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Describe how resistance training contributes to healthy aging.

Introduction-

The importance of maintaining training as you age becomes more widely acknowledged. Promoting healthy aging through physical activity has become crucial for improving quality of life, lowering the risks of age related conditions and mental wellbeing. Adults have shown significant advantages from resistance training which typically consists of workouts that increase endurance and muscle strength using; weights, resistance bands and/or bodyweight exercises. Studies by (*Hunter et al., 2004; Liu & Latham, 2009*) have shown that the training improves bone density, natural loss of muscle mass and helps improve metabolic and cardiovascular. By doing an in-depth analysis of the benefits and negatives of resistance training, inputting some suggestions and adding a conclusion on this topic's general importance, this evaluation explores how it promotes healthy aging.

Pros & cons of resistance training/recommendations for it -

Resistance training promotes healthy aging and has multiple benefits. One of the biggest benefits is its potential for preventing sarcopenia, a progressive loss of muscle and strength. Regular strength training has been proven to drastically increase muscle mass, decrease weakness, and boost mobility in elderly people (Fiatarone et al., 1994). Resistance training is also important in increasing bone mineral density, which is needed in order to avoid osteoporosis as well as decrease the risk of fractures in the elderly, as stated by Vigo et al. (2012). Additionally, resistance training promotes metabolic health and assists in avoiding or preventing the treatment of type 2 diabetes, which is becoming more common in the elderly, by improving insulin sensitivity and controlling blood glucose levels (Foley et al., 2012). As resistance training produces endorphins and other neurochemicals, there is also strong proof that it improves mental health by decreasing feelings of depression and anxiety (Blake et al., 2009).

Resistance training offers many advantages, but there are also certain risk factors and some disadvantages to take into consideration. The risk of damage is the most obvious concern, especially when it comes to if their activities are being done correctly or with minimal intensity. According to (*Bemben et al. 2004*), elderly people do not gradually adjust to resistance training or follow a planned schedule that incorporates their level of fitness, they may have pain in their joints, feel fatigued or have muscle discomfort. Professionally monitored resistance training programs are crucial for elderly people to decrease these risks and improve the benefits. Proper technique, steady improvement

and tailored exercises based on each person's athletic and health abilities should be the main priorities of these programs (Westcott, 2012). For improving general mobility, cardiovascular health and physical performance, resistance training is also beneficial when combined with aerobic workouts and flexibility training (Chodzko-Zajko et al., 2009). As people age, regular meetings with healthcare professionals can help guarantee that the training program stays safe and practical.

Conclusion -

In conclusion, resistance training has numerous benefits for both your physical and mental health, making it an essential part in healthy aging. With the proper guidance and personalised training programmes, the risk related to poor techniques or overload can be avoided. Resistance training should definitely be more commonly advised and offered as a part of public health initiatives for the older generation due to its positive impacts on bone density, muscle mass and general physical functions. (Rossi et al., 2020) states that, We are capable of helping elderly individuals maintain their independence by improving their quality of life and lowering the risk of experiencing age related health issues by recommending resistance exercises.

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