Physical Activity and Sedentary Behavior Guideline Sri Lanka - 2018

Ministry of Sports and Youth Affairs

Ministry of Healthcare and Indigenous Medical Services

Ministry of Education

Physical Activity and Sedentary Behavior Guidelines for Sri Lanka

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Message from the Director General of the Institute of Sports Medicine, Ministry of Sports Maitland place, Colombo 07

It is my pleasure to present the 2018 Physical Activity Guidelines for Sri Lankans, the first of its kind to be issued by the Sri Lankan government. This document is intended to be a primary source of information for policy makers, physical educators, health providers, and the public on the amount, types, and intensity of physical activity needed to achieve and maintain health benefits for Sri Lankans throughout their lifespan.

The mandate to develop Physical Activity sedentary behavior Guidelines for Sri Lankans was derived from the Ministerial steering committee on Non-Communicable Diseases of the Ministry of Health. The steering committee assigned the task of formulating the national guidelines to the Institute of Sports and Exercise Medicine. A committee of experts in the field of exercise science and public health conducted an extensive review of the scientific data relating to physical activity and general health published. I want to thank the Committee for their professionalism, hard work and dedication and all those who assisted in creating this document.

Physical activity is an essential component of any comprehensive disease prevention and health promotion strategy for Sri Lankans. We know that sedentary behavior contributes to a host of non-Communicable, and regular physical activity is an important component of an overall healthy lifestyle. There is strong evidence that physically active people have better health outcomes and are at a lower risk of developing disabling medical conditions prematurely than inactive people.

Prevention is a key priority. Physical activity which is clearly vital to prevention is easily overlooked. These Physical Activity and sedentary behavior Guidelines for Sri Lankans provide achievable steps for all ages in the population to live healthier and longer lives. The Eight Guiding Principles such as Life course approach, Equity, Empowerment of people, families and communities, Human Rights-based approach, Evidence-based practice, Cross-sectoral Engagement and Partnership for Joint Action, Policy coherence and Universal Health Coverage will be adopted in the implementation strategy. Communities should be mobilized to be physically active and the government should create enabling environments in all sectors for people to engage in physical activity.

Sincerely,

Dr. Lakshman Edirisinghe
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Acknowledgments

I take this opportunity to thank Hon. Minister, Ministry of Sports and Hon. Minister, Ministry of Education for extensive support rendered during the whole exercise and encouragement given us to compile the draft document with in very limited period of time.

I should profoundly extend my sincere gratitude towards Hon. Minister, Ministry of Health for his leadership in the National Steering Committee on Non Communicable Diseases and for assigning the mandate to Institute of Sports Medicine, Ministry of Sports for formulating the National Physical Activity Guidelines as a National Priority.

I also value the leadership guidance extended by Secretary, Ministry of Sports and the senior officials Ministry Sports for making this endeavor a success.

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Dr. N. G. S. Panditharathna, Regional Director of Health Services - Ratnapura, should be specially thanked for adding technical inputs and writing the document to be published during the SLSEM Conference 2018.

I also acknowledge the contributions of the external peer reviewers Prof. Nalika Gunerwardena, National Professional Officer, World Health Organization Country Office, Professor Crista Janse Van Head of sports medicine physician, South Africa, Dr. Adam Castricum, Chief Medical Officer, Australian Collage of Sport and Exercise Physicians and Dr. Nirmala Perera, Research Officer, Australian Collage of Sport and Exercise Physician who reviewed the draft document and provided helpful comments and guidance.

All staff members of the Institute of Sports Medicine and non-technical staff who helped us in this effort are fondly remembered for their valuable contribution in this regard.

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The Rationale for Physical Activity Guidelines

There is overwhelming evidence for us to declare and recommend that all Sri Lankans should engage in regular physical activity to improve overall health and to reduce the risk of many health problems. Physical activity is a leading example of how lifestyle choices have a profound effect on health. Choosing to be physically active and avoiding sedentary behavior in everyday life is essential for our health and well-being. Regular physical activity is proven to help prevent and treat non communicable diseases (NCDs) such as heart disease, stroke, diabetes and breast and colon cancer. It also helps prevent hypertension, overweight and obesity and can improve mental health, quality of life and well-being. The choices we make about other lifestyle factors, such as diet, smoking, and alcohol use, also have important and independent effects on our health.

The primary audiences for the Physical Activity and sedentary behavior Guidelines for Sri Lankans are policymakers and health professionals. The Guidelines are designed to provide information and guidance on the types and amounts of physical activity that provide substantial health benefits.

The Non-Communicable Disease Risk Factor Survey Sri Lanka - 2015, found that 22.5% of the males and 38.4% of the females did not indulge in 150 minutes of physical activity per week. Over 50% of Sri Lankan adults are either inactive or have low levels of physical activity - that is more than 9.5 million adults. These Guidelines are necessary because the current inactivity of Sri Lankan put them at unnecessary risk. The goal of Sri Lankan government is to mobilize one million inactive people by 2030. This target is in line with the Global Action Plan to reduce physical inactivity by 10% in the year 2020.

This Guideline presents Sri Lanka’s Physical Activity and sedentary behavior Guidelines for the population aged 5 to 64 years, irrespective of socio-cultural background, gender or ability. It also provides information about the benefits of being physically active, as well as ways to move more every day.

Framework for the Physical Activity & Sedentary Guidelines for Sri Lankans

Explaining Baseline Activity and Physical Activity

Physical activity has been defined as any bodily movement requiring energy more than when you are sleeping, which makes your breathing becomes quicker and your heart beat faster. In this document, the term "physical activity" will generally refer to bodily movement that enhances health. Bodily movement can be divided into two categories:

- Baseline activity refers to are normal lifestyle activities which are of the light intensity, such as standing, walking slowly, and lifting lightweight objects. People vary in how much baseline activity they do. People who do only baseline activity are considered to be inactive. They may do very short episodes of moderate- or vigorous-intensity activity, such as climbing a few flights of stairs, but these episodes aren't long enough to count toward meeting the Guidelines.

- Health-enhancing physical activity is an activity that, when added to baseline activity, produces health benefits. Brisk walking, jumping rope, dancing, lifting weights, climbing on playground equipment at recess, and doing yoga are all examples of physical activity. Some occupations involving manual work may get enough physical activity on the job to meet the Guidelines.

Sedentary behavior has been defined as sitting or lying down when awake, working, travelling or during leisure time for a prolonged period. People who do only baseline activity are considered to be inactive.

Health Benefits and Reasons to be Physically Active

The Physical Activity Guidelines for Sri Lankans describes the major research findings (both local and international) on the health benefits of physical activity:

- Regular physical activity reduces the risk of many adverse health outcomes such as cardiovascular disease (CVD). type 2 diabetes and some cancers.
- Regular physical activity Maintains and/or improve blood pressure, cholesterol and blood sugar levels of all ages.
- Regular physical activity builds strong muscles and bones. Regular physical activity helps to prevent and manage mental health problems, develop and maintain overall physical and mental well-being.
- Regular physical activity helps prevent unhealthy weight gain and assist with weight loss.
- Some physical activity is better than none.

- For most health outcomes, additional benefits occur as the amount of physical activity increases through higher intensity, greater frequency, and/or longer duration.
- Most health benefits occur with at least 150 minutes (2 hours and 30 minutes) a week of moderate-intensity physical activity, such as brisk walking. Additional benefits occur with more physical activity.
- Both aerobic (endurance) and muscle-strengthening (resistance) physical activity are beneficial.
- Health benefits occur for children and adolescents, young and middle-aged adults, older adults, of all racial and ethnic groups.
- The health benefits of physical activity occur for people with disabilities.
- The benefits of physical activity far outweigh the possibility of adverse outcomes.

These health benefits are not the only reason why people should be active. Physical activity gives people a chance to socialize, enjoy the outdoors with friends and family, improve their personality. It also improves their fitness and endurance so that they can stay active beyond retirement. Nothing in the Guidelines is intended to mean that health benefits are the only reason to do physical activity.

Importance of Promoting and translating Guidelines into Practice

The Technical Committee will also review strategies to promote physical activity in the community as a whole. Action is needed at the individual, community, and societal levels to help Sri Lankans become physically active.

Multi Sectoral partnerships with vertical and horizontal approaches including primary health care for promoting physical activity in the school and community level will be needed. The availability of infrastructure to support short episodes of activity is therefore important. During town and building planning attention should be made to encourage people to use sidewalks and paths to walk between buildings at a worksite, rather than having to drive. People should also have the option of taking the stairs instead of using an elevator. Improvements to park and playground infrastructure for safe Physical Activity. The Guidelines are stated in simple language palatable to the general public. The messages contained in these Guidelines is for dissemination to anyone involved in promoting physical activity. The best way to be physically active is to be active for life. Therefore, the Guidelines take a lifespan approach and provide recommendations for from age 5 onwards.

The Finalized Guidelines will be widely promoted through various communications strategies, such as materials for the public, Websites, and through partnerships with organizations that promote physical activity.

ISM will collaborate closely with other partner organizations to mobilize one million people in addition to the currently active population.

Physical Activity Guidelines for Sri Lankans Summary

Regular Physical activity is one of the most important decisions that people of all ages can take to improve their health. The 2018 Physical Activity Guidelines for Sri Lankans provides science-based guidance to help Sri Lankans aged 5 and older to improve their health through appropriate physical activity.

Age categorization was designed to align with the Sri Lankan school system, education and health structure. Assessing physical activity levels in the community will be based on the Age categorization.

The Physical Activity Guidelines are primarily aimed at policymakers and health professionals These Guidelines are designed to provide information and guidance on the types and amounts of physical activity that provide substantial health benefits. Regular physical activity over months and years can produce long-term health benefits.

The Guidelines do not address the types and amounts of activity necessary to improve performance-related fitness. Athletes need this kind of fitness when they compete. Medical screening issues for competitive athletes also are outside the scope of the Guidelines.

The key Physical Activity & Sedentary Guidelines for Sri Lankans

Key Guidelines for Children 5 – 10 Years

- Children aged 5-10 years should accumulate at least 60 minutes (1 hour) or more of moderate to vigorous-intensity physical activity daily, including activities that strengthen muscle and bone at least 3 days per week.
    - **Aerobic:** 60 or more minutes a day should be either moderate-vigorous intensity aerobic physical activity.
    - **Muscle and Bone Strengthening**: As part of their 60 or more minutes of daily physical activity, children should include muscle and bone-strengthening physical activity such as Climbing, Jumping, Cycling etc. on at least 3 days of the week.
- More daily physical activity provides greater health benefits.
- Moderately intense physical activities such as Bike riding, Playground activities will cause children to sweat a little and to breathe harder.

- Vigorous-intensity physical activities such as Running, Swimming will cause children to sweat and be 'out of breath'.
- Minimize the amount of time spent being sedentary for extended periods and should not spend more than 2 hours watching TV, on the computer and on video games per day.

Key Guidelines for Adolescents 11 – 19 Years

- For health benefits, adolescents aged 11-19 years should accumulate at least 60 minutes of moderate to vigorous-intensity physical activity daily, including activities that strengthen muscle and bone at least 3 days per week and flexibility maintaining activities five days per week.
    - **Aerobic:** 60 or more minutes a day should be either moderate-vigorous intensity aerobic physical activity.
    - **Muscle and Bone Strengthening:** As part of their 60 or more minutes of daily physical activity, children should include muscle and bone-strengthening physical activity such as engaging in any sport or household activity on at least 3 days of the week and flexibility maintaining activities five days per week.
- It is important to encourage adolescents to participate in physical activities that are appropriate for their age, that are enjoyable, and that offer variety.
- More daily physical activity provides greater health benefits.
- Moderately intense physical activities such as playground activities, bike riding will cause youth to sweat a little and to breathe harder.
- Vigorous-intensity physical activities such as Running, Group games like Soccer, Basketball, Netball, Volleyball etc. will cause teens to sweat and be 'out of breath'.
- Minimize the amount of time spent being sedentary for extended periods and should not spend long hours watching TV, on the computer or playing video games per day.

Key Guidelines for Young Adults 20-34 Years

- To achieve health benefits young adults should accumulate at least 150 minutes of moderate to vigorous-intensity aerobic physical activity per week, that is at least 30 minutes of physical activity on 5 days of the week in bouts of 10 minutes or more.
- Alternatively, comparable benefits can be achieved through 75 minutes of vigorous-intensity activity spread across the week or combinations of moderate and vigorous-intensity activity.
- Young adults should also do muscle and bone-strengthening activities involving all major muscle groups on 2 or more days a week such as engaging in any sport or household activity, as these activities

provide additional health benefits. Exercising with resistance equipment also contributes to muscle and bone strengthening.

- Young adults should also incorporate flexibility improving physical activity daily to achieve greater benefits
- Moderately-intense physical activities such as brisk walking, bike riding. swimming will cause adults to sweat a little and to breathe harder. group activities such as football, volleyball, badminton etc. are also beneficial.
- Vigorous-intensity physical activities such as Jogging, cross-country walking will cause adults to sweat and be 'out of breath
- Young adults should avoid inactivity. Some physical activity is better than none, and adults who participate in any amount of physical activity gain some health benefits.
- If you are not currently doing any physical activity, you will benefit from starting some. You can start slowly and gradually increase the amount you do.
- More physical activity provides greater health benefits.
- Young adults should minimize the amount of time spent being sedentary for extended periods.

Key Guidelines for Adults 35-64 Years

- To achieve health benefits Adults should accumulate at least 150 minutes of moderate to vigorous-intensity aerobic physical activity per week, that is at least 30 minutes of physical activity on 5 days of the week, in bouts of 10 minutes or more.
- Alternatively, comparable benefits can be achieved through 75 minutes of vigorous-intensity activity spread across the week or combinations of moderate and vigorous-intensity activity.
- Adults should also do muscle and bone-strengthening activities that are involving all major muscle groups on 2 or more days a week such as engaging in any sport or household activity, as these activities provide additional health benefits.
- Adults should also undertake physical activity improving flexibility daily
- Neuromoter improving physical activity two-three days a week or 60 min a week Exercising with resistance equipment also contributes to neuromata improvement.
- All adults should avoid inactivity. Some physical activity is better than none, and adults who participate in any amount of physical activity gain some health benefits.
- If you are not currently doing any physical activity, you will benefit from starting some. You can start slowly and gradually increase the amount you do.
- More physical activity provides greater health benefits.
- All adults should minimize the amount of time spent being sedentary for extended periods.

Key Guidelines for Adults 65+

Adults of this age:

- Participating in any amount of physical activity gain some health benefits including maintaining good physical & cognitive function. Some physical activity is better than none, and more physical activity provides greater health benefits.
- Adults of this age should aim to be active daily. Activity over a week should add up to at least 150 minutes (2 ½ hrs.) of moderate-intensity activity in bouts of 10 minutes or more - one way to approach this is to do 30 minutes on at least 5 days a week.
- Who are already regularly active at a moderate intensity comparable benefits can be achieved through 75 minutes of vigorous-intensity activity spread across the week or combinations of moderate and vigorous activity.
- Should also undertake daily physical activity to improving flexibility and balance.
- At risk of falls should incorporate Neuro-motor physical activity to improve balance coordination reaction speed and muscle fitness. Engaging in any sport or exercising with resistance equipment or exercising against one's own body weight at least two-three days a week promotes muscle fitness.
- Should minimize the amount of time spent being sedentary for extended periods.
- Moderately-intense physical activities will cause adults to sweat a little and to breathe harder.
- Can choose household activities like gardening, playing with Family/grandchildren, Recreational walking, walking short distances for daily needs for physical activity for this age.

Guidelines for Women during Pregnancy and the Postpartum Period

- Healthy women who are not already highly active or doing a vigorous-intensity activity should get at least 150 minutes of moderate-intensity aerobic activity a week during pregnancy and the postpartum period. Preferably, this activity should be spread throughout the week.
- Pregnant women who habitually engage in a vigorous-intensity aerobic activity or who are highly active can continue physical activity during pregnancy and the postpartum period provided that they remain healthy and discuss with their health-care provider how and when activity should be adjusted over time.

Guidelines for Safe Physical Activity

To do physical activity safely and reduce the risk of injuries and other adverse events, people should:

- Understand the risks and yet be confident that physical activity is safe for almost everyone.
- Choose to do types of physical activity that are appropriate for their current fitness level and health goals, because some activities are safer than others.
- Increase physical activity gradually over time whenever more activity is necessary to meet guidelines or health goals. Inactive people should "start low and go slow" by gradually increasing how often and how long activities are done.
- Protect themselves by using the appropriate gear and sports equipment, looking for safe environments, following rules and policies, and making sensible choices about when, where, and how to be active.
- Be under the care of a health-care provider if they have chronic conditions or symptoms. People with chronic conditions and symptoms should consult their health-care provider about the types and amounts of activity appropriate for them.

Classification of Total Weekly Amounts of Aerobic Physical Activity

Levels of Physical Activity	Physical Activity minutes a week	Summary of Overall Health Benefits	Comment
Inactive	No activity beyond the baseline activities	None	Being inactive is unhealthy.
Low	Activity beyond baseline but fewer than 150 minutes a week	Marginal	Low levels of activity are clearly preferable to an inactive lifestyle.
Medium	150 minutes to 300 minutes a week	Substantial	Activity at the high end of this range has additional and more extensive health benefits than activity at the low end.
High	More than 300 minutes a week	Additional	Additional health benefits at high levels are yet under investigation.

- Inactive is no activity beyond baseline activities of daily living.
- Low activity is activity beyond baseline but fewer than 150 minutes (2 hours and 30 minutes) of moderate-intensity physical activity a week or the equivalent amount (75 minutes, or 1 hour and 15 minutes) of vigorous-intensity activity.
- Moderate activity is 150 minutes to 300 (5 hours) minutes of moderate-intensity activity a week (or 75 to 150 minutes of vigorous-intensity physical activity a week). In scientific terms, this range is approximately equivalent to 500 to 1,000 metabolic equivalent (MET) minutes a week.
- MET refers to metabolic equivalent of task, and 1 MET is the rate of energy expenditure while sitting at rest.
- High activity is more than the equivalent of 300 minutes of moderate-intensity physical activity a week.

A Roadmap Beyond Physical Activity Guidelines

- The Physical Activity Guidelines published in September 2018 had been opened at public reviews for a period of three months. Once the review period had completed, the amended Guidelines will be declared in 2018.
- The Physical Activity Guidelines had been accompanied by a community-based activity delivery plan with responsibilities assigned to each sector of relevance.
- For adults with disabilities and chronic conditions, a separate set of guidelines will be formulated.
- Additional information and resources relevant to the Guidelines are available in the Appendices.

For More Information

- Annexures 1 & 2 provides a detailed explanation of MET-minutes, a unit useful for describing the energy expenditure of a specific physical activity.

Annexure – 01

Equivalents (METs) Values of Common Physical Activities Classified as Light, Moderate, or Vigorous Intensity.

Light (<3 METs)	**Moderate (3–<6 METs)**	**Vigorous (≥6 METs)**
Walking	Walking	Walking, jogging, and running
Walking slowly around home, store, or office =2.0[a]	Walking 3.0 mi. h^{-1} = 3.0[a]	Walking at very, very brisk pace (4.5 mi .h^{-1}) = 6.3[a]
Household and occupation	Walking at a very brisk pace (4 mi .h^{-1}) = 5.0[a]	Walking at a moderate pace =7.0(carrying <10 lb weight.)=7.0
Sitting—using a computer, work at a desk, using light hand tools = 1.5	Household and occupation	Rock climbing at steep grades and a carrying pack with 10–12 lb. =7.5–9.0
Standing to perform light work, such as making a bed, washing dishes, ironing, preparing food, = 2.0–2.5	Cleaning, heavy — washing windows, car, clean garage = 3.0	Jogging at 5 mi. h^{-1}= 8.0[a]
Leisure time and sports	Sweeping floors or carpet, vacuuming, mopping =3.0–3.5	Jogging at 6 mi. h^{-1} =10.0[a]
Arts and crafts, playing cards = 1.5	Carpentry — general =3.6	Running at 7 mi. h^{-1} =11.5[a]
Billiards =2.5	Carrying and stacking wood =5.5	Household and occupation
Boating — power = 2.5	Trimming Grass land= 5.5	Throwing sand, coal, etc. = 7.0
	Leisure time and sports	Carrying heavy loads, such as bricks =7.5
Darts=2.	Badminton — recreational = 4.5	Heavy farming, such as bailing hay = 8.0
Fishing — sitting =2.5	Basketball — shooting around = 4.5	digging ditches = 8.5
Playing most musical instruments =2.0–2.5		Leisure time and sports Bicycling on flat — light effort (10–12 mi. h^{-1}) = 6.0
	Volleyball — noncompetitive = 3.0–4.0	Basketball game =8.0
	Fishing from the riverbank and walking = 4.0	Bicycling on flat — moderate effort (12–14 mi .h^{-1}) =8 fast (14–16 mi. h^{-1}) = 10
	Sailing boat= 3.0	Soccer — casual =7.0; competitive = 10.0
		Swimming leisurely =6.0[b] Swimming — moderate/ hard =8–11[b]
	Table tennis = 4.0	Tennis singles = 8.0
	Tennis doubles = 5.0	Volleyball — competitive at the gym or beach = 8.0

a. On the flat, hard surface.

b. MET values can vary substantially from individual to individual during swimming as a result of different strokes and skill levels.

Annexure - 02

METs and MET-minutes

Physical activities frequently are classified by their intensity using the MET as a reference. A metabolic equivalent at task, or MET, is a unit useful for describing the energy expenditure of a specific activity. A MET is the ratio of the rate of energy expended during an activity to the rate of energy expended at rest. For example, 1 MET is the rate of energy expenditure while at rest. A 4 MET activity expends 4 times the energy used by the body at rest. If a person does a 4 MET activity for 30 minutes, he or she has done 4 x 30 = 120 MET-minutes (or 2.0 MET-hours) of physical activity. A person could also achieve 120 MET-minutes by doing an 8 MET activity for 15 minutes.

MET-Minutes and Health Benefits

A key finding is that the health benefits of physical activity depend mainly on total weekly energy expenditure due to physical activity. In scientific terms, this range is 500 to 1,000 MET-minutes per week. A range is necessary because the amount of physical activity necessary to produce health benefits cannot yet be identified with a high degree of precision; this amount varies somewhat by the health benefit. For example, activity of 500 MET-minutes a week results in a substantial reduction in the risk of premature death, but activity of more than 500 MET-minutes a week is necessary to achieve a substantial reduction in the risk of breast cancer.

Dose Response Relationship

There is scientific evidence to conclude that a dose-response relationship exists between physical activity and health benefits. A range of 500 to 1,000 MET-minutes of activity per week provides substantial benefit, and amounts of activity above this range have even more benefit. Amounts of activity below this range also have some benefit. The dose-response relationship continues even within the range of 500 to 1,000 MET-minutes, in that the health benefits of 1,000 MET-minutes per week are greater than those of 500 MET-minutes per week.

Annexure - 03

Daily Physical Activity - Summary of Benefits

Being active 60 minutes daily can help children 5 – 10 Years

• Improve their health

• Do better in school

• Improve their fitness

• Grow stronger

• Feel happier

• Maintain ideal body mass index (BMI) for age.

• Improve their self-confidence

• Learn new skills

Being Active 60 minutes daily can help Adolescents 11 – 19 Years

• Improve their health

• Do better in school

• Improve their fitness

• Grow stronger

• Have fun playing with friends

• Feel happier

• Maintain ideal body mass index (BMI) for age.

• Improve their self-confidence

• Learn new skills

Being active for at least 150 minutes per week in 20-34-year-olds

can help reduce the risk of:

• Premature death

• Heart disease

• Stroke

• High blood pressure

• Certain types of cancer

• Type 2 diabetes

• Osteoporosis

• Overweight and obesity

And can lead to improved:

• Fitness

• Strength

• Mental health (morale and self–esteem)

Being active for at least 150 minutes per week in 35-64-year-olds

can help reduce the risk of:

• Premature death

• Heart disease

• Stroke

• High blood pressure

• Certain types of cancer

• Type 2 diabetes

• Osteoporosis

• Overweight and obesity

And can lead to improved:

• Fitness

• Strength

• Mental health (morale and self–esteem)

Being active for at least 150 minutes per week in the 65+ age group

can help reduce the risk of:

• Chronic disease (such as high blood pressure and heart disease) and,

• Premature death

And also help to:

• Maintain functional independence/improve the quality of life

• Maintain mobility

• Improve fitness

• Improve or maintain body weight

• Maintain bone health

• Maintain mental health and feel better

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