

CHRONIC CONDITIONS + SPECIAL POPULATIONS

Let's review some common conditions + populations you may serve in your SHiNE LIGHT classes.

OBESITY

The World Health Organization reports that as of March 2022, more than 1 billion people in the world are obese and that number continues to climb.

DEFINITION:

Obesity is defined as excessive fat accumulation that may impair health. In adults, a BMI of 25 or greater is considered overweight and a BMI of 30 is obese.

HEALTH RISKS:

Obesity is a major risk factor in cardiovascular disease, arthritis, diabetes, some cancers and premature death, and it is preventable.

EXERCISE RECOMMENDATIONS:

The goal is to work up to 40-60 minutes of cardiovascular exercise per day at 40-70% of maximum heart rate. Caution overexertion.

Too much, too soon

is often a cause of drop-out or injury.

INSTRUCTOR TIPS:

- *Reduce speed of movements and directional changes*
- *Avoid high impact.*
- *Supine position is only recommended for a limited time.*
- *Adapt exercises to allow for greater range of motion.*
- *Foster feelings of success.*

HYPERTENSION

In 2010, 31% of the adult population worldwide (47% in the U.S.) had hypertension or were taking medication for hypertension.

DEFINITION:

Hypertension is also known as High blood pressure and occurs when there's consistently too much pressure exerted against the arterial walls. It's defined as having a resting systolic blood pressure reading of 130 mmHg systolic and resting diastolic reading of 60 mmHg or higher.

HEALTH RISKS:

Hypertension is the leading preventable risk factor for cardiovascular disease and death worldwide.

EXERCISE RECOMMENDATIONS:

Low-impact cardiorespiratory activities can reduce high blood pressure and risk of hypertension and should be encouraged 3-7 days per week, 30-60 minutes per day at 50-85% of max heart rate.

INSTRUCTOR TIPS:

- *Cue for breathing.*
- *Provide a sufficient Cool down*
- *Utilize Rate of Perceived Exertion (RPE)*

Why should we use RPE instead of heart rate?

Some medications can affect heart rate which makes it an ineffective measurement

CARDIOVASCULAR DISEASE

Cardiovascular diseases are the leading cause of death globally.

DEFINITION:

Cardiovascular disease is a group of disorders affecting the heart and blood vessels that includes congestive heart failure, atherosclerosis (narrowing of the coronary arteries) and peripheral arterial disease among others.

HEALTH RISKS:

Cardiovascular disease can impair function and increase the risk of death due to heart attack or stroke.

EXERCISE RECOMMENDATIONS:

Low impact cardiorespiratory activities 3-5 days per week for 20-45 minutes working at 40-60% of maximum heart rate.

INSTRUCTOR TIPS:

- **Target heart rate and Rate of Perceived Exertion guidelines should be established by each participant's physician.**
- **Direct students to alert the instructor immediately if experiencing chest pain, nausea, dizziness or heart palpitations. Exercise should cease immediately.**
- **Offer and encourage sufficient breaks** Especially in the case of dyspnea (trouble breathing), cue to take frequent or longer breaks as needed.

CANCER

As of 2018, it was estimated 17 million+ NEW cases of cancer occur each year. Accounting for 1-in-6 deaths, cancer is the second leading cause of death globally.

DEFINITION:

Cancer is a group of diseases categorized by the abnormal and invasive growth of cells within the body.

HEALTH RISKS:

Cancer can lead to chronic fatigue, affecting every-day function and can lead to muscle atrophy and depression.

EXERCISE RECOMMENDATIONS:

Low-impact cardiorespiratory, circuit-training and balance activities 3-5 days per week at 50-70% of max heart rate for 15-30 minutes per session.

INSTRUCTOR TIPS:

- **Encourage sufficient rest intervals.**
- **Encourage students to visit with their doctor regularly.**
- **Be mindful of the environment**

DIABETES

As of 2021, 537 million adults worldwide were living with diabetes (1 in every 10) and diabetes was responsible for 6.7 million deaths.

DEFINITION:

Diabetes is a chronic disease where the pancreas either doesn't create enough insulin or the body is unable to utilize insulin efficiently, leading to high blood sugar levels.

HEALTH RISKS:

High blood sugar levels, over time, can lead to heart disease, kidney disease, and vision loss.

EXERCISE RECOMMENDATIONS:

Activities that use large muscle groups in rhythmic fashion 3-7 days per week, for 20-60 minutes per day at 50-80% of max heart rate.

INSTRUCTOR TIPS:

- **Encourage participants to exercise at the same time of day and 1-2 hours after a meal.**
- **Carry a carbohydrate snack.**
- **Know the symptoms of hypoglycemia:**
excessive fatigue headaches
nausea sudden, rapid heart rate
lightheadedness seizure
dizziness confusion
profuse sweating shakiness
spots in front of eyes
- **Encourage participants to work with their doctor.**

ARTHRITIS

Arthritis affects more than 350 million people globally, and according to the CDC, 1 in 4 Americans.

DEFINITION:

Arthritis is an umbrella term for more than 100 diseases of the joints causing inflammation and pain.

HEALTH RISKS:

Arthritis is a leading cause of work disability and can limit everyday life functions.

EXERCISE RECOMMENDATIONS:

Frequent, low-intensity exercise should be performed with intensity and duration determined by participants, their doctors, and the 2-hour pain rule.

INSTRUCTOR TIPS:

- **Follow the 2-hour pain rule.**
 If pain continues 2 or more hours after exercise,
 reduce the intensity or duration of future sessions.
- **Offer an extended warm up and cool down.**



Did you know?

3 out of 5 people diagnosed with arthritis are under the age of 65.

RESPIRATORY CONDITIONS

As of 2019, asthma affected 262M people worldwide and COPD affected more than 15M US citizens.

DEFINITION:

There are several major respiratory conditions, including asthma, chronic inflammatory lung disease (COPD) bronchitis, and emphysema.

HEALTH RISKS:

Respiratory conditions can lead to disturbed sleep, fatigue and even death.

INSTRUCTOR TIPS:

- **Encourage participants to meet with their doctor** and come up with a plan to treat or prevent exercise-induced asthma
- **Ensure an inhaler is available** at all times during an exercise session.
- **Avoid exercising in certain environments**, such as the outdoors with pollen or in extreme cold. warm, humid environments tend to be best.
- **An extended warm up and cool down** should be provided.
- **Breathing through the nose or through pursed lips** can help reduce symptoms.

DEMENTIA + NERVOUS SYSTEM CONDITIONS

DEFINITION:

Dementia is a syndrome that leads to deteriorating cognitive function over time and can affect memory, learning ability, thinking, orientation, language, and judgement. Additional nervous system conditions include Epilepsy, Parkinson's, Multiple Sclerosis, Huntington's, and Alzheimers.

HEALTH RISKS:

Dementia is a major cause of disability and dependence, especially in older populations, and is the 7th leading cause of death worldwide.

INSTRUCTOR TIPS:

- **Minimize playlist changes.**
- **Reduce peripheral noise or movement.**
- **Keep the area free of clutter and apply the SHINE LIGHT principles offering more stability since balance can be an issue.**



Did you know?

55M people worldwide are living with dementia and there are nearly 10M new cases each year.

SPECIAL POPULATIONS

OLDER ADULTS *In 2019 there were 1 billion older adults worldwide. That is expected to increase to 1.4 billion by 2030 and 2.1 billion by 2050.*

DEFINITION:

Both the United Nations and the World Health Organization define older adults as people 60+ years old. Age can be defined many ways depending on cultural and societal perspectives. For the case of this discussion, we'll include anyone 60 years or older.

HEALTH RISKS:

Hearing loss, vision loss, osteoarthritis, COPD (see respiratory conditions), diabetes, high blood pressure, decreased bone density, muscles losing strength and flexibility, dementia and depression.

INSTRUCTOR TIPS:

- **Hold static stretches for at least 30 - 60 seconds.**
- **Educate your students on the cognitive benefits of dancing!**
- **Minimize playlist changes.**
- **Encourage hydration, breathing, and breaks as often as needed.**
- **Be mindful of vertigo** - a sudden spinning sensation creating dizziness, often caused by moving the head too quickly. Vertigo can be an issue for students regardless of age.



Did you know?

People are having less children, so proportionately, older adults will continue to make up a larger segment of the total population.

PREGNANCY + POSTPARTUM

DEFINITION:

Class participants who are currently pregnant or recently had a baby.

EXERCISE RECOMMENDATIONS:

Recommendations will be based on their previous fitness level and the conditions of their specific pregnancy. Participants should consult a doctor to decide what is best.



Did you know?

During pregnancy, blood volume will increase 30-50%, which can increase heart rate and cardiac output. Respiratory rates are also elevated at rest, so it's easier to overexert oneself.

INSTRUCTOR TIPS:

- **Avoid exercises in a prone or supine position after 12 weeks.**
- **Avoid plyometric exercises in 2nd and 3rd trimesters.**
- **Avoid high-impact, jarring movements.**
- **Control body temperature.**
- **Avoid overexertion.**