



# WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health, Nutrition & Indigenous Medicine

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## Physical Inactivity – Part ii

This is the second of a series of 3 articles

### 1. Satisfactory physical activity level

Satisfactory physical activity is defined as any form of physical activity that benefits health and functional capacity without undue harm or risk (Guidelines for health-enhancing physical activity promotion programmes-2000). According to the recommendation made in America as the satisfactory level is "Every US adult should accumulate 30 minutes or more of moderate-intensity physical activity on most, preferably all, days of the week" (American College of Sports Medicine-1995).

Physical activity (PA) improves muscular and cardio-respiratory fitness, bone and functional health and it reduces the risk of hypertension, coronary heart disease, stroke, diabetes, breast and colon cancer and depression, the risk of falls as well as hip or vertebral fractures (WHO, 2021). These overall health benefits other than cardiac effects are highly influenced to maintain called good health. By Physical activity survey in 2006, showed psychological aspects of people that doing exercises is a way of improving their overall health and feeling good about themselves mentioned by nine out of ten active respondents.

Physical activity does not only have beneficial effects on mortality, morbidity and quality of life but can also confer a broad range of economic and social benefits on individuals, communities and countries as a whole. Cost analyses have shown physical inactivity has a considerable economic impact in England for example, the annual cost—including those to the health system, days of absence from work and loss of income due to premature death—have been estimated to be €3 to 12 billion. This excludes the contribution of physical inactivity to overweight and obesity, whose overall cost might run to an additional €9.6 to 10.8 billion per year (WHO regional office for Europe, Denmark, 2006). Data were obtained from the city's 1998 Recreational Trails Census Report and the literature in the United States of America, per capita annual cost of using the trails (walking pathways) was the U.S.\$209.28 (\$59.28 construction and maintenance, \$150 of equipment and travel). Per capita annual direct medical benefit of using the trails was \$564.41. The cost-benefit ratio was 2.94, which means that every \$1 investment in trails for physical activity led to \$2.94 in direct medical benefit (Centers for Disease Control and Prevention, USA).

### 2. Types of physical activities

There are many types of physical activities described in different guidelines.

#### Aerobic Activity.

To promote and maintain health, recommended by the American College of Sports Medicine & American Heart Association (ACSM & AHA) all healthy adults aged 18–65 yr need moderate-intensity aerobic physical activity for a minimum of 30 min on five days each week or vigorous-intensity aerobic activity for a minimum of 20 min on three days each week.

#### Muscle-Strengthening Activity.

To promote and maintain good health and physical independence, the recommendation made by ACSM & AHA, adults will benefit from performing activities that maintain or increase muscular strength and endurance for a minimum of two days each week. It is recommended that 8–10 exercises be performed on two or more non-consecutive days each week using the major muscle groups. To maximize strength development, a resistance (weight) should be used that allows 8–12 repetitions of each exercise resulting in volitional fatigue. Muscle-strengthening activities include a progressive weight-training program, weight-bearing calisthenics, stair climbing, and similar resistance exercises that use the major muscle groups (Haskell W.L., 2007).

#### Greater Amounts of Activity/combined activity

Participation in aerobic and muscle-strengthening physical activities above minimum recommended amounts provide additional health benefits and results in higher levels of physical fitness. Many adults, including those who wish to improve their fitness or further reduce their risk for premature chronic health conditions and mortality related to physical inactivity, should exceed the minimum recommended amounts of physical activity. In addition, to further promote and maintain skeletal health, adults will benefit by engaging in extra weight-bearing activity and higher-impact activity such as stair-climbing or jogging, as tolerated. To help prevent unhealthy weight gain, some adults will need to exceed minimum recommended amounts of physical activity to a point that is individually effective in achieving energy balance, while considering their food intake and other factors that affect body weight (Haskell W.L., 2007, ACSM & AHA).

### 3. Classification of physical activity level

Participants' activity levels were classified as 'low', 'moderate' or 'high' based on scores of their overall level of activity, which required summation of the duration (in minutes) and frequency (days). In addition, the above categories can be further elaborated simply in a way to understand. i) Sedentary, e.g., reading, watching television; (ii) Mild, e.g., yoga, fishing, easy walking; (iii) Moderate, e.g., walking, bicycle riding, or light gardening at least 4 h per week; (iv) Strenuous exercise, e.g., running/jogging, football, vigorous swimming (C. Held, 2012).

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**4. Recommendation for physical activity**

**4.1. United Kingdom Physical activity guideline (Department of Health UK, 2019)**

- An adult should aim to be active daily over a week, activities should add up to at least 150 minutes (2 1/2 hours) of moderate-intensity activities in bouts of 10 minutes or more- one way to approach this is to do 30 minutes on at least 5 days a week.
- Alternatively, comparable benefits can be achieved through 75 minutes of vigorous-intensity activity spread across the week or a combination of moderate and vigorous-intensity activity.
- Adults should also undertake physical activity to improve muscle strength on at least two days a week.
- All adults should minimize the amount of time spent being sedentary (sitting) for an extended period.

**4.2. Physical activity and health (Europe –WHO & London, Department of Health, 2006)**

**Person Activities**

**Young child**

- ⇒ Daily walk to and from school
- ⇒ Daily school activity sessions (breaks and clubs)
- ⇒ 3–4 afternoon or evening play opportunities
- ⇒ Weekend: longer walks, visits to the park or swimming pool, bicycle rides

**Teenager**

- ⇒ Daily walk (or cycle) to and from school
- ⇒ 3–4 organized or informal midweek sports or activities
- ⇒ Weekend: walks, cycling, swimming, sports activities

**Student**

- ⇒ Daily walk (or cycle) to and from college
- ⇒ Taking all small opportunities to be active: using stairs, doing manual tasks
- ⇒ 2–3 midweek sports or exercise classes, visits to a gym or swimming pool
- ⇒ Weekend: longer walks, cycling, swimming, sports activities

**Adult with paid job**

- ⇒ Daily walk or cycle to work
- ⇒ Taking all small opportunities to be active: using stairs, doing manual tasks
- ⇒ 2–3 midweek sport, gym or swimming sessions
- ⇒ Weekend: longer walks, cycling, swimming, sports activities, home repairs, gardening
- ⇒ Adult working in the home      Daily walks, gardening or home repairs
- ⇒ Taking all small opportunities to be active: using stairs, doing manual tasks
- ⇒ Occasional midweek sport, gym or swimming sessions
- ⇒ Weekend: longer walks, cycling, sports activities

**Adult, unemployed**

- ⇒ Daily walks, gardening, home repairs
- ⇒ Taking all small opportunities to be active: using stairs, doing manual tasks.
- ⇒ Weekend: longer walks, cycling, swimming or sports activities
- ⇒ Occasional sport, gym, or swimming sessions

**Retired person**

- ⇒ Daily walking, cycling, home repairs or gardening
- ⇒ Taking all small opportunities to be active: using stairs, doing manual tasks
- ⇒ Weekend: longer walks, cycling or swimming

**5. Demographic characteristics related to physical activity**

Worldwide, leisure-time physical activity is generally more prevalent among men than women. Lower average income, time-consuming housekeeping duties, and cultural restrictions could preclude women from participating in leisure-time physical activity. Moreover, in rural and in low-income urban areas, women may already be physically exhausted from their 'occupational' physical activities. Secondly, it might be interesting to assess the potential interaction between gender and employment status. People's employment status can impact their level of physical activity during the week.

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 17th - 23rd Apr 2021 (17th Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus Fe-		Viral Hep-		Human		Chickenpox		Meningitis		Leishmania-		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	57	1009	4	8	0	0	0	2	1	1	12	86	0	1	0	2	0	2	1	19	0	6	0	0	57	89
Gampaha	37	568	0	1	0	1	0	1	0	0	6	113	0	2	0	3	0	1	0	12	0	5	0	3	36	75
Kalutara	46	389	0	9	0	1	0	0	0	0	3	256	0	3	0	1	0	1	2	49	2	9	0	0	44	100
Kandy	29	244	0	13	0	1	0	0	0	1	2	66	0	19	0	1	0	0	0	23	0	6	0	10	59	100
Matale	2	33	0	3	2	3	0	0	0	0	7	30	1	4	0	1	0	0	0	9	0	1	4	100	62	100
NuwaraEliya	3	21	1	6	0	1	0	1	0	0	4	31	2	28	0	1	0	0	0	11	1	4	0	1	35	92
Galle	13	94	0	2	0	1	1	5	0	4	21	328	2	20	0	2	0	0	2	24	0	17	0	1	48	97
Hambantota	17	120	0	6	1	2	2	2	3	4	18	107	3	35	0	5	0	0	2	27	0	12	29	186	75	100
Matara	32	140	0	3	0	0	0	1	0	0	7	116	0	11	0	2	0	0	3	34	0	3	16	154	36	100
Jaffna	5	94	3	31	1	3	0	11	4	11	1	11	1	403	0	0	1	1	4	21	0	2	0	2	16	88
Kilinochchi	1	20	1	12	0	0	0	0	0	8	0	36	2	50	0	0	0	0	0	6	0	0	0	1	49	100
Mannar	1	18	0	0	0	0	0	3	0	0	1	23	0	1	0	0	0	0	0	2	0	7	0	1	49	80
Vavuniya	2	27	0	2	1	1	0	0	0	0	4	17	0	2	0	1	0	0	0	5	1	1	1	1	37	100
Mullaitivu	0	3	0	1	0	0	0	0	0	0	1	20	0	6	0	0	0	0	0	7	0	4	0	0	21	100
Batticaloa	71	2762	4	16	0	2	1	2	0	13	5	28	0	0	0	1	0	0	1	7	1	17	0	0	45	100
Ampara	5	17	0	5	0	0	0	1	0	0	17	32	0	0	1	1	0	0	1	24	1	8	0	2	60	100
Trincomalee	7	85	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	10	0	2	0	0	41	85
Kurunegala	34	410	1	10	1	3	0	0	0	3	10	152	0	7	0	0	0	0	4	26	3	67	7	177	46	97
Puttalam	18	174	0	1	0	1	0	0	0	0	1	15	0	14	0	0	0	1	0	12	1	21	0	7	49	94
Anuradhapur	9	74	1	8	0	0	0	0	1	3	8	168	0	20	0	2	0	0	1	19	0	18	3	97	32	85
Polonnaruwa	3	25	0	2	0	0	0	1	0	1	12	54	1	2	0	1	0	0	3	16	0	1	24	179	37	100
Badulla	9	40	1	9	0	0	0	1	0	0	12	144	2	18	0	5	0	0	1	22	2	11	1	12	50	96
Monaragala	4	44	0	5	0	0	0	2	0	3	14	154	0	13	1	30	0	0	2	15	0	29	0	10	40	100
Ratnapura	26	225	0	17	0	4	0	0	1	4	32	398	1	15	0	5	0	1	2	30	4	38	3	36	39	99
Kegalle	30	191	0	4	1	6	0	0	0	0	7	133	1	7	1	1	0	0	7	45	1	11	2	8	45	100
Kalmune	20	199	1	6	0	1	0	1	0	1	0	14	0	0	0	2	0	2	1	6	1	4	1	2	40	100
<b>SRI LANKA</b>	<b>481</b>	<b>7026</b>	<b>17</b>	<b>180</b>	<b>7</b>	<b>31</b>	<b>4</b>	<b>34</b>	<b>10</b>	<b>57</b>	<b>205</b>	<b>2534</b>	<b>16</b>	<b>681</b>	<b>3</b>	<b>69</b>	<b>1</b>	<b>9</b>	<b>38</b>	<b>481</b>	<b>18</b>	<b>304</b>	<b>91</b>	<b>990</b>	<b>45</b>	<b>95</b>

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk).

\*T=Timeliness refers to returns received on or before 23rd April, 2021 Total number of reporting units 357 Number of reporting units data provided for the current week: 352 C\*\*=Completeness

**Table 2: Vaccine-Preventable Diseases & AFP**

17<sup>th</sup> – 23<sup>th</sup> Apr 2021 (17<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2021	Number of cases during same week in 2020	Total number of cases to date in 2021	Total number of cases to date in 2020	Difference between the number of cases to date in 2021 & 2020
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	02	00	00	00	00	00	00	00	00	00	00	19	11	72.72%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	02	00	01	00	00	00	00	00	00	03	01	37	56	-33.92%
Measles	00	01	00	00	00	00	01	00	00	02	01	08	25	-68%
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	01	00	00	00	00	00	00	00	01	00	02	03	-33.33%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	01	06	- 83.3%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	00	03	-100%
Tuberculosis	31	03	00	07	13	11	08	13	22	108	00	2130	1455	46.391%

**Key to Table 1 & 2**

**Provinces:** W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.  
**RDHS Divisions:** CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

**Data Sources:**  
**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,  
**Special Surveillance:** AFP\* (Acute Flaccid Paralysis), Japanese Encephalitis  
**CRS\*\*** =Congenital Rubella Syndrome  
**NA** = Not Available

**Number of Malaria Cases Up to End of April 2021,**

**03**

**All are Imported!!!**

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to [chepid@sltnet.lk](mailto:chepid@sltnet.lk). **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

**ON STATE SERVICE**

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