

# Exercise referral scheme



### **Proposal for Exercise Referral Scheme**

According to the NHS ([www.nhs.gov.uk](http://www.nhs.gov.uk)), approximately three million people within the UK are diagnosed with osteoporosis, and 230,000 fractures occur every year as a result of osteoporosis. Osteoporosis is a condition that affects the bones in the skeletal system, due to a loss of calcium and other mineral content, causing a loss of bone mass therefore bones becoming weak and brittle (Lawrence and Barnett, 2006). Due to this a person with osteoporosis is more susceptible to break or fracture a bone with a minor fall during daily activities, compared to a person with healthy bone mass; especially seen in the wrists, hips and spine ([www.nhs.gov.uk](http://www.nhs.gov.uk)).

A number of common risk factors for osteoporosis have been identified; gender, age, diet, family history, low body mass, smoking, hormones, lack of physical activity and medication (Durstine and Moore, 2003; Lane, 1999; Lawrence and Barnett, 2006; [www.nhs.org.uk](http://www.nhs.org.uk)). However the most common cause of osteoporosis is seen to be due to hormones. Women have been seen to be more susceptible to osteoporosis than men, especially over the age of 45, due to a decrease in the hormone oestrogen after the menopause, however men with low testosterone levels are also at high risk (Durstine and Moore, 2003).

Awareness of osteoporosis arises from the number of fractures and mortalities from fractures that occur every year. Goodman (1985) found that calcium alone can prevent bone reduction, however this 'combined with exercise, ideally before menopause, can prevent bone loss'. Exercise has been seen as a key factor in reducing the risk of fractures and consequentially falls in individuals with osteoporosis, through improving <https://assignbuster.com/exercise-referral-scheme/>

balance, mobility, flexibility, coordination and muscle strength as peak bone density is maintained as well as the rate of bone loss is reduced (Bass *et al.* 2001; Deal, 1997; Sherrington *et al.* 2004). With risk factors for osteoporosis identified; intervention for prevention and management schemes, focusing specifically on exercise, nutrition and life-style (Notelovitz, M 1993) should be created to concentrate on the individual's weaknesses.

The aim of the scheme is to focus on prevention and management of fractures from falls, for individual's suffering from osteoporosis, to improve the individual's quality of life by becoming more active in a safe and supervised exercise environment, through the formation of best practice through existing research evidence. The scheme will focus on osteoporosis sufferers, however specifically targeting sedentary populations and pre and postmenopausal women.

The scheme will take a multidisciplinary team approach. The use of general medical practitioners will be required. The role of the general practitioner (G. P) is to prescribe and inform the client about a suitable exercise referral system, once a physical examination and a medical history of the client is obtained. The G. P is responsible for the overall management of the client, therefore explains the risks and benefits of the proposed scheme to the client. The roles of physiotherapists and occupational therapists are also required within the scheme. Physiotherapists play a key role in the scheme, they are there not only to exercise the clients, however educate and reassure them about the benefits of physical activity for the client's specific condition (Guideline 4, Section C; NQAF). They will also play a large role in supervising clients who are in the high risk category of osteoporosis. A

nutritionist will also be part of the multidisciplinary team, as diet is a major factor that influences the onset of osteoporosis. Lastly, an advanced exercise instructor will be used and will play a key role in the multidisciplinary team. The practitioner will hold Level 3 of the National Occupation Standards (Guideline 7, Section A, Guideline 1, Section C; NQAF) therefore allowing the instructor to adapt physical activities to meet the needs of the client, and create long term exercise program plans. The role of the instructor is to do a pre-exercise assessment to assess the client's current physical status, and to create an exercise programme to benefit the client's medical condition. The exercise instructor will focus on cardiovascular training, muscle strength, flexibility and functional ability.

G. P's will discuss the benefits of the scheme to the client, and the client will need to reach Stage 3 of the ' Change of Behaviour' Model (Prochaska and DiClemente, 1992); therefore showing signs that they are ready to change their current ways of living to adapt to a more physical lifestyle to facilitate their medical condition, once this has been established a needs assessment, programme plan and evaluation may occur (Parker and Parikh, 2001), this follows Guideline 2 in Section C of the NQAF document, which state ' Instructors should understand and apply a proven model of behaviour change in interactions with referred patients participating in the referral scheme'.

The initial stages start with medical examinations of the client, which will be conducted through the G. P to determine the clients current medical status (heart rate and blood pressure included) and medical history, the clients family history and any medications the client may be on, allowing the G. P to

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refer the client to an appropriate health care professional (Duty of care; NQFA). Confidentially consent forms are signed by the client stating the G. P is able to pass relevant information to the exercise practitioner about the client therefore allowing the exercise practitioner to draw up a suitable exercise programme relating to the clients current condition. During the first session the client will present a G. P referral letter to the exercise practitioner, stating reasons for the referral and the clients' medical history allowing the exercise practitioner to conduct appropriate testing examining the level of fitness and current physiological and psychological status to assess the amount and level of physical activity to be prescribed (Guideline 1, Section B; NQAF). The client will be informed of the rate of perceived exertion (RPE) scale during testing therefore will be able to stop at any time if exhaustion or pain is to permit, and the use of a cycle ergo-meter is recommended (ACSM 2009).

As the scheme focuses on individuals with osteoporosis, especially targeting that of a sedentary population, as well as pre and postmenopausal women, the scheme will be a home and community based scheme lasting 20 weeks in total.

Initially, homes will be assessed by Occupational Therapists to focus on possible modification to reduce the risk of falls and inevitably fractures in osteoporotic patients. Cumming *et al* . (1999) found that home visits through occupational therapists could reduce the risk of falls, consequentially reducing the risk of fractures. Occupational Therapists have been chosen as they are trained and have experience in home modification. Chang *et al* . (2004) supports the findings of Cumming *et al* . (1999), through stating <https://assignbuster.com/exercise-referral-scheme/>

home assessment is an effective way of reducing risks of falls consequentially reducing anxiety of falling allowing an individual to feel confident around the home. In assessing a home one may look at improving floor surfaces, for example securing rugs properly, as well as applying non skid mats and grab bars to bathrooms (O'Hara *et al.* 2007)

Clients will visit a nutritionist during the beginning of the programme to obtain adequate information on diet. ' Calcium is one of the main bone forming minerals' (Palacois 2006). Santora (1987), Williams (1999), and ACSM guidelines (2009) recommend that postmenopausal women should obtain 1000-1500 milligrams of calcium per day and 400-800 IU per day, while pre menopausal women should obtain 1000-1300 milligrams. Studies support these recommendations stating a higher bone mass density and lower bone loss is achieved through adequate calcium intake (Cumming *et al.* 1997).

Physiotherapists will be involved in home based programmes once a week, lasting up to 30 minutes. Focus will be to assist those at high risk of fractures due to osteoporosis, as well as the sedentary population. It will focus on improving an individual's quality of life therefore attention will be on muscle strength, balance, mobility, posture and functional ability ultimately reduction pain (Bennell *et al.* 2000). Exercises will be gradually introduced, especially to that of the sedentary population, to minimize fatigue and reduce soreness (Forwood & Larsen 2000, cited in Bennell *et al.* 2000). Chair-based sessions will be used, as these have been noted to improve one's mobility, flexibility and muscle strength (Durstine and Moore, 2003; Lawrence and Barnett, 2006; Sinaki *et al.* 1984 and 1986 cited in Avioli, <https://assignbuster.com/exercise-referral-scheme/>

1993), as well as specific exercises depending on the individuals' weaknesses. Postural taping is recommended to maintain correct posture during exercises (Bennell *et al.* 2000). Safe activities should be repeated to continue to improve and maintain muscle strength.

Community based exercise programmes, run by a qualified advanced exercise instructor, will involve the use of a local leisure centre and swimming pools. Exercise sessions will be open to individuals suffering from osteoporosis. Gym based exercise sessions will be once a week, lasting around 60 minutes at a time, low intensity exercises with focus on aerobic and resistance exercises will improve individuals' general fitness, muscle strength, posture, balance, flexibility and functional ability. Aerobic exercises will include activities such as walking on treadmills and cycling on a cycle ergometer as these benefit bone mass maintenance (Durstine and Moore, 2003). Resistance exercises with the use of free weights and elastic bands will be used in supervision of instructors (ACSM 2009). These are beneficial to improve individual's strength and balance. Bennell *et al.* (2000) found weight training in pre-menopausal woman increases strength in the lumbar region of the spine. Hartard *et al.* (1996, cited in: Bennell *et al.* 2000) stated that 70% of 1RM was effective in maintaining hip and spine bone mass in postmenopausal women. Here, the clients will be closely monitored by the exercise practitioners, especially during balance training. Attention will be made to ensure the exercise environment is safe and hazard free, for example no loose mats or exercise equipment across the floor.

Swimming sessions will also be held once a week, lasting 30 minutes per session. Swimming is recommended especially for individuals where

resistance exercises are intolerable (ACSM 2009). Swimming is beneficial to strengthen back extensor muscles, improve balance and increase individuals' general fitness levels; a study by Koichi *et al.* (2008) on water exercises recommended deep water running for elderly individuals with poor balance.

The scheme itself will be monitored for evaluation annually through the local Primary Care Trust; who provide funding for the scheme to occur, to review and impose any modifications needed (Guideline 3, Section D, NQAF). At the end of the programme a follow up assessment will occur identifying the clients' physical and psychological behavioural changes and long term goals will be considered.

Individuals who are susceptible to fractures therefore being at higher risk of falling may be more reluctant to participate in exercise, therefore motivational strategies are needed to further incline the client to participate with no hesitation. Motivational strategies such as goal setting and feedback on the clients' progress will be used, which relates to Guideline 5, Section E in the NQAF, as well as informing the client about supervision of exercise from the exercise practitioners. The advantage of group exercise sessions allows social interaction among individuals with similar medical conditions; through positive encouragement from peers, adherence can be created.

Clients will be closely monitored by the health care professionals.

Communication between G. P's and exercise practitioners are vital to assure no negative health changes of clients occur. Record activity books, which will be filled out every session, will be given to clients within the programme to assess progress; these also play a key role in prevention of drop out.

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Exercise practitioners will have good understanding of behaviour changes therefore will be able to identify and intervene if negative change is observed.

Adherence and long term goals will need to be promoted during the programme to prevent drop out. This can be achieved through encouragement, positive feedback; as this creates confidence, realistic goal setting and pre, mid and post assessment follow up on the clients' progress through the use of a patient activity log book. These are seen to be affective as the client will be able to observe their progress. Post-programme follow up is particularly important as it benefits long term adherence (BHFNC).

In conclusion, the aim of the scheme is improve an individual suffering from osteoporosis' quality of life through multidimensional strategies through the use of best practice and existing research evidence, allowing the individual to become more active in a safe and supervised exercise environment.