

INTRODUCTION

You will find in these pages an exercise program that has been designed and used by “yours truly” for the last few years. My objective was to develop an efficient exercise program that would minimize the risks of injury.

I used to be a martial artist, mainly involved with karate, although in my younger days I also practiced judo and aikido. More recently I have enjoyed Japanese sword fencing. Since age fifteen I have exercised with weights. I now believe it was a mistake to have started working out with weights so early while my body was still developing.

It is a sad truth that as I age my physical abilities are no longer what they used to be. Injuries occur more easily and take longer to heal. That, I believe, is true for everyone. To think that we can ignore aging and continue to work out in the same way we always have is, in my opinion, a great mistake. Changes in our routine must be made and our goals must be different. Instead of fighting aging head to head, a more useful approach is to use its own energy to slow it down. We can watch and analyze its process in order to defeat it. No longer should we work to be the strongest or to develop hypertrophied muscles. Instead, we now aspire to have a well-toned, well proportioned body in which to live our years as healthy, functional and disease free as we can.

After many years of neurosurgical practice (in the last few years dedicated to spine problems) I have seen and examined people of all ages. I have observed that many ailments and injuries are related to the fact that we lose muscle strength and muscle mass as we age. While daily activities keep some muscle groups in relatively good shape, others are underutilized. As it turns out, those underused muscles are the ones that are the most needed in our older days. For example, I have observed that muscle weakness often precedes degenerative arthritis in the spine. Not everyone would agree with this. Many think that it is the arthritis that first compromises the nerves. According to them, poorly working nerves affect the muscles, which results in atrophy. In the absence of disease, I have very rarely seen arthritis progress in the spine without some form of muscle wasting or imbalance being there first. In my experience, muscle wasting almost always precedes joint degeneration.

My challenge was therefore to design an exercise program that would take the natural changes that occur as the body ages into consideration in order to obtain maximum benefits with a minimal risk of injury.

While simply moving around in our day to day activities is good exercise, it is also important to actually build and maintain the muscles used for any sequence of movements. Routine activities are not sufficient to maintain a satisfactory level of bulk and strength.

This is especially important to remember when it comes to holding the spine in position. The spine is the central

axis which supports the rest of the body and is involved in every movement. If the muscles which are required to hold the spine in place are chronically underused they remain in a weakened state. A weakened muscle is unable to protect itself against the unusual stress that can result from a fall, improper lifting, or even a sudden twisting movement.

The weakened muscle is then either damaged or unable to function properly resulting in abnormal stresses on the vertebrae or torn ligaments.

Weight training, as distasteful as it may be for some, is a necessity for all. There is no magic pill or vitamin that will rebuild wasted muscles. Even a youth pill would not help because, even in young people, unexercised muscles waste away. Joints, ligaments and bones are stronger and more resilient in youth, so we do not notice those problems.

I STRONGLY DISCOURAGE WEIGHT TRAINING BEFORE THE BONES HAVE FULLY MATURED AND FULL HEIGHT HAS BEEN ACHIEVED.

I hope that the concepts and explanations found in this book will make as much sense to you as they do to me. The program is not based on a “so many weeks to strength, or to a great body” formula. In fact, it is not really a program but a series of ideas and concepts that one must hard wire into his/her brain in order to develop a lifestyle that includes regular, efficient, exercise, of which weight training is an important part.

While most concepts presented here are straightforward and quite mechanical, there is an esoteric aspect to this training method. If you are not interested in ideas regarding subtle energies you can completely discard this aspect of the program and still realize benefits from the practical, down-to-earth material that comprises most of this book.

It is a fact that movements in space, when done in a certain way, affect the mind. We note this experiential relationship between mind and motion in dancing, Tai Chi, Qi Gong, and in the martial arts. The Sufi whirling dervishes use fast rotation to place themselves into a trance. Martial artists use carefully choreographed movement to center themselves and balance their energies. The mind-body relationship I am referring to is not the rush of endorphins that occurs with heavy exercise such as long distance running. It is something subtler and has to do as much with the shape of the movement as with its rhythm. To me, it is most obvious when performing the whirling motions of (Japanese) sword fighting, especially when using two swords. It is a feeling of connection with the whole, almost a spiritual experience.

Fencing type movements cannot really be done in traditional weight training and this program has been designed to be able to use weight machines that should easily be available at most gyms and health clubs. However, it is possible to use rhythm to achieve results not as intense but still beneficial. I will therefore briefly introduce some mathematical concepts one can use to develop useful rhythm in an exercise routine. These include the

Fibonacci numbers and the golden ratio, Phi (in Greek), popularized by the bestselling “Da Vinci Code”.

I hope that you find this book enjoyable, useful and that it helps inspire you continue to exercise and remain active, healthy and fully functional as you age gracefully.

Michael A Amaral, MD, FACS