DANCE

Many different forms of dance have been utilised by health scientists to improve fitness in patients with of many different diseases. Patients with cancer, heart disease and arthritis who are involved in dance may significantly improve various different parameters of their health with very promising results in their overall health and quality of life. More dynamic types of dancing (such as break dancing), can also be adapted to patients' needs by reducing the intensity of the movements and focusing on technique. However, dance is suitable and beneficial for all patients groups.

Most types of dance mainly involve aerobic and flexibility exercises rather than strength, which is a component of more dynamic types of dance. The training sessions last about 1 hour but this depends on the type of the discipline, the level and the instructor. Given the different types of dance genres, there is definitely a class for everybody regardless of age, sex, size or musical preference. People with hearing impairments or other disabilities may face difficulties trying to find dance classes to suit them but there have been many successful attempts to change that in the past few years.

Warm up (10minutes)

At low intensities, the warm up can include:

a) Brisk walking for 2-3 minutes x 2, with a two minutes light walking break

b) Jogging/walking on the spot (based on the level of the patient)

c) Performing the basic dance steps

e) Dancing to choreography

f) Upper body range of motion exercises (depending on the dance genre)

Main Session (60minutes)

Flexibility/Range of Motion

There are several exercises that can be performed to improve flexibility and range of motion in patients with different chronic diseases. The following exercises are dance-specific and can improve dance performance as well as functional ability. It is important to avoid exercises that exacerbate pain. Therefore, a combination of exercises, which are given in Table 15, can be used for all patients up to the range that they do not cause any discomfort and/or pain:

Table 15: Exercises based on a Dance Training Session for Patients with Chronic Diseases

Exercise	Time/Reps	Frequency	Break
Neck Tilt	10 reps	2 times	30 sec
Neck Turn	10 reps	2 times	30 sec
Shoulder Rolls front, back	10reps	2 times	30 sec
Arm Swings, front ,back, side	10reps	2 times	30 sec
+Leg Swings, front, back, side	10reps	2 times	30 sec
Child Pose Stretch	10reps	2 times	30 sec
Supine Knee to Chest Stretch	10reps	2 times	30 sec
Standing or Laying on side Quads Stretch	10reps	2 times	30 sec
Hamstring Stretch	10reps	2 times	30 sec
Groin Stretch	10reps	2 times	30 sec

Comments

Slow avoiding overextension and movements that may cause pain

Cardiorespiratory Fitness

The main session almost in all dance genres involves dancing to the choreography of the genre with an instructor helping the participants to learn as well as advance their technical skills. As such, the main part of the dance training is predominantly aerobic training, since a song can last more than 3-4 minutes.

Patients should be encouraged by the coach/volunteer to engage with dance aerobic training at least 2 times a week with low intensities at the start of the training programme. Once the patient exercises 3 times a week at low intensities, then higher intensities within a choreographed piece can be used.

In addition, to have a safe progression, the dance coach/volunteer may want to utilise lower intensity choreographies with simple movements at the start of the session, progressing to higher intensities/more advance movements for the end of the session, once the patient exercises for more than 3 months. It is important to note that, irrespective of the genre, advanced movements should not be used for patients with chronic diseases. In addition, the choreography should incorporate movements that do not cause any pain and/or discomfort for the patient.

Strength

Strength is not always considered essential in dancing but this depends on the kind of dance. In dance genres where strength training is required, such as ballet and breakdance, the patients should focus on performing the right technique first, before building up their strength in order to avoid injury.

Strength training, though, improves dancing while preventing injuries that might occur from over-stretching of the joints. Muscle strengthening exercises promote joint integrity by balancing muscle tension. Strong core muscles (muscles in the abdomen, back and pelvis) stabilise the spine, trunk and pelvis, preventing back injury and allowing for powerful rotational movement which is usually required from dancers. Strength training should definitely not be overlooked for patients as this may result in further improvement in their overall health by improving functional ability and therefore, the ability to perform everyday tasks. If the specific dance genre does not involve strength training, the following exercises can be recommended and/or used in a different to the dance training session, in addition to the dance training.

The following strength exercises can be suggested by the coach/volunteer at the start of the programme once a week with a progression of 2 times per week, as per relevant guidelines shown in table 16.

Table 16: Strength Exercises based on a Dance Training Session for Patients with Chronic Diseases

Exercise	Time/Reps	Progression	Frequency	Break
UPPER BODY				
Rows with Elastic Band	8-12reps	15-20 reps	3 times	30 sec
Supine/Standing Side Bend	30 sec	1 min	3 times	30 sec
Supine/Standing Knee Raise	30 sec	1 min	3 times	30 sec
Supine/Standing Pelvic Tilt	10 sec	-	3 times	30 sec
Abdominal Curl	1-15reps	20reps	3 times	
LOWER BODY				
Heel Walk	30 sec	-	3 times	
Toe Walk	30 sec	-	3 times	
Plié	8-10 reps	15-20 reps	3 times	
Leg Lift to front, back ,side	8-10 reps	15-20 reps	3 times	
Side-To-Side Lunge	8-10 reps	15-20 reps	3 times	

Comments
See next page

DANCE

Cool Down (10 minutes)

Slow walking and range of motion exercises focusing on breathing

General Comments

Dance is relatively a safe form of exercise particularly the low intensity choreographies and has been used quite extensively in the literature with many different dance genres including different types of contemporary dance e.g. Latin, street dance, breakdancing. If patients experience pain before participation in any dance genre, instructors should ask the patient to see their family doctor and only perform exercises that focus on technique and light aerobic intensities and avoid movements that can cause pain.

Since the main dance training is predominantly aerobic (apart from ballet and contemporary forms of dance such as breakdancing which is more dynamic), all patients should be able to get involved with dance training. Patients with more severe conditions should complete their first line of treatment, be functional and cleared by the consulting doctor to engage in dance training. The coach/volunteer should always focus on low intensity movements and performing the dance-related movements correctly at the start of a training programme to avoid injury; doing so, the muscle coordination improves and only then patients can build up their cardiorespiratory fitness, strength and flexibility.

Comments on Table 16

Rows with Elastic Band
Light elastic bands can be used by all patients

Supine/Standing Side Bend
*Avoid overhead arm movement in patients with upper body functional disabilities**

Supine/Standing Knee Raise
Avoid full movement in patients with recent hip replacement or inflammation of the hip/knee

Supine/Standing Pelvic Tilt
Avoid full movement in patients with recent hip replacement or inflammation of the hip/knee

Abdominal Curl
Focus on flat back and correct technique

Heel Walk
Avoid in patients with knee inflammation/surgery/severe osteoarthritis

Toe Walk
Avoid in patients with knee inflammation/surgery/severe osteoarthritis

Plié
Avoid in patients with knee inflammation/surgery/severe osteoarthritis

Leg Lift to front, back ,side
Avoid in patients with knee inflammation/surgery/severe osteoarthritis

Side-To-Side Lunge
Focus on technique. Avoid in patients with knee inflammation/surgery/severe osteoarthritis

* upper body functional disabilities: bypass surgery, recent upper body surgery of the shoulder, elbow, breast surgery, inflammation and/or osteoarthritis of the shoulders, elbows, wrists, neck