



Exercise and Fitness

For people with or without skeletal dysplasias, exercise is extremely important and highly recommended!

Why should I exercise?

Exercise will...

- Improve muscle **strength, endurance, and flexibility**
- Improve **coordination**
- Improve **digestion**
- Promote **relaxation**
- Help with **weight management**
- Improve **self esteem**



What does the hospital recommend?

The Kathryn O. and Alan C. Greenberg Center for Skeletal Dysplasias at the Hospital for Special Surgery incorporates a team approach as the most effective way to work with a patient with skeletal dysplasia. An orthopedist, a geneticist, a genetics counselor, physical therapist, a nutritionist and a social worker will evaluate each patient upon their visit to the Center. These professionals together will monitor any neurological and/or orthopedic complications that may arise. This team approach will provide the patient and family with comprehensive recommendations for diet, exercise, and extracurricular activities suitable for the patient. Recommendations for therapy and exercises that are safe may be made to promote function, improve mobility, strength, or assist with pain management! Overall, the goal is to help the patient and family achieve their personal fitness goals!

What activities are safe for me to do in my own time?

The A.H.A recommends that for the best health benefits, one should exercise for at least 30 minutes a day at least five days a week and children should exercise at least one hour, 5-7 days/week. Exercise for people with skeletal dysplasia should be moderate, or aerobic, and low to moderate risk activities. Low risk activities are recommended because they are less strenuous and jarring to the joints and are at low risk for collision. You should feel encouraged to engage in the following low-risk activities, and if precautions are taken and your doctor agrees, then moderate-risk activities may be acceptable. **However, it is always a good idea to check with your doctor before engaging in any sport activity as the risks can change depending on the individual diagnosis and any other medical issues!**

Low-Risk: Less strenuous on the joints with low risk for jarring, and less risk of collision. (Some examples: swimming, archery, badminton, bowling, flat water canoeing/kayaking, Frisbee, golf, sailing, scuba diving, table tennis, Tai-chi, T-ball, yoga, Pilates, walking)

Moderate-Risk: Be sure to use all protective equipment, receive training, and use common sense! (Some examples: Softball, squash, tennis, volleyball, windsurfing, baseball, basketball, bicycling, body building, cheerleading-the cheering, not the jumps and flips), soccer, kayaking, flag football, jump rope-not for people with osteogenesis imperfecta))

What is the ideal activity for patients with skeletal dysplasias?

Swimming! At the Center for Skeletal Dysplasia at HSS we recommend low risk, low impact activities such as swimming, bike riding, and walking. Swimming is ideal because the buoyancy of water allows for a low impact exercise environment for your bones and joints. Swimming is less jarring to the joints, muscles, and organs, and, it's fun!

Swimming...

- Promotes **strengthening, endurance** and **flexibility**
- Promotes **proper posture** and **alignment**
- Promotes **cardiovascular fitness** and **relaxation**
- Encourages **socialization**
- Improves **self esteem**



What treatment procedures are there to help me achieve personal goals?

For Personal Goals

- Strength training
- Endurance training
- Trunk stabilization/Core Strengthening (e.g. Pilates)
- Proper alignment, posture, and body mechanics
- Independent mobility

Treatment Procedures

- Physical Therapy is recommended to improve ROM and controlled flexibility
- Therapeutic exercises
- Breathing activities (Yoga is ideal)
- Mobility training (wheelchair, stroller, gait training)
- Adaptive seating for feeding/transport/alignment
- Environmental Adaptations (stools vs. chairs, etc.)
- Swimming programs

In Conclusion...

- **Consult your doctor** before starting any vigorous activities
- Use any and all **safety equipment!**
- **Consult a trained professional** to do it correctly and safely
- If you are susceptible to neck injuries, an evaluation of your cervical spine stability is recommended every 2-3 months while participating in the physical activity
- Use **common sense**
- **Enjoy yourself!**

This handout is meant as an educational supplement for the information exchange between a patient and the members of his/her medical team, and should not be used as a replacement for consultation with a medical professional. It is important to address all questions and concerns with your physicians and genetic counselor. If you have any questions about this handout, or any medical questions or concerns, please do not hesitate to contact the Kathryn O. and Alan C. Greenberg Center for Skeletal Dysplasias: (212) 774-7332.