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Beyond the Spine

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Lead Patients to the Fountain (and Foundation) of Youth

Overcoming Objections to Exercise in Your Patients Who Need It the Most

We're all seeking the fountain of youth and marketers are capitalizing on it. (Global demand for anti-aging products, treatments and services was valued at 140.3 billion in 2015, according to Zion Market Research.¹) The truth is there is no magic pill or cream to prevent aging, but there's something that comes darn close: *exercise*.

Exercise can slow some of the changes we regard as "inevitable" with aging; and can also help those who are already in the geriatric population regain strength, health and vitality.

It's also never too late to start. New research from the Lifestyle Interventions and Independence for Elders ([LIFE study](#)) found that sedentary individuals between the ages of 70-89 vastly improved their function after enrolling in a fitness program (walking and walking-based strength, flexibility and balance training). In addition, those who participated in at least 48 minutes of physical activity a week showed an impressive reduction in their disability risk.²

And this is just the latest in the growing wealth of research that supports the value of aerobic and resistance exercise, especially in the geriatric population. Improvements are seen in weight and body composition, greater insulin sensitivity, decreased falls / improved balance, better psychological health, less frailty and improved function. With exercise, resting blood pressure lowers, and there is a reduction in the risk of all-cause mortality.³⁻⁵ Studies also have shown that the stronger the back and leg muscles are, the higher the bone density is in the region.⁷

These benefits are so widespread that they should encourage us to recommend exercise to *all* our elderly patients. However, both doctors and their patients often hesitate to pursue exercise as part of a care plan due to several concerns, namely hypertension / atherosclerosis, osteoarthritis and deconditioning / low muscle mass.

We've all heard it before: "I'm too old to start exercising, doctor." "I'm too frail." "My joint pain is too great." "But what about my heart?" Ironically, the very same concerns that "prevent" the patient



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from exercising can actually worsen with lack of mobility, which only fuels a cycle of health and fitness decline.

Here's what you and your patients need to know in order to overcome the roadblocks in our quest for the fountain of youth.

Hypertension / Atherosclerosis

Hardening and constriction of the arteries cause a decrease in blood flow, especially to the extremities. The heart responds by increasing blood pressure, trying to force the blood through the restricted areas. When resting measurements are consistently above 140 mmHg (systolic) and/or 90 mmHg (diastolic), the patient has hypertension.

Some patients will need medication to control their high blood pressure, especially in the higher age ranges. While these drugs do decrease the likelihood of strokes and heart attacks, many patients are hesitant to exercise and become even more sedentary.

There is good evidence that exercise is not contraindicated and is actually beneficial – and recommended – for patients taking blood pressure medications.⁸ Exercise of lower intensity reduces the risk of injury and cardiac complications,⁹⁻¹⁰ and makes exercise feasible for most patients.

Considering the low cost, absence of side effects, and additional cardiovascular benefits, the use of exercise to lower blood pressure should be appealing to health care practitioners.

Osteoarthritis

Degenerative arthritis is a common musculoskeletal disorder in older adults, causing significant amounts of physical disability. [Osteoarthritis](#) afflicts an estimated 20 million Americans, with the knee being the most commonly affected weight-bearing joint.¹¹ In addition to pain with movement, the involved joint(s) lose flexibility and strength.

Contrary to what is commonly believed, moderate exercise does not increase the risk for osteoarthritis or exacerbate it; rather, it has been found to improve function and reduce pain.¹⁶

Because the hip and knee are primary areas affected with osteoarthritis, it's important to decrease stress on those joints during activities. Research indicates that custom-made flexible orthotics support the pronated foot, allowing it to provide better shock absorption. This, in turn, puts less stress on the knee joint¹²⁻¹⁴ and improves the [Q angle](#) of the hip, which puts less stress on the hip.¹⁵

Deconditioning / Low Muscle Mass

National surveys reveal that 70 percent or more of older adults do not engage in *any* regular exercise.¹⁷ This compounds loss of strength and muscle mass, and increase in body fat, that is normally seen in aging. In fact, this change in body composition is tied to many factors, including



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poor nutrition, decreased physical activity, increased disability and disuse, type II muscle fiber atrophy, and drug side effects.

ACSM / NSCA Guidelines

Two major organizations – the American College of Sports Medicine¹⁸ and the National Strength and Conditioning Association,¹⁹ have published recommendations to be followed when advising older adults to exercise. Both state that aerobic and resistance exercises for older populations are generally safe and can be extremely effective, both for treating specific problems as well as avoiding general disability. These guidelines encourage the use of regular physical activity, along with specific exercises to improve endurance, strength and proprioception.

Research has found that even high-intensity training of frail men and women in their 90s is safe and leads to significant gains in muscle strength and functional mobility.²⁰

Since isometric exercises may increase systolic blood pressure, isotonic (or "dynamic") exercises are considered safer for building strength.²¹ Elastic resistance tubing is an excellent method to provide strengthening dynamic exercise without the need for machines or heavy weights.

Older adults often have difficulty figuring out complex machines and may not be able to handle exercise weights and barbells. A home-based program using elastic tubing can provide significant gains in strength and flexibility.²² These exercises can be done standing or sitting, providing an additional weight-bearing stress to the muscles and bones.

Selecting the best exercise approach for an older patient is not difficult, but does require some special considerations. A review of the patient's health history is necessary in order to identify any complicating or restricting factors. Custom orthotics can help ease shock and protect fragile joints. A closely monitored home exercise program allows the doctor of chiropractic to provide cost-efficient, effective exercise recommendations for patients of all ages.

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