BALANCE/ PROPRIOCEPTION WORKOUTS FOR ELDERLY

Introduction

These resources have been taken from the Elderly Fitness program of Active Mauritius, and with the support of the Commonwealth Secretariat have been adapted so that they can continue to be used where isolation (confinement) or public hygiene conditions must be observed in the context of the COVID 19 pandemic.

The Elderly Fitness program is delivered by Active Mauritius and the Mauritius Sports Council, on behalf of the Ministry of Youth Empowerment, Sports and Recreation. The program is linked to the National Sports and Physical Activity Policy, which aims at having a more active and healthy population. A major health crisis (around 62% of the 65+ population is diabetic, 1 in 2 is overweight), physical inactivity (14% of the population reach 150 minutes of physical activity per week) and our ageing population are the major issues for which Elderly Fitness program was created.

Based on our unique National specificity, we have identified 4 main goals for the ELDERLY FITNESS program.

**Goal 1: Maintain/ Prolong/ Restore Autonomy of our Elderly Population.**
**Goal 2: Improve/ Preserve physical & Mental Health.**
**Goal 3: Improve Psychosocial Health.**
**Goal 4: Reduce Boredom.**

And these goals are reached through 5 deliverable eExercise modules namely:

- **MODULE A-** Seated based exercise.
- **MODULE B-** Seated based Elastic resistance exercise.
- **MODULE C-** Softball toss games.
- **MODULE D-** Aqua gym.
- **MODULE E-** Tai Chi Chuen.

These modules of exercise positively affect elders in, Cardiopulmonary Fitness, Flexibility, Balance, Selfconfidence / Self-esteem, Coordination, Strengthening, Improve sleep and Cognitive Functions.

Pre-COVID 19 these were delivered in Elderly Homes or in Centers across the island, but due to confinement we stopped the face to face program. But the demand from the participants was still there for their regular exercise session. In the context of confinement, we made certain modification to deliver the program for elders in isolation.

We chose to deliver workouts that will target 3 pillars of the program, which will provide them with great benefits:

- Strength.
- Balance.
- Flexibility.
- Tai Chi Chuen.

We ensured that we included the simplest and most appropriate (safety wise) exercises as the participants will not be in direct supervision. We sought out to provide each categories of exercise with different intensities which they can play with at their convenience.
SDGs

Context

As highlighted in the Kazan Action Plan, Sport and physical activity has been recognised to contribute to the UN Sustainable Development Goals (SDGs) in numerous ways, including improving health outcomes, providing economic opportunities, building peaceful communities and working towards reducing inequalities within and among countries. Keeping the elderly population active is increasingly important due to global trends of increased non-communicable diseases, ageing global populations and low rates of physical activity. For example, in Mauritius, 55% of those above 65 years are diabetic and the 50+ population are 35% less active than the rest of the population.

Elderly Fitness was developed to provide the opportunity for the elderly to stay active and realise the benefits of physical activity. The creation of online resources will help the elderly exercise from their homes, increasingly important while COVID-19 restricts access to the programme delivered in person. This platform includes tai chi, flexibility, balance and strength exercises across a range of difficulty levels and in both English and Creole (with English subtitles). Please see below for how providing the elderly with the opportunity to be physically active through online resources is helping contribute to the UN Sustainable Development Goals.

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Inactivity is the fourth leading risk factor for global mortality. Participating in physical activity can help motivate people to become more active, and physical activity is proven to have a positive effect on physical and mental health.

Keeping active throughout the lifetime reduces the likelihood of developing a non-communicable disease e.g. diabetes and cardiovascular disease, and therefore contributing to the reduction of premature mortality from non-communicable diseases (SDG 3.4 - By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing). Non-communicable diseases are more prevalent in the elderly population, making it crucial to provide opportunities for the elderly to stay active.

Physical activity is also associated with improved psychological and social health (SDG 3.4 - By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being), as well as the prevention and treatment of substance abuse (SDG 3.5 - Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol). The community engagement around Elderly Fitness can provide a platform for health messaging and empowerment, engaging with members of the community that may not be traditionally reached through conventional health delivery. This supports efforts to address communicable diseases and improve access to health-care services (SDG 3.3 - By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases and SDG 3.7 - By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes).
SDG 5: Achieve gender equality and empower all women and girls
There is a global trend that women are less physically active than men, and this discrepancy is exaggerated as women get older. By providing short, online videos, we hope elderly women can find the time to stay active around other time commitments they may have, therefore addressing inequalities in sport participation (SDG 5.1 - By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes).

Physical activity is also associated with improved and autonomy and empowerment of women in society addressing inequalities in leadership (SDG 5.5 - Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life and SDG 5.C - Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels).

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
While the online Elderly Fitness resources do not require coaches, the resources are based on the Elderly Fitness programme which is delivered face to face in Mauritius. The programme provides employment opportunities for sports coaches and community leaders, many of which are otherwise unemployed (SDG 8.5 - By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value and SDG 8.6 - By 2030, substantially reduce the proportion of youth not in employment, education or training). Employment opportunities in the sport industry help to diversity the economy (SDG 8.2 - Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors and SDG 8.3 - Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services).

SDG 10: Reduce inequality within and among countries
By providing physical activity resources online, we hope to provide the opportunity for all elderly, regardless of background, ethnicity, gender or socio-economic status to be active. Creating equal opportunities can make a valuable contribution to social inclusion and empowerment (SDG 10.2 - By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status).
In the face to face programme, those who attend have reported positively interacting with those from different backgrounds, building relationships and feeling closer to their community. Sport and physical activity has the power to bring people together, and promote inclusion, and reduce all forms of violence (SDG 16.1 - Significantly reduce all forms of violence and related death rates everywhere).

SDG 17: Strengthen the means of implementation and revitalize the Global Partnership
These resources have been created through partnership and collaboration. Active Mauritius are grateful for the support of the Commonwealth Secretariat, and to Played and Portas Consulting for helping to create these resources. This project is an example of how a collective approach can help move closer to the UN 2030 Agenda, contributing to:
SDG 17.2 - Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries.

SDG 17.9 - Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation.

SDG 17.14 - Enhance policy coherence for sustainable development.

SDG 17.15 - Respect each country’s policy space and leadership to establish and implement policies for poverty eradication and sustainable development Multi-stakeholder partnerships.

SDG 17.16 - Enhance the global partnership for sustainable development, complemented by multistakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.

Health and safety guidance

These exercises are safe and effective for women and men of all ages, including those who are not in perfect health. In fact, people with health concerns—such as arthritis or heart disease—often benefit the most from an exercise program that includes lifting weights a few times each week. Nevertheless, all participants should be aware of their personal medical conditions and how this can restrict certain movement or workout. For example, if you are diabetic be aware of hypoglycemia or if you have had surgery in a joint be careful not to exaggerate your movement.

Make sure that the chair you are using is solid and does not have loose legs or screws. Ensure that the ground is not wet or slippery and keep a cloth to wipe any sweat or water that might spill. Also make sure that the area that you will be working out from is clear from sharp edges and furniture that could cause harm.

General safety guidelines for elderly balance training.

- Make sure you warm up at least 10 minutes before exercise and cool down for at least 10 minutes after exercise.
- Some soreness in the muscle belly can be expected but stop the exercise if you feel pain in your joints.
- Maintain a good upright posture during all exercises.
- Don’t hold your breath while exercising. Make sure you breathe on the exertion part of the exercise.
- Don’t grip your weights tightly.
- All movements should be done in a slow to moderate and deliberate manner.
- Do not hesitate to hydrate yourself during the session.
Safeguarding considerations

By engaging with the online platform for Elderly Fitness, you consent to follow our community guidelines and safeguarding procedures:

• Everyone has a right to live a life free from abuse, and we all play our part in preventing abuse from happening and protecting those who may be experiencing, or are at risk, of abuse. For more details information, please refer to the following resources:
  Age UK Adult Safeguarding Guidance: https://www.ageuk.org.uk/bp-assets/globalassets/merton/originalblocks/about-us/policies/adult-safeguarding-guidance-and-procedure_30-118.pdf#:~:text=This%20guidance%20%26%20procedure%20is%20designed%20to%20enable%2C%20and%20are%20at%20risk%20of%20or%20experiencing%20abuse.

• Be respectful of individual rights of anyone engaging with the platform

• Do not share private information with anyone without their permission. This includes care home staff sharing resident's personal data with any partner organisations

• Demonstrate tolerance and respectful towards Active Mauritius staff

• Follow health and safety guidelines to ensure users are not put at risk. For more information please see: Social Care Institute for Excellence: https://www.scie.org.uk/person-centred-care/older-people-care-homes/safety

• All care home staff using the tool with the elders in their home should be trained in their responsibilities for reporting and recording concerns about abuse or neglect

• If working with children, it is important the correct level of supervision is assigned and correct safeguarding procedures are followed. For more information please follow: Restless Development:http://restlessdevelopment.org//file/global-safeguarding-policy-2018-pdf

• Active Mauritius will monitor the oversee content and activity on the platform. Information collected through the platform will remain confidential and not be shared with any third parties. It is not compulsory for any user to share their personal information with Active Mauritius if they do not wish to do so

• For more information please visit the following websites or contact Active Mauritius directly:

https://www.active-mauritius.com/contact-us
Set up and instructions.

For this balance training session, as equipment you will need 2 small dumbbells or 2 small water bottles, an elastic band (light), a towel and a chair. Also, you can keep a cloth to wipe up sweat or water.

So, place the chair in an area which is level and clear of furniture or any incongruent object.

These workouts can be done 3 to 5 times per week with sets of 3 x 10 or 4 x 8 repetitions. Gather your family members in your house to have a fun session together.

Workout

As you age, cardiovascular exercise, strength training and stretching can help you stay active and maintain your independence. A robust heart and lungs, strong legs, arms and core muscles and good joint range of motion are key to keeping you healthy and mobile.

Other essential pieces of the puzzle include balance, agility, coordination, and control, all of which should improve with proprioceptive exercises. Proprioceptive ability tends to weaken as people age, because message transmissions to and from the central nervous system become more sluggish. In turn, poor proprioception can negatively affect balance, agility, and coordination, all of which increase your risk of falling.

Proprioception is your ability to sense where your body and limbs are positioned in space. It's what allows you to navigate in a dark room, walk up stairs without looking at your feet and brush your teeth without peering in a mirror.

Proprioceptive exercises can contribute:
• To better posture,
• Better balance,
• Better gait and overall functionality.

Which all might help lower fall risk among seniors.

You will have to perform a warmup about 10mins with some stretching before starting the work out. For this series of exercises the difficulty will gradually increase from beginner, intermediate and advanced but, still the advanced level is easy and convenient for elderly. But still start from beginner and move to the advanced level gradually.
BALANCE EXERCISES WILL HELP YOU MAINLY IN FALL PREVENTION WHICH IS VERY COMMON IN THE ADULT POPULATION. THE EXERCISES WILL START EASILY PROGRESSING TO MORE COMPLEX EXERCISES. FOR THESE YOU WILL NEED ONLY A CHAIR 2 BOTTLES OF WATER OR 2 SMALL DUMBBELLS IF AVAILABLE. FOR EACH EXERCISE REPEAT SAME ON OPPOSITE SIDE AND HOLD FOR 10/15/30 SECS.

STEP 1
- STARTING POSITION WITH BOTH HANDS ON THE CHAIR.
- NEUTRAL POSITION.
- BE COMFORTABLE.
- THESE EXERCISE YOU CAN PERFORM AS MANY TIMES YOU WANT DAILY.

STEP 2
- SIMPLE AND EASY.
- TO START LIFT SLIGHTLY YOUR RIGHT LEG.
- KEEP HANDS ON THE CHAIR AND FIX A POINT STRAIGHT AHEAD.
- HOLD FOR 10/15/20 SECONDS.
- REPEAT FOR THE OPPOSITE SIDE.

STEP 3
- RETURN TO NEUTRAL POSITION.
- THEN LIFT THE RIGHT LEG WITH KNEE FLEXION AND HIP IN NEUTRAL.
- KEEP HANDS ON THE CHAIR AND FIX A POINT STRAIGHT AHEAD.
- HOLD FOR 10/15/20 SECONDS.
- REPEAT FOR THE OPPOSITE SIDE.
**STEP 1**
- Back to neutral position

**STEP 2**
- Lift your leg laterally.
- Do not over do and go too high.
- Perform the lateral raise 10 times keeping hands on the chair.
- Repeat same with opposite leg

**STEP 3**
- Starting from neutral position.
- Slightly raise your leg, hand off the chair.
- Close your eyes.
- Hold for 10/20 seconds.
- Repeat on the opposite side.

**STEP 4**
- Keep your hands close to the chair in case you lose your balance you can immediately hold back to the chair.

Be comfortable with these exercise before doing the next series which are more challenging.
• NEXT, FROM NEUTRAL POSITION LIFT THE LEG BACKWARD WITH THE KNEE FLEXED.
• HAND OFF THE CHAIR, FIX A POINT AHEAD AND HOLD 10/15/30 SECONDS.
• REPEAT WITH OPPOSITE LEG.

• RETURN BACK TO NEUTRAL POSITION.
• THEN LIFT THE RIGHT LEG WITH HIP AND KNEE FLEXED.
• HANDS OFF THE CHAIR AND FIX A POINT STRAIGHT AHEAD
• HOLD FOR 10/15/20 SECONDS.
• REPEAT FOR THE OPPOSITE SIDE.

• PERFORM A LATERAL RAISE WITH YOUR LEG.
• 10 REPETITIONS.
• THEN REPEAT WITH OPPOSITE SIDE.

FROM NEUTRAL POSITION, LIFT THE RIGHT LEG UP FLEXED AT KNEE AND TOUCH THE TIBIA WITH TIP OF THE SHOE.
FOR THIS EXERCISE YOU WILL NEED TWO BOTTLE OF WATER OR 2 SMALL DUMDBELLS.

TAKE THE 2 BOTTLES, FROM NEUTRAL POSITION, LIFT YOUR LEG WITH HIP AND KNEE FLEXED.

STRAIGHTEN OUT YOUR ARMS WITH THE BOTTLES, AND HOLD THE POSITION 10/15 SECONDS.

THE LAST EXERCISE CAN BE PERFORM INFRONT OF YOUR COUCH. SO, IF YOU LOSE BALANCE YOU CAN FALL BACK INTO THE COUCH. PERFORM THIS ONE ONLY WHEN YOU ARE CONFIDENT WITH THE OTHER EXERCISES.

Finish the session by a cool down and may be have a Tai Chi session.

To access videos of the workout please click on the following link:
https://active-mauritius.activityfinder.net/