

Report on Classification of Resources, Documents and Multimedia Tools Related to Sedentary Behaviour, Physical Activity and Sport

2023





Increasing the physical activity levels of low-income sedentary individuals under the guidance of personal trainers

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1. Type of resource

a. Printed materials (books, brochures, posters, etc.)

Books, brochures, posters, booklets, flyers, handouts, and other physical documents and materials that can be printed and distributed are all examples of printed material. Printed materials are a great way to reach a large audience with important information about physical activity and sedentary behaviour because they can be shared in a variety of public settings, including community centres, clinics, schools, workplaces, and more. It is common practice to distribute printed materials that include both theoretical and practical information on the advantages of regular physical activity and how to get started and keep up with a regimen. It can also be modified to meet the needs of special groups, such as the elderly, young children, or those with physical impairments. It is important to have a clear and concise message that is easy to understand and follow in printed materials.

Here are some examples of print materials that encourage physical activity:
Brochures and leaflets highlight the positive effects of exercise and list local facilities and programs.

Posters and flyers serve to remind people to get moving and to motivate them to participate in physical activity programs and events.

The use of activity logs and diaries can be instrumental in keeping people motivated to continue engaging in healthy behaviours.

Guides and manuals for physical activity offer in-depth explanations of various exercises and activities, as well as pointers on how to execute them correctly.

Nonfiction books that instruct the reader on the merits of an active lifestyle and offer advice on how to stick with it.

Physical activity and sedentary behaviour promotion printed materials are one of the valuable and effective ways to promote physical activity and sedentary behaviour in a range of settings. It's crucial to keep the target demographic, intended message, and intended format in mind when creating print materials.

b. Digital resources (websites, online articles, apps, etc.)

Digital resources encompass a variety of electronically accessible content and information, including but not limited to websites, online articles, mobile applications, and social media platforms. In recent years, there has been a growing popularity of digital resources owing to their convenience and accessibility in terms of information retrieval and social connectivity.

Websites represent a ubiquitous form of digital resources. Online platforms offer a diverse range of resources pertaining to physical activity and sedentary behaviour, encompassing written materials, audio-visual content, graphical representations, and interactive applications. Additionally, it furnishes hyperlinks to nearby resources and programs, such as physical exercise sessions and communal gatherings.

Online articles represent a category of digital resources that furnish comprehensive insights into physical activity and sedentary behaviour. A plethora of online articles can be accessed through various digital platforms such as websites, blogs, and online publications. These articles encompass a diverse array of subjects, including the advantages of engaging in physical activity, recommendations for initiating and sustaining an exercise regimen, and tactics for mitigating sedentary behaviour.

Mobile applications represent a category of digital resources that have the potential to promote physical activity and discourage sedentary behaviour. The applications offer a plethora of functionalities, encompassing monitoring of bodily movements, furnishing workout regimens and competitions, and issuing notifications to encourage physical activity intermittently during the day.

Digital resources for physical activity promotion include social media platforms such as Facebook, Twitter, and Instagram. Social media platforms are utilized for disseminating motivational messages, sharing links to local resources and events, and fostering connections with individuals who share a common interest in minimizing physical inactivity and sedentary behaviour.

Digital resources offer a convenient and accessible means of obtaining information and support for reducing physical inactivity and sedentary behaviour. When utilizing digital resources, it is imperative to take into account the dependability and precision of the information proffered, as well as the privacy and protection of personal data.

c. Multimedia (videos, podcasts, webinars, etc.)

Videos, podcasts, and webinars, in particular, are powerful resources for encouraging and promoting physical exercise.

The use of videos to demonstrate the proper form and methods for the exercises is particularly useful. Exercises are more efficient and safer when performed with proper form and technique. As a result, the usage of videos as an aid in the safe and effective completion of physical tasks.

On the other side, listeners might get movement, inspiration, and motivation from podcasts. Research in sports psychology, exercise science, and related fields can help people have healthier, more active lives. People who listen to podcasts on fitness might pick up useful tips for enhancing their workouts.

However, webinars offer a more comprehensive learning opportunity for participants. Webinars on exercise science and sports psychology, for instance, are excellent resources for persons looking to better comprehend the material supplied by professionals and acquire novel methods for enhancing their workout routines.



2. Intensity Level

a. Light (Low) Intensity:

Light-intensity exercise and sports are low-effort activities that increase respiration and heart rate somewhat. Beginners, older adults, and chronically ill people can do these activities for a long time.

Light-intensity exercises include gradual strolling, gardening, yoga, and leisurely bike riding (American Heart Association, 2023). These exercises improve cardiovascular health, reduce chronic disease risk, and boost mental health (Chastin et al., 2015; Rebar et al., 2015).

Light-intensity exercises boost daily physical activity and health (Gennuso et al., 2013). Light-intensity activities help reduce sedentary behaviour, which is associated with obesity and diabetes (Dunstan et al., 2012). Light-intensity exercises also boost mood, socializing, and stress alleviation (Hillman, 2008).

Printed materials

- Low intensity workouts.

<https://www.shu.ac.uk/gym/keeping-active-at-home/low-intensity-workouts>

- Low-impact exercise: simple, safe.

<https://www.thenationshealth.org/sites/default/files/additional-assets/healthyyou/QuickFactsLowImpactExercise.pdf>

- Beginner's Low-Intensity Cardio Workout Plan.

<https://skinnymms.com/beginners-low-intensity-cardio-workout-plan/>

Digital resources

- Light workout: fitness body.

<https://apkpure.com/light-workout-fitness-body/com.ligh.workout>

- Light Trainer

https://play.google.com/store/apps/details?id=com.trainer.lightrainer&hl=en_US

- Low Impact Exercise & Workouts

https://apkpure.com/low-impact-exercise-workouts/com.fitivity.baby_boomers

- 35-Minute Low Impact Cardio At Home

<https://www.nourishmovelove.com/35-minute-low-impact-cardio/>

Multimedia resources

- LIIT: Low Intensity Interval Training

<https://www.youtube.com/watch?v=En5SxxTzxwI>

- Low-Intensity Seated Cardio Work Out - The Great Slim Down

https://www.youtube.com/watch?v=xRI9obPG_aE

- 30 min. LISS Workout No Equipment Required | Low-Impact Workout

<https://www.youtube.com/watch?v=PWzaRDu4etI>

b. Moderate Intensity:

Moderate-intensity exercise and sports increase heart rate and respiration, causing mild to moderate perspiration. For overall health, adults should get 150 minutes of moderate-intensity activity per week (Physical Activity Guidelines for Americans, 2018).

Moderate-intensity exercise has several benefits. Moderate-intensity exercise reduces the risk of cardiovascular disease, type 2 diabetes, and several malignancies (World Health Organization, 2023). It also reduces anxiety and despair and boosts mood (Craft and Perna, 2004).

Brisk walking, swimming, cycling, dancing, and doubles tennis are moderate-intensity exercises. A heart rate monitor or the Borg Rating of Perceived Exertion (RPE) scale (Borg, 1982) evaluates these activities' intensity.

Moderate-intensity exercise and sports help prevent chronic diseases. They improve physical and mental health and are easy to implement into daily life.

Printed materials

- What Is Moderate Exercise?

<https://www.verywellfit.com/what-is-moderate-intensity-exercise-3435400>

- Continuous Moderate-Intensity but Not High-Intensity Interval Training Improves Immune Function Biomarkers in Healthy Young Men.

https://www.researchgate.net/publication/326987484_Continuous_Moderate-Intensity_but_Not_High-Intensity_Interval_Training_Improves_Immune_Function_Biomarkers_in_Healthy_Young_Men

- What is Moderate-Intensity Aerobic Activity?

<https://welltech.com/content/how-many-minutes-of-exercise-per-week/#what-is-moderateintensity-aerobic-activity>

Digital resources

- Full Body Gym Workout | Moderate Intensity Strength Training.

<https://myomyfitness.com/full-body-gym-workout-moderate-intensity-strength-training/>

- Moderate Intensity Activities and Exercises

<https://tr.pinterest.com/pin/531143349773616988/>

- Moderate Intensity Exercise.

https://apkpure.com/moderate-intensity-exercise/com.fitivity.moderate_intensity_strength

Multimedia resources

- 20 Min Full Body Interval Workout (Moderate Intensity)

<https://www.youtube.com/watch?v=S1vz19951To>

- Moderate-Intensity Standing Cardio Work Out - The Great Slim Down

<https://www.youtube.com/watch?v=5YJkvUXIGiO>

- Moderate Intensity Cardio Inspired Workout with ParticipACTION

https://www.youtube.com/watch?v=7moiO_g-GAA

c. High Intensity:

High-intensity exercises and sports are activities in which the participant's heart rate is constantly at or above 80% of its maximum during the activity. These activities are usually performed at short intervals and are known to have various health benefits.

Several studies (Laursen & Jenkins, 2002; Batacan et al., 2017) have shown that high-intensity exercise is beneficial for improving cardiovascular fitness, body composition, insulin sensitivity, and blood pressure regulation. High-intensity interval training (HIIT) is a popular form of high-intensity exercise that involves alternating between high-intensity exercise and periods of active rest. This type of training has been shown to be effective in improving aerobic and anaerobic fitness, metabolic health and body composition (Batacan et al., 2017; Milanović et al., 2015).

Sprinting, interval running, spinning, boxing and high-intensity weight training are examples of high-intensity exercise and sports. These activities can be performed in a variety of environments, including at home, in the gym or outdoors.

Although it is generally recommended, not everyone may benefit from high-intensity exercise to the same extent. People with previous illnesses or movement problems should talk to their doctor before starting a high-intensity exercise program.

Printed materials

- 100-HIIT-workouts.

<https://www.haygroveschool.co.uk/uploads/files/100-hiit-workouts.pdf>

- HIITCore® Training Guide.

<https://hiitcorefitness.com/wp-content/uploads/2018/06/The-HIITCore-Training-Guide.pdf>

- The Ultimate 6-Week HIIT Workout Plan.

<https://www.muscleandfitness.com/workouts/workout-routines/hiit-6-week-full-body-workout/>

Digital resources

- HIIT | Down Dog

<https://play.google.com/store/apps/details?id=com.downdogapp.hiit&hl=tr&gl=US>

- HIIT & Cardio Workout

<https://play.google.com/store/apps/details?id=com.fitifyapps.bwcardio&hl=tr&gl=US>

- Seven - 7 Minute Workout

<https://play.google.com/store/apps/details?id=se.perigee.android.seven&hl=tr&gl=US>

Multimedia resources

- 15 Min Intense HIIT Workout for Fat Burn & Cardio (No Equipment, No Repeats)

<https://www.youtube.com/watch?v=J212vz33gU4>

- 20 Minute Full Body Cardio HIIT Workout

https://www.youtube.com/watch?v=MOuO8X3_tEA

• Ultimate HIIT Workout for People Who Get Bored Easily - Fat Burning HIIT Cardio Workout

<https://www.youtube.com/watch?v=tbbZBtdd2OU>



3. Type of movement

a. Aerobic activities:

The European Union's Physical Activity Guidelines define aerobic activities as “activities that increase the heart rate and breathing, and can be sustained for a prolonged period of time” (European Commission, 2008). Walking quickly, running, cycling, swimming, and dancing are all examples of aerobic activities.

Spanish researchers Esteban-Cornejo et al. (2015) discovered that regular aerobic exercise improved both men's and women's cardiovascular health and reduced body fat. Another Greek study (Carvalho et al., 2014) indicated that people who regularly engaged in aerobic exercises had better cognitive function and a lower risk of getting dementia as they aged.

Aerobic activities, such as walking or cycling, were shown to be particularly beneficial at reducing symptoms of depression and anxiety in a systematic review of the literature on physical activity and mental health in older adults (Gordon et al., 2017).

British researchers Cornelissen and Fagard (2015) found that cardiovascular exercise was more beneficial than strength training at lowering participants' blood pressure.

Examples

Walking is a great example of a low-impact aerobic activity because it can be done very much anywhere and at any time. It's a fantastic strategy for getting more exercise and leading a healthier life. Wanner et al. (2019) conducted a meta-analysis of 42 European studies and found that walking was linked to reduced risks of cardiovascular disease, all-cause mortality, and better mental health.

Another well-liked cardio activity that may be done anywhere is cycling. Cardiovascular fitness and stamina can be greatly enhanced in this way. Bicycling to work has been linked to a reduced risk of death from all causes, including heart disease and cancer, according to a study conducted in the Netherlands (de Hartog et al., 2010).

Swimming: Swimming is a low-impact aerobic sport, making it suitable for persons of varying ages and levels of fitness. The benefits to cardiovascular fitness and stamina are obvious. Adults with type 2 diabetes who swam regularly had reduced body fat percentages, better lipid profiles, and better glycemic control, according to a Spanish study (Åsa et al., 2012).

Dancing is a fun and social aerobic activity that can improve cardiovascular health, endurance, and balance. It's a social activity that also offers solo options and a wide range of dance genres. Researchers in Greece showed that older persons' aerobic capacity, muscular endurance, and flexibility all increased after participating in a 12-week dancing intervention (Keogh et al., 2012).

Aerobics, step aerobics, and Zumba are just a few examples of popular group fitness courses that offer an aerobic workout in a socially encouraging setting. They are ideal for those who get a kick out of making new friends while getting in shape. Researchers in Ireland discovered that women who took part in-group exercise courses had better psychological well-being, self-esteem, and social support (O'Donovan et al., 2010).

Printed materials

- “Runner’s World” magazine, which includes articles on running and other aerobic activities: <https://www.runnersworld.com/>
- “Physical Activity Guidelines for Americans” brochure by the U.S. Department of Health and Human Services: https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf

Digital resources

- Nike Training Club mobile app: <https://www.nike.com/ntc-app>
- “Couch to 5K” mobile app, which provides a training plan for running a 5K race: <https://www.active.com/mobile/couch-to-5k-app>
- “MyFitnessPal” website and mobile app, which can track physical activity and provide personalized recommendations for aerobic exercise: <https://www.myfitnesspal.com/>

Multimedia resources

- “PopSugar Fitness” YouTube channel, which includes a variety of aerobic workout videos: <https://www.youtube.com/user/popsugartvfit>
- “The Strength Running Podcast” by Jason Fitzgerald, which includes interviews and advice on running and other aerobic activities: <https://strengthrunning.com/podcast/>
<https://www.youtube.com/user/yogawithadriene>
- 9 Min Aerobics For Beginners / Morning Energy Booster / Aerobic Exercises <https://www.youtube.com/watch?v=WTUruNwUMFI>
- 10 Aerobic Exercise Examples: How to, Benefits, and More <https://www.healthline.com/health/fitness-exercise/aerobic-exercise-examples#at-home-exercises>

b. Strength training activities:

Strength training activities, also known as resistance training or weight training, involve using resistance to build muscle strength, endurance and size. These exercises include weights, resistance bands, or bodyweight exercises to work the muscles against resistance.

Strength-training exercises are an important component of an all-round fitness program for adults, with the recommended frequency at least twice a week in addition to aerobic exercise. Strength training exercises can be planned to include compound exercises that work multiple muscle groups at the same time, or isolation exercises that target specific muscles. Examples of compound exercises include squats, deadlifts, lunges, and pull-ups, while isolation exercises include bicep curl, triceps extension, and leg curl (National Institute for Fitness & Sport, 2023).

Proper technique is important when performing strength-training exercises to prevent injury and maximize the benefits of exercise. The International Weightlifting Federation provides guidance on technique and safety for strength training exercises such as snatch, clean and squat (International Weightlifting Federation).

Overall, strength-training activities are an important component of a well-rounded fitness program and provide numerous health benefits when done safely and effectively.

Printed materials

- Starting Strength: Basic Barbell Training by Mark Rippetoe: A comprehensive guide to strength training with barbells. <https://www.startingstrength.com/>
- Delavier, F. (2018). “Strength Training Anatomy” by Frederic Delavier: This book provides detailed illustrations and descriptions of strength training exercises for various muscle groups.
- Baechle, T. R., & Earle, R. W. (Eds.). (2008). Essentials of Strength Training and Conditioning. Human Kinetics.

Digital resources

- The website of the National Strength and Conditioning Association (NSCA) offers a variety of digital resources for strength training, including articles, videos, and online courses. (Link: <https://www.nscs.com/>)
- Bodybuilding.com is a popular website that offers a wide range of strength training resources, including workout plans, exercise videos, and nutrition advice. (Link: <https://www.bodybuilding.com/>)
- Women’s Health: Offers a variety of strength training workouts and exercises for women. <https://www.womenshealthmag.com/uk/workouts/g32018818/strength-training-exercises/>

Multimedia resources

- The YouTube channel of fitness expert Jeff Nippard offers a range of videos on strength training, including technique demonstrations and workout plans. <https://www.youtube.com/user/icecream4PRs>
- The StrongLifts 5x5 app is a popular strength training app that provides workout plans and tracking features for users. <https://stronglifts.com/>
- The Body Coach TV: Provides a variety of strength training workouts, including bodyweight exercises and dumbbell workouts. <https://www.youtube.com/user/thebodycoach1>

c. Flexibility activities:

Flexibility activities are those that target increasing joint and muscle mobility and adaptability. They are useful for getting increased mobility, staying injury-free, and doing better in sports. The American Council on Exercise (ACE, 2023) states that regular flexibility training can improve joint health, lessen pain and stiffness, and increase the pliability of muscles, tendons, and ligaments. Also, they should be done at least twice or thrice weekly for the best results (European Commission, 2023).

Increased range of motion, decreased muscle tension and more upright posture are only some of the benefits of flexibility training (ACE, 2022). Flexibility exercises also improve athletic performance, reduce the risk of injury, and decrease muscle soreness (McHugh & Cosgrave, 2010). They also promote relaxation and reduce anxiety and sadness (Morgan et al., 2014).

Yoga, Pilates, Tai Chi, and foam rolling are just a few of the many examples of exercises that can be used to increase flexibility (ACE, 2022). Holding a stretch for 10-30 seconds is considered static stretching, while dynamic stretching involves moving through a range of motion several times. They are complementary in their ability to increase adaptability. Yoga is beneficial for your health since it includes stretching, strengthening, and balancing movements. Pilates is a form of exercise that emphasizes core strength, flexibility, and balance through a sequence of regulated movements. Tai chi is a low-impact exercise that involves a series of flowing movements that promote flexibility, balance, and relaxation. Self-massage with a foam roller can alleviate muscle tension and make you more flexible.

Exercises that increase one's range of motion are essential for good health. Flexibility exercises, when practised regularly, have the potential to boost mobility, posture, relaxation, and athletic performance while lowering injury risk.

Printed materials

- The Anatomy of Stretching: Your Illustrated Guide to Flexibility and Injury Rehabilitation by Brad Walker: <https://www.amazon.com/Anatomy-Stretching-Illustrated-Flexibility-Rehabilitation/dp/1556435967>
- Stretching for Dummies by LaReine Chabut: <https://www.dummies.com/health/exercise/stretching/stretching-for-dummies-cheat-sheet/>
- Norris, C. M. (2011). The complete guide to stretching. Bloomsbury Publishing.

Digital resources

- Mayo Clinic's stretching guide: <https://www.mayoclinic.org/healthy-lifestyle/fitness/multimedia/stretching/sls-20076525>
- WebMD's stretching exercises for flexibility: <https://www.webmd.com/fitness-exercise/guide/how-to-stretch>
- StretchIt (website/app): StretchIt offers a variety of stretch and flexibility classes, with options for different levels and specific areas of the body (<https://stretchitapp.com/>).

Multimedia resources

- "10-Minute Flexibility Routine" video by Fitness Blender: https://www.youtube.com/watch?v=L_xrDATykMI
- FitnessBlender. Flexibility Exercises & Stretching Workout for Beginners. [Video]. YouTube. <https://www.youtube.com/watch?v=qZTGgEWPbLk>
- "The Best 15-Minute Beginner Yoga Sequence to Flexibility" video by Yoga with Adriene: <https://www.youtube.com/watch?v=GLy2rYHwUqY>

d. Balance activities:

Balance activities are exercises designed to increase the body's balance, coordination, concentration, strength and flexibility. These activities are beneficial for people of all ages and can be performed at varying levels of difficulty.

In the report “Sport as a Tool for Integration and social inclusion of Refugees” published by the European Commission (2018), balance activities are defined as “activities in which the weight distribution around the centre of the body is controlled”. These activities improve balance and stability by increasing body awareness, muscle strength and coordination.

Balance activities as “exercise that requires self-balancing, control and coordination skills”. Doing these activities regularly can reduce the risk of falls, strengthen muscles and improve posture.

Benefits of balance activities include:

- > Increases muscle strength and endurance.
- > It improves coordination and increases body awareness.
- > Improves balance and stability.
- > It reduces the risk of falling.
- > Corrects posture and reduces back pain.

Examples: Yoga, Tai chi, Pilates, balance board, exercises on the ball, and trampolines.

Printed materials

- “Better Balance for Life: Banish the Fear of Falling with Simple Activities Added to Your Everyday Routine” by Carol Clements (<https://www.amazon.com/Better-Balance-Life-Activities-Everyday/dp/1592337411>)
- “The Balance Workout Handbook: Ten Weeks to Improve Stability and Prevent Falls” by Dr. Karl Knopf (<https://www.amazon.com/Balance-Workout-Handbook-Improve-Stability/dp/1578267933>)
- “Stay Balanced: A Senior's Guide to Improving Stability and Preventing Falls” by Karen Peterson (<https://www.amazon.com/Stay-Balanced-Improving-Stability-Preventing/dp/1517511848>)

Digital resources

- “Balance Exercises for Seniors” by ElderGym - <https://eldergym.com/balance-exercises.html>
- Mayo Clinic: Fall prevention: Simple tips to prevent falls: This article from Mayo Clinic offers tips for improving balance and preventing falls, including balance exercises that can be done at home. The article also includes instructional videos for each exercise. <https://www.mayoclinic.org/healthy-lifestyle/healthy-aging/in-depth/fall-prevention/art-20047358>
- App: FitOn Link: <https://www.fitonapp.com/>

Description: FitOn is a fitness app that offers a variety of workout routines, including balance exercises. The app provides video demonstrations and personalized training plans.

Multimedia resources

- “Balance Exercises for Better Stability” (video). (2021). Mayo Clinic. <https://www.mayoclinic.org/healthy-lifestyle/fitness/multimedia/balance-exercises/sls-20076853>
- “Balance Exercises for Stroke Patients” (video). (2021). Flint Rehab. <https://www.flintrehab.com/2017/balance-exercises-for-stroke-patients/>

e. Coordination activities:

Coordination activities are exercises that require different parts of the body to work together. These activities improve the coordination of muscles, nerves and November functions. Good coordination helps to make things easier in everyday life and reduces the risk of falling.

There is information about coordination activities in many different sources. For example, the American Heart Association states that coordination activities are an important part of physical activity programs (American Heart Association, 2023). Harvard Health Publications emphasize that coordination activities are especially important for older individuals and reduce the risk of falls (Harvard Health Publishing, 2019).

Deceleration activities have many benefits, including strong muscles and bones, increased balance and posture, improved flexibility and mobility (Dunsky, 2019). Coordination activities are suitable for people of all age groups. Examples include soccer, basketball, and gymnastics walking, dancing, tennis, yoga, Pilates, rowing and coordination ball games (National Institute on Aging, 2019).

Printed materials

- The Ultimate Guide to Bilateral Coordination Skills.

<https://www.yourtherapysource.com/blog/2017/10/01/bilateral-coordination-skills/?e-pik=djOyJnU9XORjWko5Y2FOUDZqQTQ5Zm1wdEpQd3BzX0lBWnhxZUUmcdOwJm-49bHpyRXVZS29hQV9qNFpqY0lObmQ3USZ0PUFBQUFBFR1F3bkpj>

- Balance and Coordination Activities for Adults.

<https://thenoteninjas.com/blog/f/balance-and-coordination-activities-for-adults>

Digital resources

- Physio-pedia. (2021). Coordination Exercises.

https://www.physio-pedia.com/Coordination_Exercises

- Coordination Exercise: Benefits & Examples.

<https://betterme.world/articles/coordination-exercises/>

- How To Improve Coordination: 3 Exercises For Better Balance and Agility.

<https://8fit.com/fitness/how-to-improve-coordination/>

Multimedia resources

- 15 Minute Coordination Workout | Good Moves | Well+Good.

<https://www.youtube.com/watch?v=tKGIS5sXkhM>

- TOP 4 Brain Exercises for coordination.

<https://www.youtube.com/watch?v=GYe1WeAEbZY>

- Ohio State Wexner Medical Centre.

https://www.youtube.com/watch?v=cr_QY-fehdc



4. Environment

a. Outdoor:

Outdoor activities cover all kinds of physical and sports activities performed outdoors. We can give examples of many different activities such as walking, jogging, cycling, climbing, camping, sea sports, nature walks, canoeing, skiing, mountaineering, orienteering to these activities.

Research shows that physical activities performed outdoors have many benefits. These include benefits such as physical health, mental health, stress Deceleration, increased happiness, social connections and adherence to the natural environment.

Walking provides connection with nature and thus reduces stress levels Similarly, outdoor exercise has been shown to reduce symptoms of depression and anxiety and improve overall mental health (Barton & Pretty, 2010).

Printed materials

- The Backpacker's Field Manual: A Comprehensive Guide to Mastering Backcountry Skills by Rick Curtis.

www.amazon.com/Backpackers-Field-Manual-Comprehensive-Backcountry/dp/1400053099

- The Ultimate Hiker's Gear Guide by Andrew Skurka -

www.amazon.com/Ultimate-Hikers-Gear-Guide-Second/dp/1426217846

- 47 of the Most Fun Outdoor Games for All Ages.

www.playpartyplan.com/fun-outdoor-games

Digital resources

- AllTrails: A website and mobile app that offers details about hiking and bike paths, as well as user reviews and images..

www.alltrails.com

- The Outbound Collective: A website that provides information on a range of outdoor pursuits, such as hiking, camping, kayaking, and more, as well as a community forum for exchanging advice and tales.

www.theoutbound.com

- Hiking Project: A website and mobile application that offers details on hiking paths, including reviews and images, as well as a tool for tracking your progress on a specific trail.

www.hikingproject.com

Multimedia

- Outside Magazine: www.outsideonline.com

- Outside TV: This website provides a huge selection of media with an outdoor theme, such as documentaries, TV episodes, and movies. www.outsidetv.com

- The Adventure Sports Podcast: In this podcast, adventure sports enthusiasts who engage in activities like trekking and climbing are interviewed. www.adventuresportspodcast.com

b. Indoor:

Indoor activities are physical activities performed in indoor environments. These activities are usually preferred in cases where weather conditions make it difficult to do outside. A wide range of indoor activities are offered, examples include fitness, yoga, dance, Pilates, bodybuilding and stretching exercises Dec.

The benefits of indoor activities include helping to maintain physical health, increasing metabolism, Decelerating stress, improving mood and fitness, improving heart health and improving sleep quality. In addition, doing a group exercise can increase social bonds and provide a motivating environment for playing sports.

For example, one study showed that regular indoor activities such as yoga and Pilates are effective in reducing stress (Cramer et al., 2013). In addition, another study found that fitness activities are effective in reducing cardiovascular disease risk factors (Kokkinos, 2012). Thanks to the variety and diversity of indoor activities, there can be a suitable option for everyone.

Printed Resources

- Types of Indoor Activity. <https://www.gov.im/media/1365772/type-of-indoor-activity.pdf>
- Exploring Opportunities To Encourage Physical Activity In Everyday Life. <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/designing-for-physical-activity-indoor-spaces.pdf?VersionId=jZSob9liOkRqzjfChGUW5.mR-CSGziqkH>
- 23 Indoor Activities for Heart-Healthy Kids. https://www.connecticutchildrens.org/wp-content/uploads/2020/02/Connecticut_Childrens_Parents_Guide-HeartHealthy.pdf

Digital resources

- HASfit is a fitness-focused website that features a wide range of convenient at-home exercises. <https://hasfit.com/>
- Nike's free software for mobile devices, Nike Training Club, includes both audio and video of trainers guiding users through various workouts. <https://www.nike.com/tr/ntc-app>
- Use the Aaptiv app on your smartphone to access your own individualized audio workouts. There are several options for both difficulty and duration of exercise. <https://www.aaptiv.com/>
- Link to Darebee: <https://darebee.com/>

Multimedia:

- Peloton Digital: Streaming Platform with Indoor Workouts: <https://www.onepeloton.com/digital>
- ACE Fitness: Indoor Workouts <https://www.acefitness.org/education-and-resources/lifestyle/blog/6597/top-indoor-workouts-for-all-fitness-levels/>
- Top 10 Indoor Sports/Games/Activities to Do this time of the Pandemic: <https://www.outube.com/watch?v=EXAN2uFUJUO>

c. Virtual:

Physical activity-inducing virtual reality (VR) workouts are becoming increasingly popular. These courses are presented using web-based, mobile, or video-based conferencing software.

Virtual physical activities have several advantages, such as allowing individuals to exercise consistently despite their location, allowing them to exercise at their own speed, accommodating a wide range of fitness levels, and boosting motivation.

Research has shown Virtual exercise has several health benefits, including higher rates of physical activity, better cardiovascular health, lower rates of obesity, and lower stress levels (Lewis et al., 2002; Martin et al., 2000).

Throughout the epidemic, virtual physical activities have gained popularity all across the world. Nevertheless, there are also some drawbacks to working out in digital surroundings, such as not being able to complete the programs in their entirety because of inadequate equipment or space, technological issues, feelings of social isolation, and a loss of confidence (Lewis et al., 2002; Martin et al., 2000).

Users can access exercise videos on YouTube and other platforms, and these videos often feature a variety of at-home workouts.

Apps for working out and eating right have come a long way in recent years, and now they even allow you to track your progress toward your goals. These mobile apps are available for download on cell phones.

By watching a live or recorded virtual workout class, you can become in shape without leaving the house. Many various types of workouts are featured in these online classes.

Exercising in a computer-generated environment is now possible with the help of virtual reality (VR) technology. Particularly appealing to people seeking variety in their fitness and exercise routines is this style of training.

Printed materials

- “The Virtual Training Guidebook: How to Design, Deliver, and Implement Live Online Learning” by Cindy Huggett
- “Virtual Workouts: Exercise from Anywhere with the Bar Method” by Burr Leonard
- “Fitness Technology and Wearables: 2019-2024” by Adarsh Jain

Digital resources

- Peloton app: provides live and on-demand virtual classes for running, cycling, yoga, strength, and more.

<https://www.onepeloton.com/app>

- Liteboxer VR.

<https://litesport.com/>

- Virtuagym Fitness - Home & Gym.

https://play.google.com/store/apps/details?id=digifit.virtuagym.client.android&hl=en_US

Multimedia

- 3 Virtual Reality Workouts That Will Change the Way You Look at Fitness.

<https://www.youtube.com/watch?v=o-Cwu4Ql69rU>

- Virtual Exercise Channel.

<https://www.youtube.com/@VirtualExerciseChannel>

- Exercising in Virtual Reality - The Best VR Workout!.

www.youtube.com/watch?v=5F5Hubv-Yzz8

The background of the slide is composed of four large quadrants: top-left is dark grey, top-right is orange, bottom-left is dark grey, and bottom-right is orange. In the center, there is a white area containing a light grey geometric pattern of overlapping triangles that form a star-like shape.

5. Equipment

a. No equipment required:

Exercises without special equipment are simple activities that can be performed indoors or outdoors. Activities that are chosen and frequently engaged in by many individuals include exercises and sports that don't require any equipment. These activities promote healthy heart and lung function, flexibility, coordination, and muscular endurance, among many other advantages. As it can be done at home, it is also practical and available.

In this section, we'll give you some instances of these activities together with data to support them from various sources:

Burpee: A full-body exercise is the burpee. Burpees work the muscles in both the upper and lower bodies, which increases calorie burn. Strength and endurance are improved through burpees (Sperlich et al., 2017).

Jumping jacks: This cardiovascular workout engages all of the muscles in the body. Jumping jacks boost flexibility, the rate at which calories are burned, and heart health. (1996; Blair et al.)

Running is a well-liked aerobic activity that only needs a pair of running shoes. It assists with weight loss, muscle building, and cardiovascular health improvement (Scully et al., 1998).

Bodyweight exercises: Bodyweight exercises use resistance from the body's own weight. They include of push-ups, squats, lunges, planks, and numerous other exercises. Strength, flexibility, and cardiovascular fitness can all be enhanced with them (Behringer et al., 2011).

In addition to these workouts, simple and convenient activities that can be done at home or outside, including dancing and climbing stairs don't require any special equipment.

Printed materials

- "Bodyweight Strength Training Anatomy" by Bret Contreras (<https://www.humankinetics.com/products/all-products/Bodyweight-Strength-Training-Anatomy>)
- "You Are Your Own Gym: The Bible of Bodyweight Exercises" by Mark Lauren (<https://www.marklauren.com/books/you-are-your-own-gym/>)
- "You Are Your Own Gym: The Bible of Bodyweight Exercises" by Mark Lauren: This book provides a comprehensive guide to bodyweight exercises that require no equipment. It includes over 200 exercises with detailed instructions and illustrations. [Link: <https://www.amazon.com/You-Are-Your-Own-Gym/dp/0345528581>]

Digital resources

- Darebee (<https://darebee.com/>): a free online resource with various bodyweight workouts and challenges for all levels.
- Blogilates (<https://www.blogilates.com/>) - a website and YouTube channel run by certified fitness instructor Cassey Ho, offering a variety of bodyweight workout videos, as well as recipes, fitness challenges, and community support.
- Home Workout - No Equipment. <https://play.google.com/store/apps/details?id=homeworkout.homeworkouts.noequipment&cjevent=aafd4d66d67611e-d83cd94080a18ba74>

Multimedia resources

- 20 min Fat Burning Workout for TOTAL BEGINNERS (Achievable, No Equipment). <https://www.youtube.com/watch?v=IT94xC35u6k>
- Body Project. <https://www.youtube.com/@BodyProject-challenge/videos>
- Complete 15 Min Full Body Workout | No Equipment. <https://www.youtube.com/watch?v=gnTz-k1yUHB4>

b. Minimal equipment (mat, resistance band)

Less-equipment-required exercises can be performed outdoors or at home with ease. Several advantages come from sports and exercise that require little. First off, you don't need a gym membership or a special facility to perform the majority of these exercises; you can do them at home or outside. Since you only need a few pieces of equipment, it also saves you time and money.

By boosting cardiovascular fitness, muscular endurance, and flexibility, these activities aid in enhancing total physical fitness. Also, it lessens stress, boosts the quality of your sleep, and generally enhances your health and well-being.

Exercises that may be performed with the bare minimum of gear include:

Exercises with a resistance band Resistance bands are a good choice for exercising at home or on the road because they are very lightweight. There are several exercises, such as chest presses, triceps extensions, and bicep curls (Efendi et al., 2022).

Jump roping is a low-space, high-intensity workout that just needs a jump rope and a little room. Enhancing cardiovascular health, coordination, and agility with this practice is quite successful (Trecroci et al., 2015).

Yoga was created as a practice to promote harmony and balance between the body and mind. Not just for the body but also for the mind, yoga poses are incredibly useful. Increased flexibility, stress relief, and body awareness are among the benefits of yoga. Exercises like Pilates were created to build muscles, improve balance, and make the body more flexible. Increased body awareness, less tension, and relief from back discomfort are among the benefits of Pilates (Kloubec, 2010).

Printed materials

- Yoga Poses Handbook. <https://mymission.lamission.edu/userdata/ruyssc/docs/Stretch-An-Ullustrated-Step-By-Step-Guide-To-Yoga-Postures.pdf>
- Pilates Essentials Principles & Repertoire. https://www.art-of-motion.com/public/downloads/Publications/EN/art-of-motion_Pilates-Essentials_course-manual.pdf
- Resistance Loop Band Workouts a Complete Guide. https://www.panathletic.com/ebook/eBook_Panathletic_EN.pdf

Digital resources

- Pilatesology. https://play.google.com/store/apps/details?id=com.pilatesology.Pilatesology&hl=en_US
- Daily Yoga: Fitness+Meditation. https://play.google.com/store/apps/details?id=com.dailyyoga.inc&hl=en_US
- Resistance Band Training App. <https://play.google.com/store/apps/details?id=com.muzudre.resistance.band.training.challenges.app>

Multimedia resources

- Pilates Anytime. <https://www.pilatesanytime.com/mx/videos>
- 5 Yoga Poses That'll Change Your Body In Less Than a Month. <https://www.youtube.com/watch?v=rt1bsoOukjl>
- 10 Best Resistance Band Workout (full body) 10 EFFECTIVE EXERCISES. <https://www.youtube.com/watch?v=8RQLkTGO-tew>

c. Extensive equipment (weights, machines)

Sports and workouts that require for a lot of gear can be pricey, making them out of reach for some people. Nonetheless, they have the potential to offer a novel and demanding exercise that can help you strengthen your muscles and become in better shape. Some activities and sports that call for a lot of gear include:

Weightlifting is a kind of strength training in which barbells, dumbbells, and/or weight machines are used as resistance. Several people take it to help them bulk up, get stronger, and perform better in the gym (Stone et al., 2008).

One common cardiovascular workout is rowing on an ergometer or a rowing machine. It is a full-body exercise that works your legs, back, and arms with rhythmic motions (Makanae, Y., & Fujita, S. 2015). It's been shown to boost stamina and strength in addition to general well-being.

CrossFit is a high-intensity training program that combines several exercises, such as weightlifting, gymnastics, and aerobic activities, to achieve a broad range of physical and mental benefits. Barbells, kettlebells, medicine balls, and jump ropes are just a few of the common pieces of equipment used (Schoenfeld et al., 2019). CrossFit is a great way to get in better shape and build muscle and stamina.

Skiing and snowboarding call for specific gear including skis, snowboards, boots, and poles. Balance, coordination, and cardiovascular fitness can all benefit from engaging in these pursuits.

Tennis calls for a tennis racquet, tennis balls, and a tennis court. You can improve your cardiovascular fitness, hand-eye coordination, balance, and agility all at the same time with this fun and engaging activity.

Golf is played by attempting to hit a ball into a hole with as few strokes as possible. Golfing is a sport that calls for a golf course, golf clubs, and golf balls.

Rock climbing is a sport in which participants use gear like ropes, harnesses, and carabiners to ascend a vertical surface like a rock face or a man-made climbing wall. It improves fitness, coordination, and problem-solving abilities; it is mentally and physically demanding (Whitaker et al., 2020).

Boxing is a combat sport that features striking, blocking, and evading. It usually involves using a wide variety of tools, such as gloves, hand wraps, and punching bags. Boxing has several health benefits, including increased stamina, strength, and agility.

These activities and sports give a difficult and distinctive workout, but not everyone may be able to afford or have easy access to the necessary gear.

Printed materials

- Kick Boxing - Tutorialspoint.
https://www.tutorialspoint.com/kickboxing/kickboxing_tutorial.pdf
- The Ultimate 30 day CrossFit Workout Plan.
<https://www.thisiswhyimfit.com/30-day-crossfit-workout-plan-pdf/>
- Skiing and snowboarding.
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5172694.pdf

Digital resources

- Bodybuilding.com - This website offers a vast library of workout plans, videos, and articles on weightlifting and bodybuilding using equipment such as barbells, dumbbells, and machines.

Link: <https://www.bodybuilding.com/>

- Kickboxing - Fitness Workout.
<https://play.google.com/store/apps/details?id=com.taka.kickboxing&hl=en>
- Tennis Training.
https://play.google.com/store/apps/details?id=com.fitivity.tennis_skills&hl=en_US

Multimedia

- 30-Minute No-Equipment Cardio Kickboxing Workout
<https://www.youtube.com/watch?v=6oLg5fFe5ww>
- 20 Minute Rowing Workout - Best Workout Ever.
<https://www.youtube.com/watch?v=olUJP7R2QIU>
- 20 Pro Tips EVERY Climber should know.
<https://www.youtube.com/watch?v=kR1buRTIKhk>



6. Goals

a. Cardiovascular endurance

Due to their positive effects on the circulatory system, cardiovascular endurance workouts are excellent for overall health. This form of exercise improves the efficiency of the cardiovascular system, which in turn enhances the body's ability to transfer oxygen and nutrients. Apart than improving cardiovascular health, doing these workouts can help boost energy, decrease stress, and fortify the immune system.

You can improve your cardiovascular endurance through participation in a wide variety of sports and workouts. Running, swimming, cycling, aerobic workouts, dancing, and rowing are all great cardiovascular exercises since they raise the heart rate. The most prevalent of these is running, and multiple studies have shown that it has many positive effects on health.

One study showed that running greatly improves cardiovascular endurance, lowers blood pressure, cholesterol, and diabetes risk (Mozaffarian et al., 2016). To improve stamina and endurance, swimming is another excellent choice. Swimming regularly improves cardiovascular health, blood pressure, and mental well-being (Hassmén et al., 2000).

Printed materials

- What Is Cardiorespiratory Endurance and How Can You Improve It?

<https://www.healthline.com/health/cardiorespiratory-endurance?epik=dj0yJnU9d3V-CY1IWdEJyQVozS09nNktPQ0p5c0Nhdkl1OWRFU3EmcD0wJm49YWdUQzZCemZF-R3A3VmV3SXlwdHhWZyZ0PUFBQUFBFR1F6SlhB#tests>

- The Daily Cardio Challenge by Darebee is a brief burst of cardio exercise you can do each day.

<https://tr.pinterest.com/pin/586382813997431157/>

- Cardiovascular Fitness Procedures Manual.

https://www.cdc.gov/nchs/data/nhanes/nhanes_05_06/cv.pdf

Digital resources

- HIIT & Cardio Workout.

https://play.google.com/store/apps/details?id=com.fitifyapps.bwcardio&hl=en_US

- Daily Cardio Workout – Trainer.

https://play.google.com/store/apps/details?id=com.tinymission.dailycardioworkoutfree&hl=en_US

- Aerobics workout at home.

<https://play.google.com/store/apps/details?id=melstudio.mcardio&cjevent=cccOd2d-9d71611ed806834010a18b8f7>

Multimedia resources

- How To Improve Increase Your Cardiovascular System, Heart Rate, Endurance, Stamina And Fitness.

<https://www.youtube.com/watch?v=OyXalsVfwzo>

- 15 Min Beginner Cardio Workout

<https://www.youtube.com/watch?v=VWj8ZxCxrYk>

- Low Impact 30 minute cardio workout- Beginner/intermediate

<https://www.youtube.com/watch?v=50kH47ZztHs>

b. Muscle strength

Exercising and participating in sports that focus on building muscle are crucial factors in meeting body-shaping goals. Bone density is increased by exercise, which in turn decreases the likelihood of osteoporosis. It boosts metabolism, which in turn aids in the burning of fat.

Bodyweight activities (such as push-ups, sit-ups, and pull-ups), fitness equipment, cycling, swimming, and running are just a few examples.

The merits of muscle-strengthening workouts are well documented, and may be found in a variety of sources. Regular weight lifting, for instance, was found to boost bone density and muscle mass in one study (Westcott et al., 2012). Strengthening muscles and enhancing equilibrium: another study's finding (Scandalis et al., 2001). Muscle mass and strength were also observed to increase with fitness machine use in a meta-analysis (Ratamess et al., 2009).

Printed materials

- Beginner's Weight Lifting Program.
<https://everydaywellnesswithmorgan.com/beginners-weight-lifting-program/>
- Machine exercise.
<https://tr.pinterest.com/pin/351912463717476/>
- Muscular Strength and Endurance.
<https://www.ntcc.edu/sites/default/files/2018-08/Level%201%20Strength%20Lecture.pdf>

Digital resources

- Strength by Muscle and Motion.
<https://play.google.com/store/apps/details?id=air.com.musclemotion.strength.mobile&hl=en>
- The Anatomy & Biomechanics of Strength Training
<https://www.muscleandmotion.com/products/strength-training-app/>
- Muscle & Strength Full Body Workout Routine
<https://apps.apple.com/us/app/muscle-strength-full-body-workout-routine/id1224489205>

Multimedia resources

- Muscle & Strength.
<https://www.youtube.com/@muscleandstrength>
- How To Build Muscle Strength- A Complete Guide.
https://www.youtube.com/watch?v=L_JhT5X7its
- You Only Need This To Build Muscle.
<https://www.youtube.com/watch?v=rXPLkzOcVol>

c. Stress relief and relaxation

Sports and activities that reduce stress have a favourable impact on both mental and physical health. Through stress reduction, increased endorphin release, and mental relaxation, these activities aid in coping with stress.

Yoga, meditation, tai chi, pilates, and walking are a few of the well-liked sports and exercise activities utilized to unwind the body and mind and relieve stress. Regularly engaging in these activities lowers stress levels, calms the body and mind, and improves focus.

Yoga and meditation are excellent treatments for mental health issues like stress, anxiety, and depression, according to certain research (Bridges, L., & Sharma, M., 2017). Also, it has been shown that tai chi can improve bodily balance, and reduce tension and mental tiredness (Jahnke et al., 2010).

Printed materials

- Stress Relief-Physical Activities.

<https://www3.uwsp.edu/stuhealth/Documents/Counseling%20Issues/Stress%20Relief-Physical%20Activities.pdf>

- Physical Activity Reduces Stress.

<https://adaa.org/understanding-anxiety/related-illnesses/other-related-conditions/stress/physical-activity-reduces-st>

- Exercising to relax.

<https://www.health.harvard.edu/staying-healthy/exercising-to-relax>

Digital resources

- The Best Apps for Stress Relief.

<https://www.active.com/fitness/articles/the-best-apps-for-stress-relief>

Multimedia resources

- Stress Relief Exercises.

<https://www.youtube.com/watch?v=x6fYqEjG-Nc>

- 20 Min Pilates Stretch and Release workout to Relieve Stress and Anxiety.

<https://www.youtube.com/watch?v=FsPRx3WaoFw>

- Yoga For Anxiety and Stress.

https://www.youtube.com/watch?v=hJbRpHZr_d0

d. Weight management

Exercising and participating in sports are popular ways to keep in shape and achieve or maintain a healthy weight. The increased calorie expenditure during exercise is beneficial for both weight loss and maintenance. Muscle mass rises with consistent exercise, which in turn boosts metabolism and helps in the maintenance of a healthy weight.

By raising your heart rate, cardiovascular exercises help to strengthen your heart and lungs. Exercises including running, swimming, cycling, aerobics, and dance are examples of this type. According to research, losing weight can be helped by engaging in at least 150 minutes per week of moderate-intensity aerobic activity (Donnelly et al., 2009).

Exercises with weights build muscle, quicken metabolism, and help your body burn more calories. Exercises for weight lifting can be done with a variety of tools, including dumbbells, resistance bands, kettlebells, and bodyweight workouts. Research demonstrates that sustained weight management is supported by frequent weightlifting activities (Westcott, 2012).

By enhancing flexibility, flexibility exercises lengthen muscles and ease discomfort. Stretching, yoga, and Pilates are a few examples of flexibility exercises. Research demonstrates that flexibility training aids in weight management since it increases muscle mass and speeds up metabolism (Clark et al., 2010).

Sports and exercise for weight loss have numerous advantages for both physical and mental health in addition to aiding in weight loss.

Printed materials

- The Role of Exercise and Physical Activity in Weight Loss and Maintenance. <https://paulogentil.com/pdf/The%20Role%20of%20Exercise%20and%20Physical%20Activity%20in%20Weight%20Loss%20and%20Maintenance.pdf>
- Weight Management. <https://extension.colostate.edu/docs/pubs/foodnut/09368.pdf>
- Exercising to Lose Weight. https://exerciseismedicine.org/assets/page_documents/EIM%20Rx%20series_Exercising%20to%20Lose%20Weight_2.pdf

Digital resources

- Lose Weight App for Men. https://play.google.com/store/apps/details?id=menlo-seweight.loseweightappformen.weightlossformen&hl=en_US
- Lose Weight at Home in 30 Days. https://play.google.com/store/apps/details?id=lo-seweight.weightloss.workout.fitness&hl=en_US
- Fitness and weight loss apps. <https://www.healthnavigator.org.nz/apps/f/fitness-weight-loss-apps/>

Multimedia resources

- Swimming For Weight Loss | Swim Tips For Losing Weight. <https://www.youtube.com/watch?v=nlGsZTsZaFc>
- How Does Exercise Impact Weight Loss? <https://www.youtube.com/watch?v=ep9j-7YaTfMg>
- Lose 4 Kg In 7 Days - Daily Home Workout. <https://www.youtube.com/watch?v=-JeUnxvd2-U>

e. Fun and recreation

Exercise and sports activities for entertainment and relaxation provide many benefits to both physical and mental health. These activities reduce stress, improve mood by increasing the release of endorphins, improve sleep quality and generally improve quality of life. Examples include many exercise and sports activities such as yoga, tai chi, dancing, walking, cycling, swimming, volleyball, basketball and football.

In particular, yoga and tai chi can be combined with meditation and breathing exercises and provide many benefits such as reducing stress, increasing mental health and balance (Wang et al., 2014).

Dance is considered both a social and physical activity and improves bodily coordination, balance and cardiovascular health (Keogh et al., 2009).

Although walking is considered by many to be a low-intensity activity, doing it regularly supports heart health and weight management (Ford et al., 2013).

Team sports such as cycling, swimming, volleyball, basketball and football are also suitable for recreation and relaxation. These sports increase cardiovascular health, endurance and muscle strength (Krustrup et al., 2010).

Printed materials

- Active Sports and Recreation - Human Kinetics. <http://www.humankinetics.com/acucustom/sitename/K12DAM/c8d7b5cd-9e2e-4ede-968b-9088307af40a/Ch05%20Active%20Sports%20and%20Recreation.pdf>
- Recreation and entertainment. https://www.researchgate.net/publication/329281480_Recreation_and_entertainment
- Recreational Activities. <https://www.unicef.org/supply/sites/unicef.org/supply/files/2019-07/disability-guidance-recreational-activities-UNICEF-education-kit-hanbook.pdf>

Digital resources

- PeakFinder. <https://play.google.com/store/apps/details?id=org.peakfinder.area.alps&hl=tr&gl=US>
- Locus Map 4 Outdoor Navigation. https://play.google.com/store/apps/details?id=menion.android.locus&referrer=utm_source%3Dlocusmap.eu%26utm_medium%3D-downloadbutton%26utm_content%3Ddownload_homepage%26utm_campaign%3Dlocusmap.eu
- Visit A City. <https://play.google.com/store/apps/details?id=com.visitacity.visitacityapp&hl=tr&gl=US>

Multimedia resources

- Outdoor Recreation | Resources for Health. <https://www.youtube.com/watch?v=osXErbHDIlg>
- Recreational Activities - Grade 12 (Hope 4). <https://www.youtube.com/watch?v=-D7K-09hxtkQ>
- 10 Recreational Games (10 Fun & Easy Games for Kids) | Physical Education Games | PE Class | Games. <https://www.youtube.com/watch?v=RIzuY4Cchbl>

7. Target population

a. Children and youth

Physical activity and sports are crucial to the growth and well-being of children and teenagers. At least one hour of vigorous physical activity each week is recommended for kids and teens by the American Academy of Pediatrics (West et al, 2019).

Children and teenagers who regularly participate in sports and other forms of physical activity get several mental and emotional benefits in addition to the obvious physiological advantages (Faigenbaum, Myer, & Stracciolini, 2011). These activities help children and teens manage stress, improve sleep patterns and reduce the risk of depression (Eather et al, 2016).

Swimming, bicycling, running, gymnastics, and football are all fantastic physical activities and sports for kids. Young people also enjoy other sports including basketball, volleyball, dance, yoga, and fitness. In addition to these activities, there are also various games and activities that children and young people can enjoy while exercising (Landry, 2012).

Printed materials

- Physical activity: Guidelines for children and teens.
<https://www.aboutkidshealth.ca/article?contentid=642&language=english>
- Physical Activity Recommendations – Have fun.
<https://exercise.trekeeducation.org/children-and-adolescents-0-17years/>
- 10 Benefits of Physical Activity for Kids.
<https://www.parents.com/fun/sports/exercise/10-benefits-of-physical-activity/>

Digital resources

- Exercise For Kids - And Youth.
<https://apkcombo.com/exercise-for-kids-and-youth/air.Calisthenics.for.kids.A4enc/>
- Yoga for kids and fitness.
<https://play.google.com/store/apps/details?id=com.fitnessapps.yogakidsworkouts&cjevent=448d9ffad7fc11ed825d787f0a18b8fc>
- GoNoodle - Kids Videos.
https://play.google.com/store/apps/details?id=com.gonoodle.gonoodle&hl=en_ZA&gl=US&cjevent=b5db320bd7fc11ed819800310a18ba73

Multimedia resources

- Physical activity for kids and teens.
<https://www.wellbeingsa.sa.gov.au/your-wellbeing/being-active-healthy/movement-being-active/physical-activity-for-kids-teens>
- Materials for Kids and Teens.
<https://health.gov/our-work/nutrition-physical-activity/move-your-way-community-resources/campaign-materials/materials-kids-and-teens>
- 8 Super Fun Balance And Coordination Exercises For Kids.
<https://www.youtube.com/watch?v=OcdsEaYMqg>

b. Seniors

Exercise and sports activities for the elderly are important in reducing the negative effects of aging, maintaining a healthy lifestyle and maintaining independence. Physical activity reduces the risk of falls, injuries, obesity, cardiovascular diseases, hypertension, type 2 diabetes and osteoporosis in the elderly (Liu et al., 2009).

Regular exercise and sports activities increase muscle strength and flexibility, improving mobility and preserving the elderly's ability to perform their daily activities. In addition, exercise and sports activities improve cognitive functions and reduce the risk of dementia and Alzheimer's disease that may occur in old age (Xu et al., 2023).

Recommended exercise and sports activities for the elderly include walking, jogging, cycling, swimming, Pilates, yoga, tai chi, and resistance training (Liu et al., 2009). Exercise sessions should be tailored to the physical condition and activity level of the elderly. In addition, appropriate equipment should be used during exercise sessions and a doctor's advice should be sought if there is any health problem.

Printed materials

- The Benefits and Importance of Exercise for Seniors.
https://www.researchgate.net/publication/353653536_The_Benefits_and_Importance_of_Exercise_for_Seniors
- Physical Activity Toolkit for Older Adults.
<https://www.gov.nl.ca/tcar/files/Older-Adult-Physical-Activity-Toolkit.pdf>
- How to engage older people In sport and physical activity.
<https://www.outdoorsvictoria.org.au/wp-content/uploads/2023/02/20150617-CO-TA-Vic-How-to-Engage-Older-People-in-Sport-and-Physical-Activity-Resource-Guide-July-2015.pdf>

Digital resources

- Hearty Seniors - Workouts for.
https://play.google.com/store/apps/details?id=com.hearty.seniors.workout&hl=en_US
- Senior Fitness-workout for 50+.
<https://play.google.com/store/apps/details?id=fitness.com.senior&cjevent=07c44eb-6d7ff11ed821734c60a18b8f8>
- Exercise Plan for Seniors.
<https://play.google.com/store/apps/details?id=senior.fitness.exercises.elderly>

Multimedia resources

- How Older Adults Can Get Started With Exercise.
<https://www.nia.nih.gov/health/how-older-adults-can-get-started-exercise>
- 17 Therapist-Recommended Sports for Older Adults (Solo and Team Options). <https://www.grayingwithgrace.com/sports-for-older-adults/>
- Active Seniors.
https://www.ipswich.qld.gov.au/live/healthy_lifestyle/active-programs/active-seniors

c. Pregnant women

Exercising during pregnancy is beneficial for the health of both mother and baby. In a joint statement made by the European Sports Medicine Association and the European Association of Gynaecology and Obstetrics, it is recommended that women during pregnancy should do moderate aerobic exercise for at least 150 minutes per week (Bø et al., 2016).

Many studies show that regular exercise by pregnant women can reduce the risk of gestational diabetes, gestational hypertension, pre-eclampsia, and other pregnancy complications (Barakat et al., 2012; Davenport et al., 2018). In addition, it has been found that pregnant women who exercise generally gain less weight, give birth faster, and have an easier labour process (Choi et al., 2013).

Among the exercises to be done during pregnancy, low-impact aerobic exercises such as walking, swimming, yoga and Pilates are recommended (Bø et al., 2016). In addition, strength training is also recommended, but should be done using the correct form and appropriate weights (Barakat et al., 2012).

Printed materials

- Exercise During Pregnancy: Get Moving With Safe and Simple Pregnancy Exercises.
<https://www.pampers.com/en-us/pregnancy/prenatal-health-and-wellness/article/exercise-during-pregnancy-get-moving>
- Guidelines On Physical Activity & Exercise In Pregnancy.
<http://perinatal.sg/exercise.pdf>
- Pregnancy Physical Activity.
https://www.acsm.org/docs/default-source/files-for-resource-library/pregnancy-physical-activity.pdf?sfvrsn=12a73853_4

Digital resources

- Pregnant Yoga | Down Dog.
<https://play.google.com/store/apps/details?id=com.downdogapp.prenatal&hl=tr&gl=US>
- Pregnancy Exercise, Fitness.
<https://play.google.com/store/apps/details?id=com.pregnancy.exercise.and.workout.at.home.fitness.for.pregnant&cjevent=Oa65bfafd81011ed81fcfc80a18b8f7>
- Baby2Body: Pregnancy Wellness.
<https://apps.apple.com/app/baby2body-pregnancy-wellness/id1108801085>

Multimedia resources

- Physical Activity and Pregnancy.
https://www.physio-pedia.com/Physical_Activity_and_Pregnancy
- Safe exercise in pregnancy.
<https://www.maternalandchild.org.au/antenatal-and-pregnancy-services/nutrition-and-dietetics/safe-exercise-in-pregnancy>
- Pregnancy-Safe Exercise to Do Outdoors.
<https://www.thebump.com/a/pregnancy-safe-exercises-to-do-outdoors>

d. People with disabilities

Physical activity for disabled people is important for both physical and psychological health. Exercise and sports activities increase the functional abilities of the disabled, making their lives more independent.

Some exemplary exercises include walking, wheelchair basketball, swimming, yoga, dance and fitness programs. Exercise programs adapted for the disabled are customized according to the type of disability and the individual needs of the person.

The benefits of exercising for people with disabilities include protecting muscle and bone health, increasing energy levels, supporting heart health, reducing depression and anxiety, improving stress management, increasing self-esteem, and strengthening social connections.

In a study, it was found that individuals with disabilities who participated in a 6-week exercise program had a significant increase in their physical capacity, quality of life, and social connections (de Vries et al., 2012). In another study, it was observed that the social acceptance and self-confidence of individuals with disabilities who participate in team sports such as wheelchair basketball increased, their physical capacity improved and their quality of life increased.

Printed materials

- 7 Sports Activities for People with Disabilities.

<https://www.disabledliving.co.uk/blog/sports-activities-for-people-with-disabilities/>

- Increasing Physical Activity among Adults with Disabilities.

<https://www.cdc.gov/ncbddd/disabilityandhealth/pa.html>

- Physical Activity in Individuals with Disabilities.

https://www.physio-pedia.com/Physical_Activity_in_Individuals_with_Disabilities

Digital resources

- Evolve21.

<https://play.google.com/store/apps/details?id=com.apppartner.cpfsevenminutefundraiser&hl=en>

- Exercising from home.

<https://www.scope.org.uk/advice-and-support/exercising-from-home/>

- Adapted exercises.

<https://apkcombo.com/adapted-exercises/com.royah.adaptedexercises/>

Multimedia resources

- Top 10 exercises for disabled people.

<https://disabilityhorizons.com/2016/10/top-10-exercises-disabled-people/>

- How to adapt and modify your sport activities to include all.

<https://www.inclusivesportdesign.com/blog-posts/how-to-adapt-and-modify-your-sport-activities-to-include-all>

- Stories about Reaching People with Disabilities through Healthy Communities. <https://www.cdc.gov/ncbddd/disabilityandhealth/reachingpeople/stories.html>

e. Individuals with chronic diseases

Regular exercise helps prevent heart disease, stroke, type 2 diabetes, and several types of cancer, according to a 2007 study by Haskell et al. Also, engaging in sports and exercise can help you cope with stress and alleviate chronic pain (American Heart Association, 2022).

But, it's critical for people with chronic illnesses to take caution and speak with their doctors before participating in sports and exercise. For instance, it is advised for those who have asthma to utilize inhaled bronchodilators before to physical activity (Global Initiative for Asthma, 2022).

Depending on the patient's health and the doctor's instructions, there are several exercise forms and intensities that are suitable for people with chronic diseases. For illustration, low-impact exercises like walking, cycling, swimming, and yoga might be advised (American Heart Association, 2022).

As a result, engaging in sports and exercise is crucial for the health of those with chronic illnesses. They should, however, obtain guidance on the proper forms and intensities of exercise prior to seeing their doctor.

Printed materials

- Physical Activity, Exercise, and Chronic Diseases: A Brief Review.
https://www.researchgate.net/publication/336042023_Physical_Activity_Exercise_and_Chronic_Diseases_A_Brief_Review
- Physical activity for the prevention and treatment of major chronic disease: an overview of systematic reviews.
<https://d-nb.info/1106109279/34>
- Physical Activity in the Prevention of the Most Frequent Chronic Diseases: an Analysis of the Recent Evidence.
http://journal.waocp.org/article_24611_dd9514e6afde96a47640912f338733c8.pdf

Digital resources

- Exercises to Reduce Chronic Pa.
<https://play.google.com/store/apps/details?id=eu.fitric.reducepain>
- Back Pain Relief Yoga at Home.
<https://play.google.com/store/apps/details?id=drzio.backpain.back.yoga.back.exercise>
- Diabetes Yoga Exercise Therapy.
<https://play.google.com/store/apps/details?id=drzio.diabetes.yoga.diabetescontrolyoga>

Multimedia resources

- How 30 Minutes of Exercise Can Reduce Your Risk of 4 Major Diseases.
<https://www.partnermd.com/blog/30-minutes-of-exercise-can-reduce-risk-major-diseases>
- Physical activity to prevent chronic disease.
<https://www.youtube.com/watch?v=etFlXqzQgxQ>
- Physical, Mental, And Overall Health Benefits Of Regular Exercise - How Exercise Improves Health.
https://www.youtube.com/watch?v=-lXg-35Xo_o



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American Heart Association. (2022). Why is physical activity important? <https://www.heart.org/en/healthy-living/fitness/fitness-basics/why-is-physical-activity-so-important-for-health-and-wellbeing>

American Heart Association. (2023). Recommendations for Physical Activity in Adults and Kids. Kids <https://www.heart.org/en/healthy-living/fitness/fitness-basics/why-is-physical-activity-important>

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