STYD03- 4 week training programme

Client Profile: Denzel Ubiaro Age: 23 weight: 87kgs height: 187cm sport: Basketball

Patient is a sports rehabilitation student at Marjon University as well as a professional basketball player. The patient is involved in the professional team as well as his university team which increases his training time per week to 25 hours of high level basketball and training weekly. Training involves a lot of drills and small sided games in preparation for upcoming games. Monday and Thursday are particular harder days as these are the biggest output days with 4 levels of on court time and two hours and 2 hours of strength and conditioning. The patient had a anterior cruciate ligament (ACL) reconstruction on his left knee four years ago and explained even though he has made a full recovery and return to play he isn’t as explosive as he was in the past and still get anterior knee pain from time to time. For Denzel’s programme this need to take into account his very demanding training schedule as well as his issues with knee pain.

Injury analysis

Basketball is a very demanding sport: it tests all aspects of athletic fitness you need to have a lot of spread, agility and balance as well as being strong and explosive. Being able to stop quickly, land efficiently after a jump and change direction are all essential parts of basketball these actions are also reasons for an ACL injury. (Leppänen, M et al 2017). Patellofemal pain syndrome is one of the most common knee injuries and accounts for 25% of all knee injuries treated in sport injury clinics. Factors that can contribute to the patient being in pain are improper bio mechanics, excessive exercise, and soft tissue tightness and muscle weakness. (Fredericson, M et al 2006). Patella tendinopathy is also referred to as jumpers’ knee it is cause by repeated stress to the patella tendon (Cook, J et al). High levels of physical output, muscular imbalance and tight muscles are all factor that may contribute to the development of patella tendinopathy (Gaida, J. E. at el 2004).

Screening and testing

Due to the UK being a part of a global pandemic and a national lock down being implemented is wasn’t able to complete any testing or screening to nevertheless Before having a patient take part in a training program I would have completed these two steps to make sure the patient was in good health and able to complete the programme to the best of their ability. Completing the initial testing would have allowed me to create a baseline for my patient which would have allowed me to track the progress my patient from beginning of the training program till the end of the training program. During the health screening process I would have had the patient complete a Physical activity readiness questionnaire (PAR-Q) and a fitness facility pre-participation screening questionnaire. This questionnaire determines if the patient is at a high risk, low risk or medium risk of any unwanted, potentially life threatening responses from exercise which may also highlight any underlying health issues which would need to be addressed before training can begin. (Cardinal, b. J et al 1996).

Warm up

During every training session the patient should undergo a warm up before starting the exercises. The first part of the warm up will start with five minutes on an aerobic machine: treadmill, stationary bicycle, rowing machine and or an elliptical machine at a low to moderate intensity. (Taylor, K. L et al 2009). Doing this raises muscle temperature which allows for enhancements in the rate of nerve impulses, vasodilation to increase blood flow, range of motion and Muscle glycogen degradation. (McGowan, C. J et al 2015). Conducting a warm up prior to training also reduces your risk of injury due to these same reasons.(Fradkin, A. J et al 2006).Post initial aerobic phase the patient will perform a set of dynamic stretches as performing stretches that use active range of motion have shown to improve speed, power, endurance, flexibility and strength. (Frantz, T. L et al 2011).

Cool down

After each training session the patent will perform a five to fifteen minute cool down. A cool down normally consist of a set low to moderate intensity exercises within an hour of completing training (Van Hooren, B, et al 2018). An active cool down can aid in the accelerated recovery of the cardiovascular and respiratory systems, promote faster reduction of metabolic products and a decrease in muscle soreness. (Van Hooren, B, et al 2018).

Referencing

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