

Keys to successful weight loss management:

- Identify a reasonable weight goal.
- Prevent additional weight gain.
- A combination of healthy eating and exercise is the key to weight loss and the prevention of weight gain.
- Reduce body weight by 5-10% of initial body weight with a sustained weight loss of more than 10% of initial body weight to maximize long-term health benefits.
- Progressively increase physical activity levels to at least 150 minutes (2.5 hrs) of moderate intensity physical activity per week. Progress to 200 – 300 minutes (3.3 – 5 hrs) per week or more than 2000 Kcal of energy expenditure.
- Reduce energy intake by 500 – 1000 Kcal per day combined with a decrease in dietary fat of less than 30% of total energy intake.
- Incorporate resistance training exercises into a weight loss program to improve strength and function and minimize loss of lean body mass.

Physical Activity Tips:

- Low to moderate intensity exercise (50 – 70% MHR - maximum heart rate) for a duration of 30 minutes or longer.
- Choose modes of exercise on the basis of individual preference and availability of resources.
- A wide variety of exercise choices should be offered: upper body, lower body, weight bearing, non-weight bearing, resistance, anaerobic and aerobic exercises.
- Use an exercise diary to record the days, minutes and types of exercise.
- Include resistance exercises at a moderate intensity 2-3 times per week. Start with 1-2 sets of 8-15 repetitions for each major muscle group.
- Increase daily physical activity through “nonstructured” exercise participation. Taking the stairs or parking at the far end of the parking lot. □

Sports Health & REHAB CENTER

On The Canal

February 2005



Weight Training

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A) DEFINITION -

- Strength Training - weight training or resistance training.
- Competitive Sports - weight lifting/power lifting/bodybuilding.

B) BENEFITS -

- May not see significant changes in muscle size in pre-adolescents but can achieve significant strength gains. The American Academy of Pediatrics 2001 policy statement on strength training for children and adolescents says, “*Studies have shown that strength training, when properly structured with regard to frequency, mode (type of lifting), intensity, and duration of program, can increase strength in pre-adolescents and adolescents.*”
- May improve sports performance. The American College of Sports Medicine has stated that *properly designed and competently supervised strength training programs may enhance motor fitness skills (e.g. jumping, sprinting) and sports performance.*
- May have cholesterol lowering effect.
- Helps lead to fat loss and weight maintenance with improvement in lean body weight.

C) PROBLEMS -

- Improve sense of character, self esteem, social functioning.
- May help prevent injury.
- Low back injuries - stress fractures (spondylolysis - a bony break or slip), disc degeneration (wearing out), herniation (slippage), or muscle strain.
- Shoulder injuries - subluxation (slipping out of joint secondary to stretching or tearing of ligaments and muscles).
- Muscle strains (common).
- Bony/growth plate trauma fractures (rare).
- Trauma from dropping or losing control of weights (rare).
- Increased blood pressure - transient (short-term or temporary)?
- Stroke/pneumothorax (very rare).

D) GETTING STARTED -

- Body weight exercises mastered (push-ups, pull-ups, sit-ups).
- Warm-up 10-15 minutes (walk, jog, stretch muscles to be strengthened).
- Do a well-balanced program (major muscles) - upper body (shoulder girdle), trunk, (spine, abdominals), lower body (legs, hip girdle).
- Cool down 5-10 minutes (walk, stabilization of blood pressure and heart rate).

E) PRE-ADOLESCENT GUIDELINES - (8-14 years of age) - can gain strength and be safe with these guidelines -

- Have program designed by a professional with knowledge of weight training.



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CRYSTAL CLINIC

Sports Health & Rehab Centers



CRYSTAL CLINIC

- Properly supervised by someone with knowledge of strength training to ensure proper technique/safety.
- No maximum lifts.
- No more than 30 minute work-out after warm-up.
- No back-to-back days and no more than three days per week.
- Discontinue work-out if horseplay/goofing off.
- Avoid boredom/fatigue (when most injuries occur).
- Combine with fun activity (swimming or games).



Causes of Shoulder Pain

By Scott McMillen, D.P.T.
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Shoulder pain is a common complaint among athletes of all ages. Shoulder injuries have been commonly seen in throwing athletes and swimmers, but also in workers whose jobs involve heavy lifting and repetitive or overhead arm activity. Improper weight lifting technique in athletes has also been implicated as the cause of shoulder pain/injury.

Shoulder pain can result from a number of factors. The first possible mechanism of injury is structural abnormalities in the shoulder. Some people have a curved or hooked acromion. This is the bone at the top of the shoulder and if it is curved downward, the amount of space underneath it is decreased. The result can be irritation of the rotator cuff musculature which runs through this “sub-acromial” space. People can be born with the structural abnormality, or it can be acquired as the result of calcium deposits or a previous injury. Muscle weakness can also cause shoulder pain. Often the weakness is found in the rotator cuff muscles. The rotator cuff comprises of four muscles that work together to hold the arm in the shoulder socket. Weakness in these muscles will result in extra movement of the arm in the shoulder socket, again causing irritation of the surrounding tissues. Scapula (shoulder blade) muscle weakness can also result in pain in the shoulder, and scapular strength is often overlooked during shoulder treatment and strengthening. The scapula acts as a base of support for all arm movement and it needs to be strong enough for efficient and pain-free arm function.

The scapula must also be mobile enough to place the shoulder socket in the most effective position for specific arm activities, and loss of this mobility is a third possible cause of shoulder pain. Proper stretching, both at the scapula and at the shoulder joint itself can help prevent the onset of pain. The shoulder joint is surrounded by muscles, ligaments, and a thick capsule. Decreased flexibility in any of these tissues affect the amount of shoulder motion available and will also affects the mechanics and efficiency of the shoulder motions. In this case, the athlete or worker may injure other joints in addition to the shoulder. Shoulder tightness can cause problems but, as many pitchers know, too much shoulder “looseness” is also bad. Shoulder “laxity” or instability can result not only in pain from overuse of the shoulder, but can also be the cause of recurring episodes of shoulder subluxation or dislocation. In this case, instead of stretching, specific exercises must be used for shoulder strengthening to regain the normal

- F) LIFT-OFF - (Over 14 years of age and experienced at weight training) -
- Never lift alone - make sure partner or spotter is present in the room.
 - Use work-out card/log to monitor progress.
 - If athlete cannot do 10 repetitions/sets with a given weight, the weight is too heavy and should be decreased.
 - If athlete does 15 repetitions/sets too easily, increase the weight.
 - When athlete can do three sets of 15 repetitions at three consecutive sessions, add weight.
- G) SPECIFICS -
- Work intrinsic shoulder muscles, with special focus on the anterior deltoid, supraspinatus, middle deltoid, posterior deltoid, internal rotators, and external rotators.
 - Work upper back (scapular stabilizing muscles) with resistance exercises, including shoulder shrugs, bent-over lateral raises, bent-over rows, bench rows, seated rows, and latissimus pull-downs.
 - Work lower back and abdomen with resistance exercises, including lumbar paraspinous stretching, 3-direction crunch sit-ups (for rectus and oblique abdominals), and reverse sit-ups (for the lumbar paraspinous muscles).
 - Work upper body - biceps/triceps curls.
 - Work lower extremities - leg press, squats (very carefully). To work hip girdle - quad/hamstrings with knee extension and hamstring curls. □

The SportsHealth & Rehab Center lost one of its finest on January 22nd with the untimely and sudden death of John Gibel. John was the link to many athletes, coaches, and friends of the SportsHealth & Rehab Center. John was a big man, physically, with a very big heart and he creates a big hole to fill at the center. He had a special way of caring for people who came in contact with SportsHealth & Rehab.

Along with being the outreach coordinator at SportsHealth & Rehab, John had a syndicated comic strip known as “Flo and Friends” which took a lighter view of the aging process with a byline known as “Aging with an Attitude”. Among John’s many other accomplishments he currently was the race director of the Akron Marathon’s Kids Run, which included “Special Needs” kids in the Akron area. He also was working on the fitness expo known as “Families in Motion”. He will be remembered in those special programs as they go forward and also in a special way by all those who knew him at the SportsHealth & Rehab Center.

Physical therapy is important in the treatment of shoulder pain from any of these causes, and the most important step is to first determine which of these factors is the culprit. Once that is determined, the pain can be relieved and further injury can be prevented either through strengthening, stretching, or a combination of the two. Often, treatment can be as simple as changing a person’s posture (think about what happens to your shoulder blade position when you sit up straight versus when you slouch), changing a person’s habits at work and during sports, or modifying the person’s workplace. As with any injury, early diagnosis and treatment of shoulder pain is important to prevent further problems down the road.□



Eating Healthy and Staying Fit

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Approximately 97 million people in the United States are overweight or obese and the World Health Organization has declared obesity a “global epidemic.” The increased consumption of energy in the diet has made a major contribution to this epidemic. Physical inactivity also has made a significant contribution to the obesity epidemic. The American Heart Association classifies obesity as a major cardiovascular disease risk factor. Other adverse health conditions associated with obesity include: hypertension, hyperlipidemia, diabetes, osteoarthritis, colon and breast cancer and gall bladder disease.

Body Mass Index (BMI) is a practical and reliable tool for evaluating health risk in people who are overweight or obese. BMI is highly correlated with body fat. BMI is calculated as weight in Kg divided by height in meters squared times 10,000.

$$\text{BMI} = (\text{weight (kg)} / \text{height (m)}^2) \times 10,000$$

Classifications of BMI:

Weight Classification	BMI
Underweight	< 18.5
Normal	18.5 – 24.9
Overweight	25.0 – 29.0
Obese	30.0 – 39.9
Morbidly Obese	≥ 40

Both decreasing dietary energy intake and increasing physical activity is essential for the long-term maintenance of a healthy body weight. Individuals will lose weight when they reduce dietary energy and fat intake and engage in greater amounts of lifestyle physical activity.

Benefits of weight loss and exercise include:

- Lower blood pressure
- Lower risk of developing Diabetes
- Lower cholesterol and triglycerides
- Raise cardioprotective HDL cholesterol
- Reduce risks of cardiovascular disease
- Reduce symptoms of osteoarthritis

Data from several studies have shown that even a 10% loss of body weight can provide health benefits in overweight and obese individuals. A weight loss of 10% is an appropriate and attainable initial goal.

The key to successful weight loss is to begin by setting clear and realistic goals. Start by making small steps to reach these goals. The best goals are **attainable, measurable, and flexible**. One should develop weekly, monthly, yearly and lifelong goals. It is important to set realistic attainable goals and to make a firm commitment to work toward these goals every day. Make gradual changes and build upon successes. Add a little distance when walking or running or add a few more steps when walking up flights of stairs. Make intentional efforts to include increased physical activity in activities of daily living; such as parking in the far end of the store parking lot or taking the stairs instead of the elevator. Lifestyle changes become more manageable by using small goals as building blocks to larger goals.

Weight loss isn’t the only marker of success, but consistently weighing oneself weekly helps one to know if you are making enough changes to meet your goals. You can expect to lose about 10% of your initial body weight in the first 6 months.

Chose appropriate rewards and make a firm commitment to yourself that you will do what it takes to achieve the reward. Avoid rewards that sabotage your progress, such as eating dinner out or having a dessert. You will naturally feel more motivated on some days and less on other days. Do not let a minor setback stop you. Begin again the next day and focus on the long-term goals. Avoiding temptations to give in to excesses will make you successful in the long run.

Here are some ideas to give you extra motivation:

- Picture yourself enjoying the reward
- Keep a simple record of progress and setbacks
- Plan alternatives ahead of time
- Use post-it notes to post inspirational messages
- Do not let minor setbacks stop you cold
- Have a friend, spouse, child or co-worker join you

