but 20th percentile for strength. Her goal would therefore be to increase her muscle strength as a SMART goal. Let her know strengthening will also help her dancing. Ask if she would be willing to do the following to help her achieve her goal:

- 3 X week, perform push-ups, wall sits and abdominal curls (do until fatigued)
- 2 times a week go to the neighborhood park and use the monkey bars, practice trying to work on a pull-up and jump ups on the play structures for whole body strength
- Have parents create fun strength challenges: putting objects in a wheelbarrow and having Gabby push the wheelbarrow around a pathway; seeing how many deep jumps you can do in 30 seconds; do a crab walk or bear crawl walks in the yard
- Each time the family car is unloaded with groceries, Gabby helps carry them in the house

If she doesn't like any of these, ask her what would SHE be willing to try?

Quinn: This is a 13-year old boy with a higher BMI and borderline high blood pressure. He is currently a lineman on his middle school football team, with average CRF percentile and very high strength percentiles. His flexibility scores are low and are in the 10th percentile. The SMART goal should focus on flexibility in this case. Based on his school schedule, ask him if he would be willing to try any of the following:

- Getting to practice each weekday 10 minutes earlier and warming up on his own with dynamic stretches like walking-knee-to-chest or luges-with-twists
- 4 times a week at home, add 10 minutes of specific stretches for his hamstrings and low back, shoulders and hips while he relaxes to music
- At each commercial break while watching TV on 3 nights a week, get up and do a different stretch of a body part. Break up sitting and stretch.

If he doesn't like any of these, ask him what would HE be willing to try?

Follow-up and Adoption of SMART Goal.

At the follow-up visit, participants will be re-retested for fitness using the CRF, handgrip strength and flexibility tests. The new percentile scores will be compared to the previous scores to see whether and where any improvements occurred. The ideal outcome is to have an improvement in fitness for the component targeted in the SMART goal.

At this follow-up visit, it will be important to understand how well the prior SMART goal was followed, and what activities actually occurred if it was different than the planned SMART goal. Ask the participants the following questions:

1. Were you able to follow-the SMART goal that was selected at your last visit? Document: yes, no or partially followed and whether the activity was started and then dropped, or whether the goal activity was substituted with something else. Ask how long the goal was followed.

Ask if there were any other changes in physical activity since the last visit (like starting a new sport, ending a sport season, injury or other)

2. What were the reasons that you were not able to follow the goal?
   Document: specific reasons why not

3. Ask if they would like to try something different and what might that activity be?
   Document: new activity

The goal at follow-up is to determine what worked well for the participant and what did not. If the participant now scored worst in a different fitness component, document the new SMART goal.

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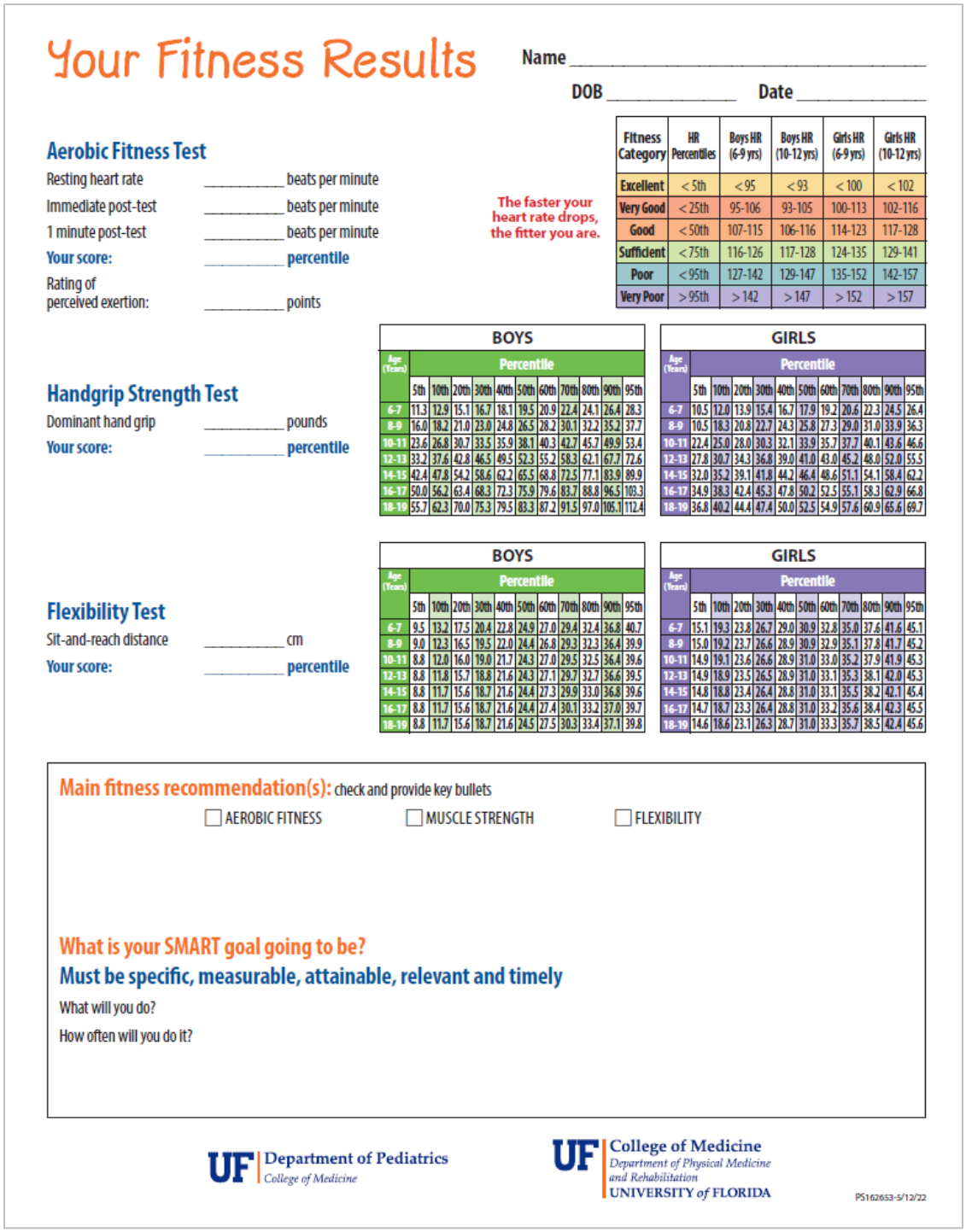
Data Collection Form Samples

English Version



Your Fitness Results

Name _____

DOB _____ Date _____

Aerobic Fitness Test

Resting heart rate _____ beats per minute

Immediate post-test _____ beats per minute

1 minute post-test _____ beats per minute

Your score: _____ **percentile**

Rating of perceived exertion: _____ points

The faster your heart rate drops, the fitter you are.

Fitness Category	HR Percentiles	Boys HR (6-9 yrs)	Boys HR (10-12 yrs)	Girls HR (6-9 yrs)	Girls HR (10-12 yrs)
Excellent	< 5th	< 95	< 93	< 100	< 102
Very Good	< 25th	95-106	93-105	100-113	102-116
Good	< 50th	107-115	106-116	114-123	117-128
Sufficient	< 75th	116-126	117-128	124-135	129-141
Poor	< 95th	127-142	129-147	135-152	142-157
Very Poor	> 95th	> 142	> 147	> 152	> 157

Handgrip Strength Test

Dominant hand grip _____ pounds

Your score: _____ **percentile**

BOYS

Age (Years)	Percentile										
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	11.3	12.9	15.1	16.7	18.1	19.5	20.9	22.4	24.1	26.4	28.3
8-9	16.0	18.2	21.0	23.0	24.8	26.5	28.2	30.1	32.2	35.2	37.7
10-11	23.6	26.8	30.7	33.5	35.9	38.1	40.3	42.7	45.7	49.9	53.4
12-13	33.2	37.6	42.8	46.5	49.5	52.3	55.2	58.3	62.1	67.7	72.6
14-15	42.4	47.8	54.2	58.6	62.2	65.5	68.8	72.5	77.1	83.9	89.9
16-17	50.0	56.2	63.4	68.3	72.3	75.9	79.6	83.7	88.8	96.5	103.3
18-19	55.7	62.3	70.0	75.3	79.5	83.3	87.2	91.5	97.0	105.1	112.4

GIRLS

Age (Years)	Percentile										
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	10.5	12.0	13.9	15.4	16.7	17.9	19.2	20.6	22.3	24.5	26.4
8-9	10.5	18.3	20.8	22.7	24.3	25.8	27.3	29.0	31.0	33.9	36.3
10-11	22.4	25.0	28.0	30.3	32.1	33.9	35.7	37.7	40.1	43.6	46.6
12-13	27.8	30.7	34.3	36.8	39.0	41.0	43.0	45.2	48.0	52.0	55.5
14-15	32.0	35.2	39.1	41.8	44.2	46.4	48.6	51.1	54.1	58.4	62.2
16-17	34.9	38.3	42.4	45.3	47.8	50.2	52.5	55.1	58.3	62.9	66.8
18-19	36.8	40.2	44.4	47.4	50.0	52.5	54.9	57.6	60.9	65.6	69.7

Flexibility Test

Sit-and-reach distance _____ cm

Your score: _____ **percentile**

BOYS

Age (Years)	Percentile										
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	9.5	13.2	17.5	20.4	22.8	24.9	27.0	29.4	32.4	36.8	40.7
8-9	9.0	12.3	16.5	19.5	22.0	24.4	26.8	29.3	32.3	36.4	39.9
10-11	8.8	12.0	16.0	19.0	21.7	24.3	27.0	29.5	32.5	36.4	39.6
12-13	8.8	11.8	15.7	18.8	21.6	24.3	27.1	29.7	32.7	36.6	39.5
14-15	8.8	11.7	15.6	18.7	21.6	24.4	27.3	29.9	33.0	36.8	39.6
16-17	8.8	11.7	15.6	18.7	21.6	24.4	27.4	30.1	33.2	37.0	39.7
18-19	8.8	11.7	15.6	18.7	21.6	24.5	27.5	30.3	33.4	37.1	39.8

GIRLS

Age (Years)	Percentile										
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	15.1	19.3	23.8	26.7	29.0	30.9	32.8	35.0	37.6	41.6	45.1
8-9	15.0	19.2	23.7	26.6	28.9	30.9	32.9	35.1	37.8	41.7	45.2
10-11	14.9	19.1	23.6	26.6	28.9	31.0	33.0	35.2	37.9	41.9	45.3
12-13	14.9	18.9	23.5	26.5	28.9	31.0	33.1	35.3	38.1	42.0	45.3
14-15	14.8	18.8	23.4	26.4	28.8	31.0	33.1	35.5	38.2	42.1	45.4
16-17	14.7	18.7	23.3	26.4	28.8	31.0	33.2	35.6	38.4	42.3	45.5
18-19	14.6	18.6	23.1	26.3	28.7	31.0	33.3	35.7	38.5	42.4	45.6

Main fitness recommendation(s): check and provide key bullets

☐ AEROBIC FITNESS ☐ MUSCLE STRENGTH ☐ FLEXIBILITY

What is your SMART goal going to be?

Must be specific, measurable, attainable, relevant and timely

What will you do?

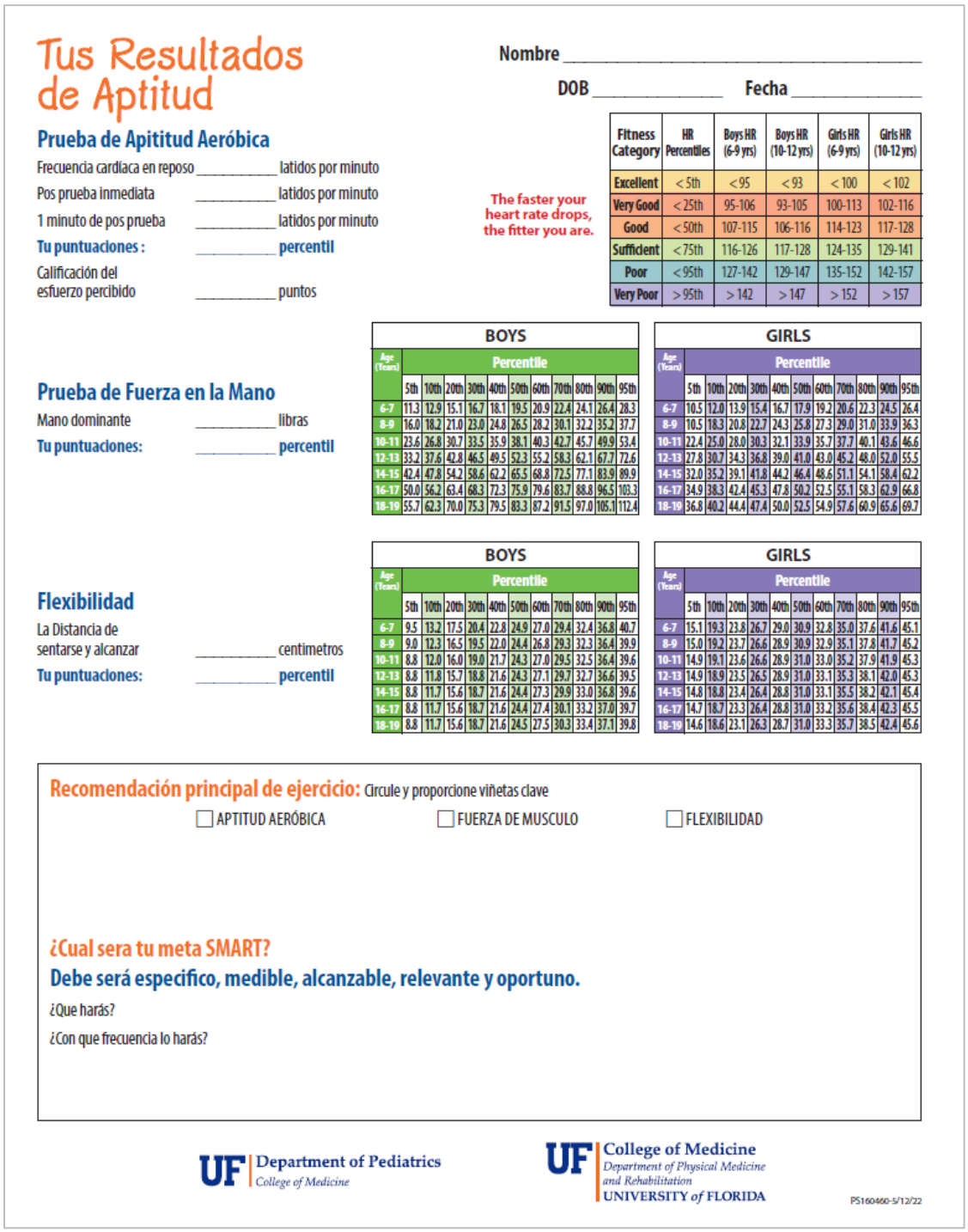
How often will you do it?

UF Department of Pediatrics, College of Medicine

UF College of Medicine, Department of Physical Medicine and Rehabilitation, UNIVERSITY of FLORIDA

PS162653-5/12/22

Spanish Version



Tus Resultados de Aptitud

Nombre _____

DOB _____ Fecha _____

Prueba de Apititud Aeróbica

Frecuencia cardiaca en reposo _____ latidos por minuto

Pos prueba inmediata _____ latidos por minuto

1 minuto de pos prueba _____ latidos por minuto

Tu puntuaciones : _____ **percentil**

Calificación del esfuerzo percibido _____ puntos

The faster your heart rate drops, the fitter you are.

Fitness Category	HR Percentiles	Boys HR (6-9 yrs)	Boys HR (10-12 yrs)	Girls HR (6-9 yrs)	Girls HR (10-12 yrs)
Excellent	< 5th	< 95	< 93	< 100	< 102
Very Good	< 25th	95-106	93-105	100-113	102-116
Good	< 50th	107-115	106-116	114-123	117-128
Sufficient	< 75th	116-126	117-128	124-135	129-141
Poor	< 95th	127-142	129-147	135-152	142-157
Very Poor	> 95th	> 142	> 147	> 152	> 157

Prueba de Fuerza en la Mano

Mano dominante _____ libras

Tu puntuaciones: _____ **percentil**

BOYS

Age (Years)	Percentile									
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	11.3	12.9	15.1	16.7	18.1	19.5	20.9	22.4	24.1	26.4	28.3
8-9	16.0	18.2	21.0	23.0	24.8	26.5	28.2	30.1	32.2	35.2	37.7
10-11	23.6	26.8	30.7	33.5	35.9	38.1	40.3	42.7	45.7	49.9	53.4
12-13	33.2	37.6	42.8	46.5	49.5	52.3	55.2	58.3	62.1	67.7	72.6
14-15	42.4	47.8	54.2	58.6	62.2	65.5	68.8	72.5	77.1	83.9	89.9
16-17	50.0	56.2	63.4	68.3	72.3	75.9	79.6	83.7	88.8	96.5	103.3
18-19	55.7	62.3	70.0	75.3	79.5	83.3	87.2	91.5	97.0	105.1	112.4

GIRLS

Age (Years)	Percentile									
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	10.5	12.0	13.9	15.4	16.7	17.9	19.2	20.6	22.3	24.5	26.4
8-9	10.5	18.3	20.8	22.7	24.3	25.8	27.3	29.0	31.0	33.9	36.3
10-11	22.4	25.0	28.0	30.3	32.1	33.9	35.7	37.7	40.1	43.6	46.6
12-13	27.8	30.7	34.3	36.8	39.0	41.0	43.0	45.2	48.0	52.0	55.5
14-15	32.0	35.2	39.1	41.8	44.2	46.4	48.6	51.1	54.1	58.4	62.2
16-17	34.9	38.3	42.4	45.3	47.8	50.2	52.5	55.1	58.3	62.9	66.8
18-19	36.8	40.2	44.4	47.4	50.0	52.5	54.9	57.6	60.9	65.6	69.7

Flexibilidad

La Distancia de sentarse y alcanzar _____ centimetros

Tu puntuaciones: _____ **percentil**

BOYS

Age (Years)	Percentile									
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	9.5	13.2	17.5	20.4	22.8	24.9	27.0	29.4	32.4	36.8	40.7
8-9	9.0	12.3	16.5	19.5	22.0	24.4	26.8	29.3	32.3	36.4	39.9
10-11	8.8	12.0	16.0	19.0	21.7	24.3	27.0	29.5	32.5	36.4	39.6
12-13	8.8	11.8	15.7	18.8	21.6	24.3	27.1	29.7	32.7	36.6	39.5
14-15	8.8	11.7	15.6	18.7	21.6	24.4	27.3	29.9	33.0	36.8	39.6
16-17	8.8	11.7	15.6	18.7	21.6	24.4	27.4	30.1	33.2	37.0	39.7
18-19	8.8	11.7	15.6	18.7	21.6	24.5	27.5	30.3	33.4	37.1	39.8

GIRLS

Age (Years)	Percentile									
	5th	10th	20th	30th	40th	50th	60th	70th	80th	90th	95th
6-7	15.1	19.3	23.8	26.7	29.0	30.9	32.8	35.0	37.6	41.6	45.1
8-9	15.0	19.2	23.7	26.6	28.9	30.9	32.9	35.1	37.8	41.7	45.2
10-11	14.9	19.1	23.6	26.6	28.9	31.0	33.0	35.2	37.9	41.9	45.3
12-13	14.9	18.9	23.5	26.5	28.9	31.0	33.1	35.3	38.1	42.0	45.3
14-15	14.8	18.8	23.4	26.4	28.8	31.0	33.1	35.5	38.2	42.1	45.4
16-17	14.7	18.7	23.3	26.4	28.8	31.0	33.2	35.6	38.4	42.3	45.5
18-19	14.6	18.6	23.1	26.3	28.7	31.0	33.3	35.7	38.5	42.4	45.6

Recomendación principal de ejercicio: Circule y proporcione viñetas clave

☐ APTITUD AERÓBICA ☐ FUERZA DE MUSCULO ☐ FLEXIBILIDAD

¿Cual sera tu meta SMART?

Debe será especifico, medible, alcanzable, relevante y oportuno.

¿Que harás?

¿Con que frecuencia lo harás?

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Sample Fitness Activity Handout

English version

Small changes lead to BIG results. Start small and keep moving!

Sit less and move more each day. Build in enough sleep.

- Limit sedentary screen time to no more than 2 hours per day
- Breakup long periods of sitting with stretching, some basic exercise movements
- Get up during TV commercials
- Walk and talk on the phone
- Take the stairs
- Try and incorporate even light activity during the day (helping with housework, yardwork, cleaning)
- Set an appointment to walk for 10-15 minutes each day at least once.
- 9 to 11 hours of sleep for children between the ages of 5-13 and 8 to 10 hours of sleep for children between the ages of 14-17
- Consistent bed and wake-up time

Why is physical activity good for you?

- Supports concentration and learning
- Good mood and mental health
- Helps your coordination skills and balance
- Helps reach and maintain healthy weight
- Improves heart health, lowers heart rate
- Lowers blood pressure
- Improves self-confidence and independence
- Fights sickness and keeps you healthy
- Builds strong bones and muscles
- Make friends and develop social skills
- Better sleep at night

Spanish version

¡Varias formas de mejorar su estado de fisico!

Aptitud Aeróbica

Levanta tu frecuencia cardiaca, Respira fuerte

- Saltar la cuerda
- Deportes (Ex: baloncesto, futbol, tenis, nadar)
- Montar en bicicleta, empujar scooters
- Caminar (Caminar al perro, caminar a la escuela, con amigos/familia)
- Jugar juegos de a fuera
- Hacer tu propia carrera de obstáculos y tomarte el tiempo

Flexibilidad

Estira tus músculos y mueva sus articulaciones

- Estiramiento dinámico (Mueva mientras estirar)
  - Caminar y estira la rodilla al pecho
  - Zancada con giro
  - Caminar y estira tus dedos de los pies a la mano
- Estiramiento estático (sosteniendo un estiramiento durante 10-30 segundos)
  - Estiramiento de isquiotibiales
  - Estiramiento del muslo
  - Estiramiento de la rodilla al pecho
  - Estiramiento del hombro
  - Estiramiento de la mariposa

La Fuerza

Hacer que sus músculos trabajen duro

- Flexión y dominada
- Ayudando con los comestibles
- Jugando con barras
- Plancha
- Sentadilla
- Sentarse a la pared
- Zancada
- Trabajar en el jardín con la familia

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Pequeños cambios conducen a grandes resultados. ¡Empieza pequeño y siga moviéndose!

Siéntate menos y muévete más cada día. Construir en suficiente sueño.

- Saltar la cuerda
- Deportes (Ex: baloncesto, futbol, tenis, nadar)
- Montar en bicicleta, empujar scooters
- Caminar (Caminar al perro, caminar a la escuela, con amigos/familia)
- Jugar juegos de a fuera
- Hacer tu propia carrera de obstáculos y tomarte el tiempo

¿Por qué la actividad física es buena para ti?

- Apoya la concentración y el aprendizaje
- Buen humor y buen salud mental
- Ayuda con sus habilidades de coordinación y equilibrio
- Ayuda a alcanzar y mantener un peso saludable
- Disminuye la frecuencia cardíaca
- Mejora la confianza en sí mismo y la independencia
- Combate las enfermedades y te mantiene saludable
- Hacer amigos y desarrollar habilidades sociales
- Dormir mejor por la noche

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