

COMPLEX MADE SIMPLE: PASTA TRANSFER

HandLab's byline is "Complex made Simple," so we are offering this extremely simple idea for use with your patients.

Gross grasp is usually the earliest function desired following immobilization of the hand after injury/surgery. As the patient's hand regains motion, progressive exercise activities are needed requiring increasing finger flexion in a synergistic pattern with wrist motion. Loading of both the intrinsic and extrinsic muscles is important because the intrinsic hand muscles are important contributors to grip power. Additionally, any activity progression needs to be simple, inexpensive, and easily replicated by the patient at home. All that is needed for this exercise is a couple of containers/bowls and some pasta.

The activity consists of grasping as many pasta shapes in one container as possible, holding the pasta while transferring to another bowl (with wrist slightly extended), and then releasing...ideally without dropping any pasta!! Instruct the patient to spread the fingers as much as possible to grasp as much pasta as possible, which specifically provides a workout for the interosseous muscles. Although this activity does not appear to have significant resistance, the level of fatigue can be surprising even for an uninjured hand.

Start with a size and shape of pasta the patient can successfully grasp but that requires some effort to hold onto during transfer. If finger flexion is severely limited, the beginning point may be a larger shape such as bow ties, large macaroni, or large shells, etc. As finger flexion increases, choose decreasing sizes of pasta shapes, eventually progressing to small pasta, rice, or even small birdseed. (Try transferring birdseed with your uninjured hand!) The grading of

the activity can be controlled by 1) the size of the containers, 2) the size and volume of pasta, 3) the number of transfers required, and 4) the distance between the bowls/containers.



Patient transfers rice from one container to another

The benefits to the hand are numerous: 1) adaptively shortened interosseous muscles are given a contract-relax workout, 2) finger flexion and extension activates lymphatic pumping in the hand, 3) wrist stabilization needed for transfer reintegrates the normal tenodesis pattern and 4) immersion into the pasta provides sensory input/desensitization. This is the perfect example of a multifaceted exercise accomplished with a very simple, inexpensive solution.