A toddler recovering from serious burns develops ongoing health problems that make it difficult for him to walk and use his hands during play. An elementary school student with muscular dystrophy is unable to move around his school including his classroom, the playground, and the lunchroom. He falls frequently when walking and may need to use a wheelchair part of the day. A teenager with multiple disabilities including cerebral palsy needs to learn job skills. Her success on the job depends on her being able to get on and off public transportation and being able to sit for long periods with good posture and head control.

All of the students mentioned above would benefit from physical therapy. A physical therapist might assist the parents of the child with the burn by showing them how to carry and safely bathe the child. The therapist also works with the youngster’s muscles to ease them back into movement. The student with muscular dystrophy would benefit from practice learning how to safely get in and out of his classroom chair, to use a wheelchair independently on the playground and school field trips, and to participate in modified physical education activities. After evaluating the teenager with cerebral palsy in the community and at the vocational site, the school physical therapist recommends necessary architectural changes and transportation modifications to make the job site more accessible, and helps the student learn proper positioning techniques to use when sitting for long periods of time.

Every day, almost one million Americans some of them children are treated by physical therapists in hospitals, clinics, health agencies, and private practices. Children can also receive physical therapy in schools or homes. Of the approximately 90,000 active physical therapists in the United States, three percent are employed by schools. Through the federal law called Individuals with Disabilities Education Act, these professionals serve infants and toddlers in their home or day care and provide services to students ages 3-21 in education settings including preschools, schools, and vocational-training sites.
Nature of Work

Physical therapists provide treatment to relieve pain, limit or prevent permanent physical disability, and improve the mobility of people who have an injury, disease, or disability. These professionals use the properties of heat, cold, exercise, electricity, ultrasound, massage, and education to relieve pain, promote healing, and improve function.

Physical therapists who work in the schools, work with other members of the special education team and the family to identify the problems interfering with a student's education program. During an assessment of the student, the physical therapist might measure walking and other mobility skills; daily activities such as dressing and toileting; and positioning and posture during classroom learning, play, and on the school bus. The physical therapist will also measure joint range of motion and mobility, muscle strength, limb length and circumference, and sensorimotor performance.

Testing usually occurs in the student's school or home. (A school physical therapist who works entirely with infants and preschoolers, for example, may see all the children in their homes rather than at the school.) Parents, guardians, or caregivers are always involved to some degree. Generally speaking, the younger the child, the more involved the physical therapist is with the parents. Following the testing, the physical therapist, as a member of the special education team, helps to decide if the student requires special education and then collaborates with the other education personnel and parents (and sometimes the student) to write specific goals, objectives, and a treatment plan. For children aged 3-21 this plan is called an Individualized Education Program. For children from birth to 3 years old, this is called an Individualized Family Services Plan.

Throughout the course of treatment, physical therapists record the progress a student makes towards meeting his or her goals and objectives. Sometimes, a physical therapist will recommend that particular equipment be obtained for the child, or that certain modifications be made in the child's home that would encourage independence yet ensure safety.

In school settings, physical therapists usually work as a team with occupational therapists, speech-language pathologists, special education teachers, and other professionals. The caseload, or number of students assigned to each physical therapist, varies greatly among schools and depends on several factors. In addition to collaborating on treatment for individual students, physical therapists also serve as a resource to the school faculty.

An adapted physical education teacher, for example, might ask the school's physical therapist for fun exercise ideas for a preschooler who has cerebral palsy. Suppose the youngster uses a wheelchair and the adapted physical education teacher wonders if the child can safely leave the wheelchair and move around on a floor mat during class. The physical therapist would consult the child’s IEP, make suggestions to the teacher, and perhaps work individually with the teacher and child. The physical therapist would visit the preschool physical education class and demonstrate some exercises that every youngster could enjoy.

A typical responsibility for physical therapists in secondary schools is to help develop recreation and leisure programs for a variety of older students with special needs. They assist students with mild disabilities who are integrated into regular physical education classes, as well as students with severe disabilities who are enrolled in special classes. They help ensure that playing fields, locker rooms, showers, etc. are accessible to all students. Physical therapists also teach students how to prevent injuries to their muscles, bones, joints, heart, and lungs. They play an important role in educating students without disabilities about the abilities of students with special needs especially with respect to athletics and lifelong fitness programs.

Education Required

Physical therapy degrees are offered by 146 U.S. colleges and universities. A bachelor's degree in physical therapy is the current minimum education requirement for this profession. However, the profession's preferred entry level degree is at the postbaccalaureate degree level; over 60 percent of physical therapist programs are at this level. In addition to a degree in physical therapy, all 50 states require a license to practice. It is awarded when candidates pass a state administered national exam.

Prerequisite courses for physical therapy programs usually include biology, physics, chemistry, psychology, English, computer literacy, and human anatomy/physiology. A physical therapy college curriculum typically includes classes in human anatomy, pharmacology, physiology, human growth and development, examination procedures, therapeutic interventions, and clinical sciences. Students also must take a supervised clinical practicum applying physical therapy in a hospital, school, or other setting that provides a variety of learning experiences.
Charlotte Murphy
Physical Therapist
Montgomery County, Maryland

Charlette Murphy is a physical therapist with the Montgomery County school system and is assigned to an Infants and Toddlers Program. She earned a bachelor's degree in physical science and allied health from Howard University in Washington, DC, in 1981, and has worked full time in physical therapy since then. Like many physical therapists who are employed by schools, Charlette works part time, 20 hours a week. She also works 20 hours in a hospital.

Her caseload of 14-16 children ranges from infants to three olds. They need the services of a physical therapist because they have birth defects as a result of low birth weight, failure to thrive, were born prematurely, have cerebral palsy, or other conditions. She sees a few children on a weekly basis, some once a month, and others quarterly. She sees some children intermittently for several years. One of her most memorable experiences was working with a baby girl who was born prematurely and then continuing to monitor her growth and progress until the child was almost 3.

When diagnosing a child's problems, Charlette collaborates regularly with a physician, speech-language pathologist, occupational therapist, or special educator. She believes that if it takes a whole village to raise a child, "It takes four villages to raise a child with special needs." Charlette records detailed information, goals, and progress on an Individualized Family Services Plan for each child. The goals are usually very specific, such as "The child will walk down the stairs, alternating feet, five times consecutively."

Daily Schedule: Charlette sees 99 percent of children in homes or daycare facilities. Monday is assessment day. On a recent home visit, Charlette met with a child who had difficulty sitting while playing. "Our team determined that this youngster's weak abdominal muscles were a primary reason for her difficulty sitting properly. I provided therapy by working with the child and also showing her mother specific exercises that would strengthen those muscles. If the little girl's problem had been ignored, she would eventually have had trouble walking up or down the stairs. She might have had to crawl, or use the railing to pull herself up the stairs, or maybe she would have not attempted the stairs at all," Charlette explained.

Challenges: "Selecting the right goal for the child is always a challenge. Sometimes I think progress should be made in a certain period of time, but due to various factors, it takes longer. Generally, the families I work with really are a part of the intervention process, and they appreciate the skills of a physical therapist. Some families, however, have difficulty accepting a child's dysfunction. Helping the child can disrupt a parent's routine. For example, with a child who is delayed in walking, it's easier to pick up a child than to wait 3 minutes for him to walk to you."

Satisfaction: "Seeing the children progress is very gratifying, and when the parents and the teachers work as a team, that's a bonus. Occasionally, I see dramatic change in a short period of time that's very exciting. It's satisfying for me to understand how the central nervous system works and then be able to choose the right equipment or exercises and teach parents how they can help their child. Finally, being a physical therapist over a period of years is satisfying because your success rate with goal setting gets easier. There really isn't any substitute for experience in this profession. The first few years there's so much to learn. It's a good feeling to see the results of years of experience."
**Personal Qualities**

Physical therapists are patient, self-assured, resourceful, mature, tactful, and able to work with a variety of people. They have very good listening and verbal skills, since most of their work involves teaching patients how to adapt disabilities for maximum benefit. Physical therapists are efficient in their work and movements when delivering patient care whether moving equipment or walking, bending, stretching, lifting, and kneeling as they provide therapy to clients.

**Job Outlook and Advancement**

Through the year 2005, job opportunities for physical therapists are expected to grow faster than the average for other occupations. The profession, whose practitioners are predominantly female (75 percent), continues to attract both men and women for full-time and part-time careers. The American Physical Therapy Association actively supports and recruits minority students for careers in the profession. The association believes treatment is enhanced when physical therapists and their patients share common language and similar cultures. The trend toward specialization is growing. Some physical therapists focus on orthopedics, pediatrics, sports, cardiopulmonary, geriatric, electrotherapeutic diagnostics, or neurologic physical therapy.

In a recent survey by the American Physical Therapy Association, half of the respondents stated that they practice their profession in multiple settings. In 1992-93, school systems in the United States employed 3,504 physical therapists and had vacancies for 583 physical therapy positions. With additional experience and training, physical therapists can advance in the field by becoming supervisors, administrators, and college teachers.

**How to Prepare for a Career**

High school students interested in this profession should take classes in biology, chemistry, physics, mathematics, English, and social studies. Admission into physical therapy programs in colleges is very competitive, and depends heavily on good grades in high school. Volunteer work in a physical therapy setting is also valuable to help students determine if they have the qualifications to enter the field. U.S. hospitals employ half of all physical therapists nationwide; many of them welcome serious student volunteers.

**RESOURCES**

American Physical Therapy Association
1111 North Fairfax Street
Alexandria, Virginia 22314-1488
1-800-999-APTA
URL: http://www.apta.org

National Clearinghouse for Professions in Special Education
1110 North Glebe Road, Suite 300
Arlington, Virginia 22201-5704
1-800-641-7824
E-Mail: ncpse@cec.sped.org
www.special-ed-careers.org

Photographs by Uniphoto and Mark Regan

The National Clearinghouse for Professions in Special Education is the descriptive title for the National Clearinghouse on Careers and Professions Related to Early Intervention and Education for Children with Disabilities; Cooperative Agreement H326P980002 between the U.S. Department of Education and the Council for Exceptional Children. The contents of this publication do not necessarily reflect the views or policies of either the U.S. Department of Education or the Council for Exceptional Children. This information is in the public domain unless otherwise indicated. Readers are encouraged to copy and share it, but please credit the National Clearinghouse for Professions in Special Education.

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