10 Physical fitness and nutrition, detox, weight loss and active programs

If one of the main roles of a spa is to promote health and wellbeing, the spa manager (and indeed their team) need to have a sound, basic understanding of the fundamentals of physical fitness and nutrition and their related products. This chapter aims to summarize essential fitness and diet information, however, it should be emphasized that this is just the basics, and that spa managers are advised to continually increase their knowledge of these topics. Treatments and programs related to fitness and diet are also included in this chapter.

Physical fitness

Being physically fit is essential to good health and wellbeing. If we are physically fit, we lower our risk of many diseases, we can carry out everyday tasks more comfortably/efficiently and we feel more confident in ourselves. Being fit also helps to reduce anxiety and increase a feeling of wellbeing. In good physical condition we also have better agility, coordination and balance as well as reaction time and speed.

According to the American College of Sports Medicine, all healthy adults aged between 18 and 65 years should have moderate intensity aerobic physical activity for a minimum of 30 minutes 5 days a week. In addition, they recommend for every adult to perform activities that maintain or increase muscular strength and endurance at least twice a week. Whilst on the surface this doesn't appear too extreme, taking into consideration how sedentary workplaces and lifestyles have become, actually fitting in this amount of exercise into a weekly routine can be quite a challenge.

Clinical studies have shown that regular exercise reduces the chances of cardiovascular diseases, hypertension, stroke, osteoporosis, type 2 diabetes, obesity, colon cancer, breast cancer, anxiety and depression (ACSM, 2010).

In order to understand clearly physical fitness, it helps to divide the different components into three key areas:

1. **Cardio** exercise, otherwise called **aerobic** training, that has an effect on our cardio (heart) vascular system (also called the circulatory system – the vessels that carry blood and oxygen around the body).
2. Exercises to develop **muscular strength.**
3. Exercise to develop **flexibility.**

The advice given in this chapter has been based on the American College of Sports Medicine guidelines for exercise prescription – the largest and most respected sports medicine and exercise science organization.

Cardio fitness

Whilst all of the above fitness components are necessary, cardio fitness is described first because it is the most important area of physical fitness. Not only does it play the major role in reducing the risk of the diseases listed above, but without a well-functioning heart and cardiovascular system we are putting our whole existence at risk. A strong bicep muscle can be useful and aesthetic, but it is not essential – a strong, fit heart is!

In order to exercise the heart and vascular system, large muscle groups (such as those in the legs and buttocks) need to be put under moderate to vigorous exertion over an extended period of time. During cardio training the heart and vascular system react to this exertion or load to pump the blood and oxygen to the muscles and take away waste products. Cardio exercise is defined as:

> …" the ability to perform large muscle, dynamic, moderate-to-high intensity exercise for prolonged periods" (ACSM, 2010).

Regular cardio training improves endurance, strengthens the heart and develops the body's ability to utilize oxygen.

- Examples of cardio exercise include running, fast walking, swimming, cycling, dancing, aerobic type activities.
- Examples of equipment that would be deemed 'cardio' are: standing and recline bikes, running machines, step machines, rowers and elliptical walkers.
- Examples of cardio or 'aerobic' type classes would include: aerobics, step, Zumba, dance and any class that involves dynamic movement using large muscles for an extended period of time.

Cardio level intensity and target heart rate

The intensity level at which a person trains when doing cardio exercise is extremely important. If the level is too high they will be working out anaerobically (building the strength of the muscles as opposed to training the cardiovascular system) and if the level is too low then they will not train the cardiovascular system enough to have an effect.

To understand how to perform cardio exercise at the right level, first it is necessary to know how to calculate the maximum heart rate:

Maximum heart rate = 220 – age.

So, if a client is 50 years old their maximum heart rate will be 170 beats per minute.

(A normal resting heart rate should be around 70 beats per minute).

Once we have calculated the maximum heart rate, we need to determine the target heart rate training zone. The Karvonen formula is a common way to calculate this. The Karvonen formula helps to determine the target heart rate (HR) training zone. It uses the maximum and resting heart rate with the desired training intensity to calculate the target heart rate.

Target heart rate = ((max HR – resting HR) x % intensity)) + resting heart rate

Calculating the target heart rate for a cardio training workout

First calculate the maximum heart rate (220 – age) minus resting heart rate (normally 70 beats per minute). Multiply this number by the percentage of desired intensity (for cardio exercise this is normally between 40% and 70%). Finally, add the resting heart rate.

Let us take a 50-year-old client with a resting heart rate of 70 beats per minute. Their maximum heart rate is 170 beats per minute (220 – age) minus the resting heart rate 70 = 100. We call this number the heart rate reserve (the difference between the predicted maximum heart rate and the resting heart rate).

To calculate the number of heart beats per minute required for a client to be training at an intensity of 60% of their heart rate reserve: 100 x 60% = 60. We add this number onto the resting heart rate: 60 (60% of heart rate reserve) + 70 (resting heart rate) = 130 (target heart rate).

In order to exercise the heart effectively it is recommended to perform moderate intensity exercise for at least 30 minutes 5 or more days a week (at 40% - 60% of the heart rate reserve (HRR)) or vigorous intensity exercise (at 60% - 85% of the HRR) for at least 20 – 25 minutes on 3 or more days a week.

Many cardio machines will automatically calculate a person's heart rate (although their accuracy is not always perfect). Alternatively, a person can take their own heart rate by placing two fingers between the bone and the tendon over the radial artery located on the thumb side of the wrist. They should count the number of beats in 15 seconds and then multiply by four.

A good spa fitness program will teach its guests how to exercise at the right level according to their heart rate reserve by calculating their heart rate. Exercising too lightly will have little benefit and performing cardio exercise too intensely (over 85% of the HRR) can cause the body to work anaerobically, therefore defeating the object of cardio training.