Lecture (1)

Physical therapy, also called **physiotherapy**, health profession that aims to improve movement and mobility in persons with compromised physical functioning. Professionals in the field are known as physical therapists.

History of physical therapy

Although the use of exercise as part of a healthy lifestyle is ancient in its origins, modern physical therapy appears to have originated in the 19th century with the promotion of massage and manual muscle therapy in Europe. In the early 20th century, approaches in physical therapy were used in the United States to evaluate muscle function in those affected by polio. Physical therapists developed programs to strengthen muscles when possible and helped polio patients learn how to use their remaining musculature to accomplish functional mobility activities. About the same time, physical therapists in the United States were also trained to work with soldiers returning from World War I; these therapists were known as “reconstruction aides.” Some worked in hospitals close to the battlefields in France to begin early rehabilitation of wounded soldiers. Typical patients were those with amputated limbs, head injuries, and spinal cord injuries. Physical therapists later practiced in a wide variety of settings, including private practices, hospitals, rehabilitation centers, nursing homes, public schools, and home health agencies. In each of those settings, therapists work with other members of the health care team toward common goals for the patient.

The profession of physical therapy has evolved significantly in the past three decades. Although it has received substantial publicity, confusion remains regarding its unique characteristics. For example, how does physical therapy differ

from occupational or chiropractic therapy? This chapter's first purpose, then, must be to present and define this profession. To define physical therapy thoroughly, we must present a brief history of its development. A review of the past will demonstrate how the profession has responded to societal needs and gained respect as an essential component of the rehabilitation team. It will also link some current trends and practices with past events.

Patients of physical therapy

Often, persons who undergo physical therapy have experienced a decrease in quality of life as a result of physical impairments or functional limitations caused by disease or injury. Individuals who often are in need of physical therapy include those with back pain, elderly persons with arthritis or balance problems, injured athletes, infants with developmental disabilities, and persons who have had severe burns, strokes, or spinal cord injuries. Persons whose endurance for movement is affected by heart or lung problems or other illnesses are also helped by exercise and education to build activity tolerance and improve muscle strength and efficiency of movement during functional activities. Individuals with limb deficiencies are taught to use prosthetic replacement devices.

Patient management

Physical therapists complete an examination of the individual and work with him or her to determine goals that can be achieved primarily through exercise prescription and functional training to improve movement. Education is a key component of patient management. Adults with impairments and functional limitations can be taught to recover or improve movements impaired by disease and injury and to prevent injury and disability caused by abnormal posture and movement. Infants born with developmental disabilities are helped to teach movements they have never done before, with an emphasis on functional mobility for satisfying participation in family and community activities. Some problems, such as pain, may be addressed with treatments, including mobilization of soft tissues and joints, electrotherapy, and other physical agents.

Progress in physical therapy

New areas of practice are continually developing in the field of physical therapy. The scope of practice of a growing specialty in women's health, for example, includes concerns such as incontinence, pelvic/vaginal pain, prenatal and postpartum musculoskeletal pain, osteoporosis, rehabilitation following breast surgery, and lymphedema (accumulation of fluids in soft tissues). Females across the life span, from the young athlete to the childbearing, menopausal, or elderly woman, can benefit from physical therapy. Education for

prevention, wellness, and exercise is another important area in addressing physical health for both men and women.

Lecture (2)

If you're going or have gone to a physical therapist (PT), you might notice that your chart is full of abbreviations and acronyms. While it might look like Greek to you, each abbreviation has a particular purpose and meaning. To keep yourself on top of your care, learn what the different physical therapy abbreviations and terms mean.

Common Physical Therapy Terminology

You broke a leg and now you're in physical therapy. But what do all these terms that they're throwing at you actually mean? Get some of the basic terms and abbreviations that you might find at physical therapy.

Activities of daily living (ADLs) - These are the activities that you do to care for yourself like bathing, dressing and feeding yourself.

Assistive devices - You use these devices to assist in completing your normal daily activities. Examples include crutches and walkers.

Deformity - This is when a body part or bone is different than what it normally would be.

Fine motor - These are the small muscles and movements you have, like the ones you use for typing.

Gross motor - These are the muscles you use for big movements, like walking or running.

Manual therapy - In this therapeutic technique, the PT uses their hands to manipulate a body part back into the correct position.

Rehabilitation program - The physical therapist designs this program for you.

Range of motion (ROM) - This how well or how little you can move a specific body part.

Weight-bearing - This terms describes whether or not you can bear your body weight when walking or moving.

Abbreviations for PT Assistive Devices & Equipment

If you are going to physical therapy, it means that you are trying to improve your range of motion or reduce your pain. So, patients come into physical therapy with a lot of different assistive devices, and therapists use different equipment to help them.

Since there isn't a lot of time to write down crutches and walkers, they use physical therapy abbreviations to keep it simple. Explore common physical therapy abbreviations for assistive devices and equipment.

AD - Assistive device

CGA - Contact guard assist

CKC - Closed kinetic chain

CTx - Cervical traction

FWW - Front-wheeled walker

LBQC - Large-base quad cane

NBQC - Narrow base quad cane

OKC - Open kinetic chain

PUW - Pick-up walker

QC - Quad cane

RW - Rolling walker

SBQC - Small base quad cane

SC - Straight cane

SLR - Straight leg raise

SPC - Single-point cane

SW - Standard walker

TM - Treadmill

Trxn - Traction

UBE - Upper body ergometer

WBQC - Wide-base quad cane

WC (or w/c) - Wheelchair

WW - Wheeled walker

4WW - Four-wheeled walker

Exercise & Treatment Abbreviations

After your initial assessment, your PT is going to set a treatment course to help improve your life. These therapeutic modalities might include exercises and other forms of treatment, like ultrasound and electrical stimulation, to get things up and moving again. These treatment abbreviations will be used to improve inflammation, circulation and pain.

CP - Cold pack

EEG - Electroencephalogram

ES - Electrical stimulation

HEP - Home exercise program

HP - Hot pack

Inv - Inversion

Ionto - Iontophoresis

ITB - Iliotibial band

LP - Leg press

MFR - Myofascial release

MHP - Moist hot pack

MMT - Manual muscle test

NDT - Neurodevelopmental technique

NMES - Neuromuscular electrical stimulation

Pfin - Paraffin bath

Phono - Phonophoresis

PNF - Proprioceptive neuromuscular facilitation

SB - Side bending (or Swiss ball)

TENS - Transcutaneous electrical neuromuscular stimulation

Ther Ex - Therapeutic exercise

US - Ultrasound

Body & Diagnosis Abbreviations

Physical therapy is a medical field, which means that all your body parts have abbreviations. This includes even the ones that aren't functioning at their best. To find out what your disease, diagnosis or body part abbreviation means, check them here.

ACJ – Acromioclavicular Joint

ACL - Anterior Cruciate Ligament

AFO - Ankle Foot Orthoses

AKA - Above Knee Amputation

BKA - Below Knee Amputation

CABG - Coronary artery bypass graft (open heart surgery)

CP - Cerebral palsy

DDD - Degenerative disc disease

DJD - Degenerative joint disease

GHJ - Glenohumeral joint

HKAFO - Hip-knee-ankle foot orthosis

HNP - Herniated nucleus pulposus (herniated disc)

KAFO - Knee, ankle and foot orthosis

LCL - Lateral collateral ligament

LE - Lower extremity

LSO - Lumbosacral orthosis

MCL - Medial collateral ligament

PCL - Posterior cruciate ligament

PFS - Patellofemoral syndrome

PD - Peritoneal dialysis

PEG - Percutaneous endoscopic gastrotomy

PICC - Peripherally inserted central catheter

PLIF - Posterior lumbar interbody fusion

RC - Rotator cuff

TB - TheraBand, tuberculosis

THA - Total hip arthroplasty

THR - Total hip replacement

TKA - Total knee arthroplasty

TKR - Total knee replacement

TLSO - Thoracic lumbar sacral orthosis

TLIF - Transforaminal lumbar interbody fusion

TMJ - Temporomandibular joint

UD - Ulnar deviation

Position & Common Abbreviations

Not every term fits nice and neatly under a header. There are just some common or positional terms used in medicine, like "beats per minute" and "head of the bed." Common physical therapy abbreviations you might see in PT charts or prescriptions include:

BPM - Beats per minute

C/O - Complains of

EOB - Edge of bed

H/o - History of

HOB - Head of bed

Horiz - Horizontal

I (or Ind) - Independent

L - Left

LTG - Long-term goals

OOB - Out of bed

PMX (or PMHx) - Past medical history

Pt - Patient

Q - Every

QD - Every day

QID - Four times a day

R - Right

RICE - Rest, ice, compression, elevation

S (with a line over a lowercase S) - Without

SBA - Stand-by assist

STS - Sit-to-stand

TID - Three times a day

Total A - Total assist

WFL - Within functional limits

WNL - Within normal limits

– pounds

Medical & Other Term Abbreviations

Some physical therapy abbreviations that you come across are less common and more medical in nature. Not only might they cover medical degree abbreviations, but also varying levels of independence. Learn what "ICD-10" and "Mod I" mean.

B - Bilateral

BMI - Body mass index

BOS - Base of support

Ex Lap - Exploratory laparotomy or laparoscopy

FIM - Functional independence level (also called FIM score)

Fx - Fracture

I (or Ind) - Independent

I&D - Incision and drainage (debridement)

ICD-10 - 10th revision: International Statistical Classification of Diseases and Related Health Problems

LOA - Level of assist

LOS - Length of stay

MD - Medical doctor

Mm - Muscle

Mod I - Modified independent

RN - Registered nurse

RT - Respiratory therapist/therapy

Rx - Treatment

UE - Upper extremity

Movement Abbreviations

Range of motion is one common reason that you are going to physical therapy. You might be trying to get rotation back into your shoulder or extend into a new range of motion after a back surgery. Whatever the case, when it comes to range of motion, you'll find lots of different PT abbreviations.

AAROM: - Active assistive range of motion

ABD - Abduction

ADD - Adduction

AROM - Active range of motion

Amb - Ambulation

CPM - Continuous passive motion

DF - Dorsiflexion

ER - External rotation

EV - Eversion

Ex - Exercise

Ext (or /) - Extension

Flex (or ✓) - Flexion

FWB - Full weight-bearing

IR - Internal rotation

LAQ - Long-arc quad

Max A - Maximum assist

Min A - Minimum assist

Mob - Mobilization

NWB - Non-weight bearing

PF - Plantarflexion

Pro - Pronation

PROM - Passive range of motion

PWB - Partial weight-bearing

RD - Radial deviation

ROM - Range of motion

Rot - Rotation

SAQ - Short arc quad

STM - Soft tissue mobilization

STS - Sit-to-stand

Sup - Supination

TDWB - Touch-down weight bearing

TTWB - Toe-touch weight bearing

WBAT - Weight-bearing as tolerated

Conquering PT Abbreviations

Disability Models

Objectives

- International Classification of Functioning, Disability and Health (ICF).

Terminology related to functional loss

Disablement

- The impact(s) and functional consequence(s) of acute or chronic conditions, such as disease, injury, and congenital or developmental abnormalities, on specific body systems.

Functional Imapirments

- Problems associated with of body systems (including physiological and psychological functions).

Structural Impairments

- Problems with the anatomical features of the body, such as significant deviation or loss, affecting all body systems.

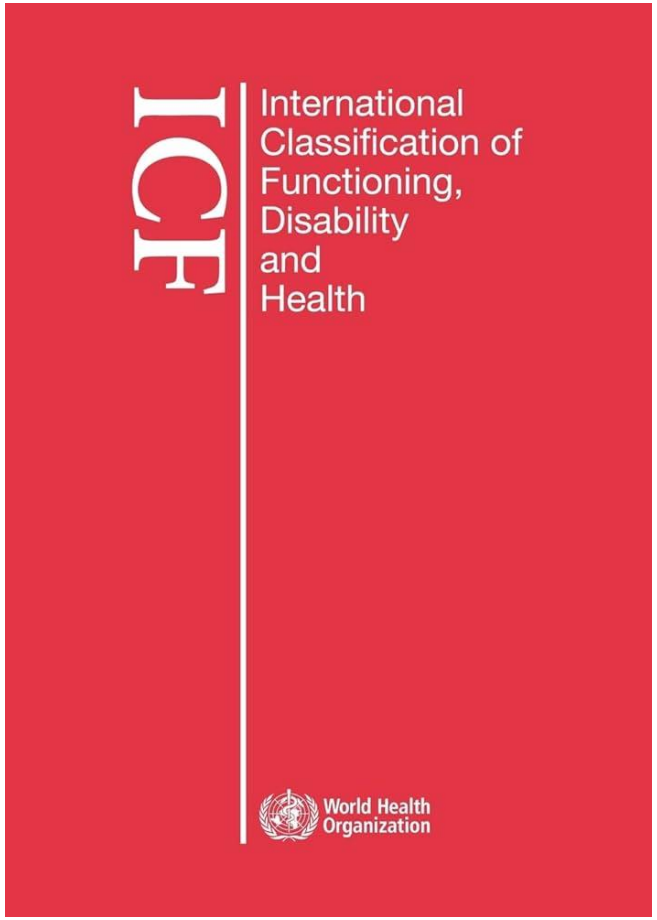
Activity limitations

- Difficulties an individual may have in executing actions, task, activities.

International Classification of Functioning, Disability and Health (ICF)

Definition

- Is a framework for describing functioning and disability in relation to a **health condition**.
- In 2001, WHO developed the International Classification of Functioning, Disability and Health (ICF) to classify and coding medical conditions worldwide provide a common language used by all health profession.



An Overview of the ICF Model

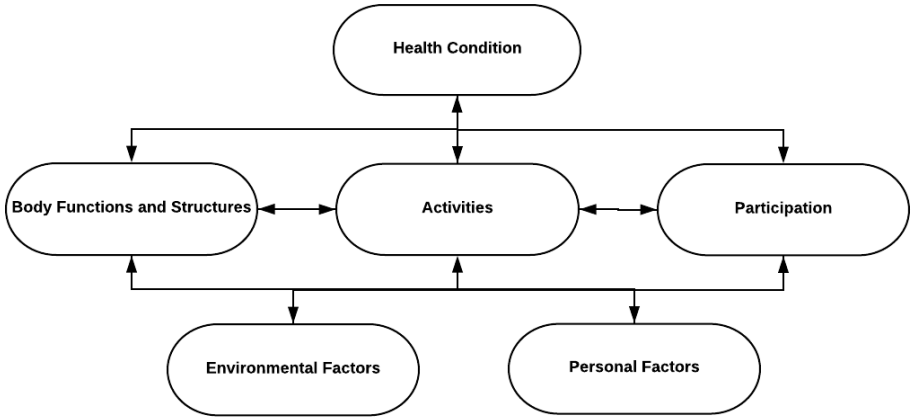
The model consists of two basic parts:

- Part 1: Functioning and Disability. Which divide into to:

1. Body Functions and Structures.
2. Activities and Participation.

- Part 2: Contextual Factors. Also subdivided into two components:

1. Environmental Factors.
2. Personal Factors.



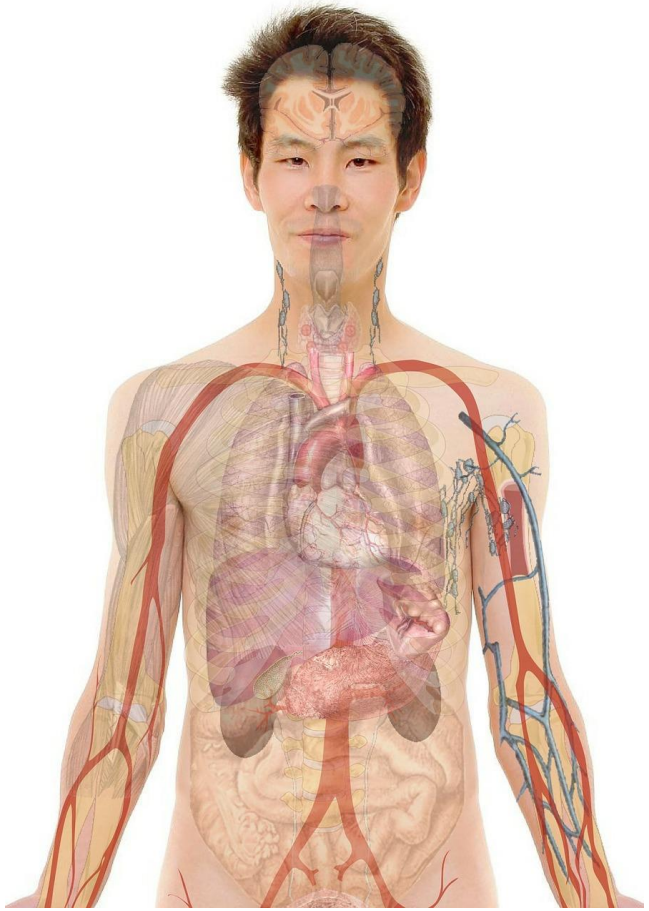
Body Functions and Structures

- **Body Functions:** The physiological functions of body systems (including psychological functions).
- **Body Structures:** Anatomical parts of the body such as organs, limbs and their components.

Examples:

- *b28010 Pain in head and neck.*
- *s720 Structure of shoulder region.*
- *s810 Structures of areas of skin.*

Note that codes relating to body functions start with 'b' while codes relating to body structures start with 's.'



Activities and Participation

- **Activity:** The execution of a task or action by an individual.
- **Activity Limitations:** Difficulties an individual may have in executing activities.
- **Participation:** Involvement in a life situation.
- **Participation Restrictions:** Problems an individual may experience in involvement in life situations.

Examples:

- d230 Carrying out daily routine.
- d420 Transferring oneself.
- d475 Driving.
- d530 Toileting.
- d910 Community life.
- d920 Recreation and leisure.

Environmental and Personal Factors

Definition

- The physical, social and environment in which people live and conduct their lives.

Examples:

- *e115 Products and technology for personal use in daily living.*
- *e155 Design, construction and building products and technology of buildings for private use.*

Bio-psycho-social Model of Functioning, Disability and Health

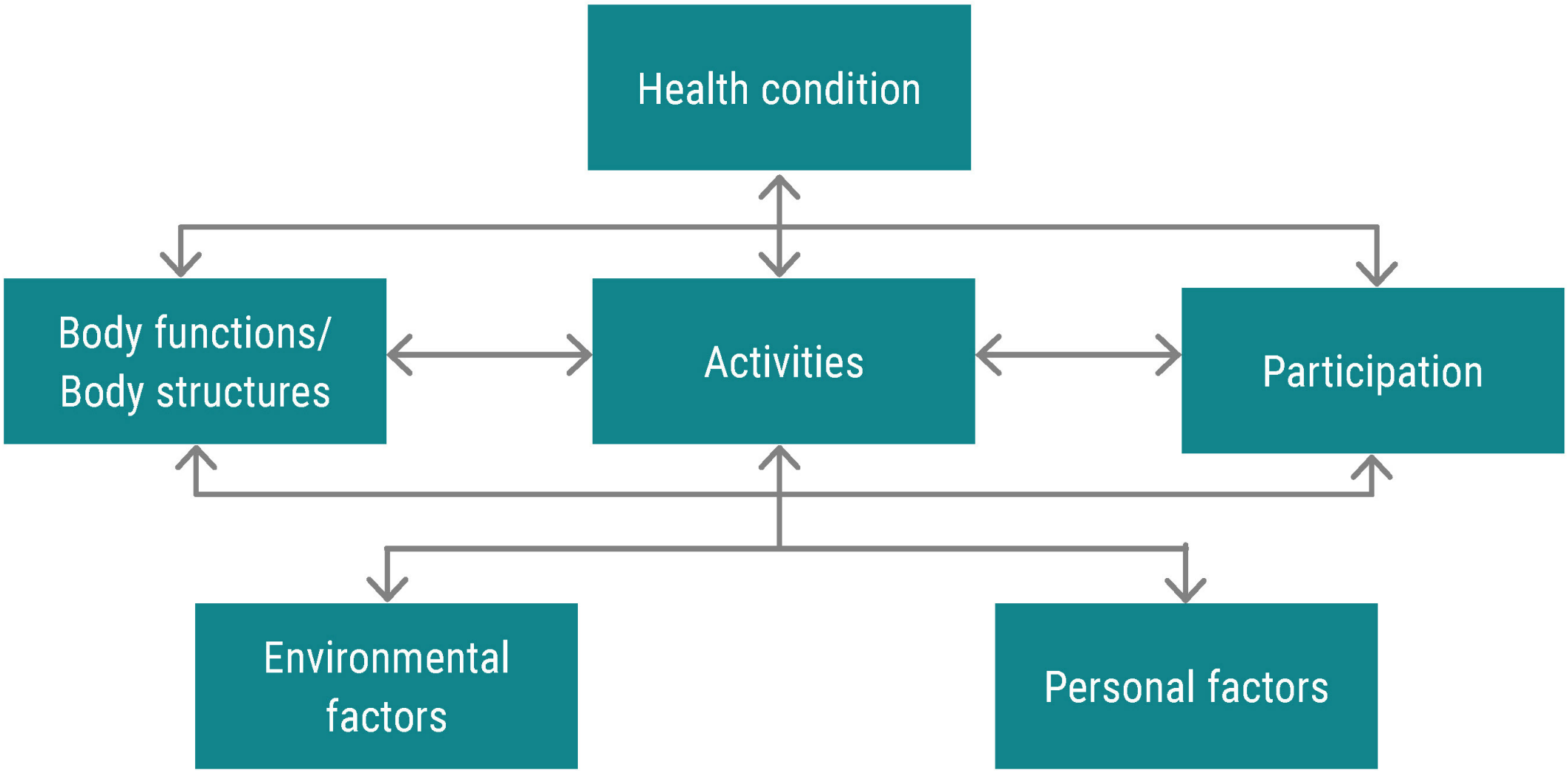


Figure 1: Bio-psycho-social model of the International Classification of Functioning, Disability and Health (ICF)

Health Conditions

- Acute or chronic diseases, disorders, or injuries that have an impact on a person's level of activity.
- Health conditions are characterized by a set of signs and symptoms that are indicative of alterations of structure or function of the body and are.
- Primarily identified at the cellular, tissue, or organ/organ system level.
- These are the basis of a medical diagnosis and trigger medical intervention.

Does Physiotherapy need to know medical diagnosis???

1. *''However, it is well within a physical therapist's scope of practice using appropriate examination tools to identify abnormalities, particularly at the tissue level, that are the sources of musculoskeletal impairments''.*
2. *''Knowledge of the underlying pathology associated with health conditions is important background information, but it does not tell the therapist how to assess and treat a patient's impairments and subsequent dysfunction that arise from the pathological condition''.*
3. *''Despite an accurate medical diagnosis and a therapist's thorough knowledge of specific health conditions, the experienced therapist knows full well that two patients with the same medical diagnosis, such as rheumatoid arthritis, and the same extent of joint destruction (confirmed radiologically) may have very different severities of impairment, activity (functional) limitation, and participation restriction, and, consequently, very different degrees of disability''.*
4. ''This emphasizes the need for physical therapists to always pay close attention to the impact(s) of a particular health condition on function when designing meaningful management strategies to improve functional abilities''.

Impairments

- Types of Impairment In the ICF model, impairments are subdivided into impairments of body function and body structure.
- Physical therapists typically provide care and services to patients with impairments of body function and/or body structure that affect the following systems:

✓Musculoskeletal.

✓Neuromuscular.

✓Cardiovascular/pulmonary.

✓Integumentary.

Common Physical Impairments Managed with Therapeutic Exercise

Musculoskeletal:

- Pain.
- Muscle weakness/reduced torque production.
- Decreased muscular endurance.
- Limited range of motion due to:

1. *Restriction of the joint capsule.*
2. *Restriction of periarticular connective tissue.*
3. *Decreased muscle length.*
4. *Joint hypermobility.*
5. *Faulty posture.*
6. *Muscle length/strength imbalances.*

Common Physical Impairments Managed with Therapeutic Exercise

Neuromuscular

- Pain.
- Impaired balance, postural stability, or control.
- Incoordination, faulty timing.
- Delayed motor development.
- Abnormal tone (hypotonia, hypertonia, dystonia).
- Ineffective/inefficient functional movement strategies.

Common Physical Impairments Managed with Therapeutic Exercise

Cardiovascular/Pulmonary

- Decreased aerobic capacity (cardiopulmonary endurance).
- Impaired circulation (lymphatic, venous, arterial).
- Pain with sustained physical activity (intermittent claudication).

Integumentary

- Skin hypomobility (e.g., immobile or adherent scarring)

Primary and secondary impairments

Direct impairment

- Impairments may arise directly from the health condition.

For example

- A patient, who has been referred to physical therapy with a medical diagnosis of impingement syndrome or tendonitis of the rotator cuff (pathological condition) may exhibit primary impairments of body function, such as pain, limited ROM of the shoulder, and weakness of specific shoulder girdle and glenohumeral musculature during the physical therapy examination.

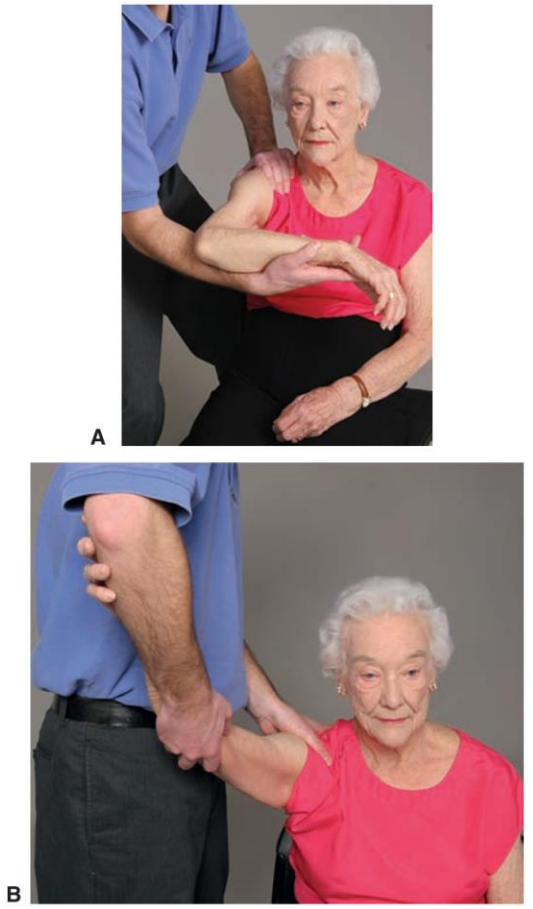
Primary and secondary impairments

Secondary impairment

- Result of preexisting impairments.

For example:

- The patient may have developed the shoulder pathology from a preexisting postural impairment (secondary impairment), which led to altered use of the upper extremity and impingement from faulty mechanics.



Composite impairments

- When an impairment is the result of multiple underlying causes and arises from a combination of primary or secondary impairments

For example:

- A patient who sustained a severe inversion sprain of the ankle resulting in a tear of the talofibular ligament and whose ankle was immobilized for several weeks is likely to exhibit a balance impairment of the involved lower extremity after the immobilizer is removed.
- This composite impairment could be the result of chronic ligamentous laxity (structural impairment) and impaired ankle proprioception from the injury or muscle weakness (functional impairments) due to immobilization and disuse.

Activity Limitations/Functional Limitations

- In the language of the ICF, activity limitations occur when a person has difficulty executing or is unable to perform tasks or actions of daily life

BOX 1.4 Common Activity Limitations/ Functional Limitations Related to Physical Tasks

Difficulties with or limitation of:

- Reaching and grasping
- Lifting, lowering, and carrying
- Pushing and pulling
- Bending, stooping
- Turning, twisting
- Throwing, catching
- Rolling
- Sitting or standing tolerance
- Squatting (crouching) and kneeling
- Standing up and sitting down (from and to a chair, the floor)
- Getting in and out of bed
- Moving around (crawling, walking, running) in various environments
- Ascending and descending stairs
- Hopping and jumping
- Kicking or swinging an object

Participation Restrictions and Disability

- As identified in the ICF model participation restrictions are defined as problems a person may experience in his or her involvement in life situations as measured against social standards.

BOX 1.5 Areas of Functioning Associated with Participation Restrictions and Disability

- Self-care
- Mobility in the community
- Occupational tasks
- School-related tasks
- Home management (indoor and outdoor)
- Caring for dependents
- Recreational and leisure activities
- Socializing with friends/family
- Community responsibilities and service

Nagi model?

Additional recourses

https://youtu.be/uoEIc4wBaIo

https://youtu.be/O2pRqr-THMs

https://youtu.be/mwYxs567Cg0

https://youtu.be/-j0495iwCX0

https://youtu.be/Vj7cF63egGU

https://youtu.be/9BbQCOxq2q0

ANY QUESTIONS?

Multidisciplinary team and Interdisciplinary team

PT. Saif mahdi alhar

Multidisciplinary team

Multidisciplinary team (MDT);

Professional team including representatives of different disciplines.

Professionals working in parallel with clear roles.

Hierarchical lines of authority.

Led by consultant or team leader.

Interdisciplinary team

Interdisciplinary team (IDT);

Professionals involved in joint problem solving.

Participants share goals and overlap practice.

Regular communication between team members.

Clinical Rehabilitation 2010; **24**: 745–755

Interprofessional teamwork in medical rehabilitation: a comparison of multidisciplinary and interdisciplinary team approach

Mirjam Körner Department of Medical Psychology and Sociology, Medical Faculty, University of Freiburg, Freiburg, Germany

Received 31st March 2009; returned for revisions 23rd December 2009; revised manuscript accepted 28th December 2009.

Evidence

Result;

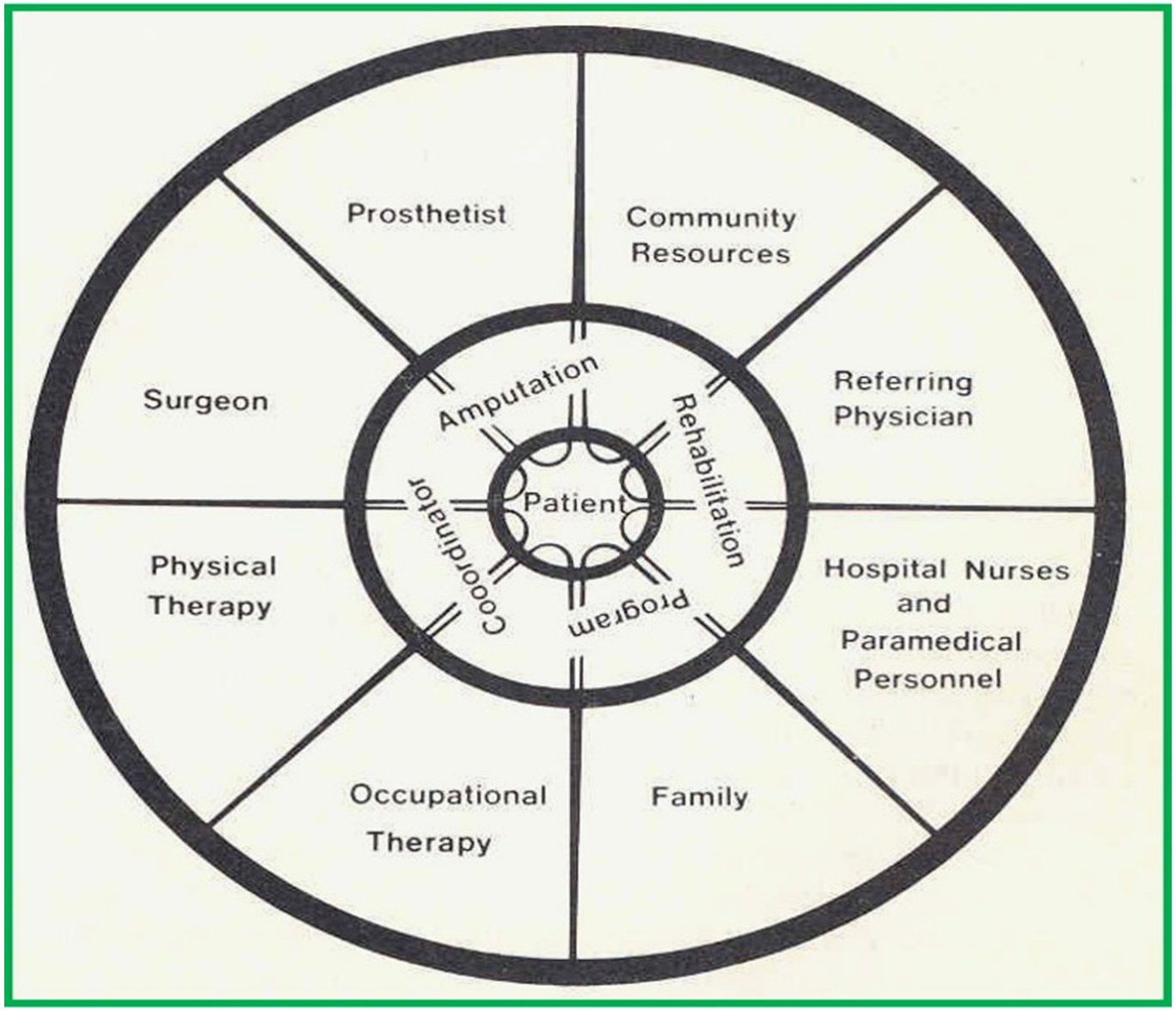
- Team performance grades rated significant.
- Team satisfaction was higher.

Conclusion;

- Teamwork and team effectiveness are higher in teams working with the interdisciplinary team approach

Appendix 1 – Descriptions of multi-and interdisciplinary team approach as part of the semi-standardized interview form

	Multidisciplinary team model	Interdisciplinary team model
Management and organization of medical treatment	The **physician** compiles a therapy plan and coordinates the therapists (hierarchically). Each professional group does their job in accordance with their standards (**additive**). The professionals work parallel and independently of each other. Each therapist sets his or her own treatment goals for patients or receives them from the physician as a guideline □	The physician and other professionals work together in a team. There is a **high level of cooperation**, **integration and participation.** The treatment arrangements and decisions are **collaboratively** agreed by the **team** members. Treatment goals are also determined together as a team, and are obligatory for all team members. Modifications of the treatment goals or plans must discussed and decided in the team □
Structure of communication and cooperation	… **is bilateral and occasionally multilateral:** The physician and other therapists come to an agreement bilaterally. Multilateral team meetings take place as required, **especially for problem cases**. □	… **is permanently multilateral:** All the professionals work together permanently as a team. Team meetings to discuss the treatment of all patients take place regularly. **Communication is continuous and multilateral**. □


Prosthetist
Community Resources
Surgeon
Referring Physician
Amputation
Rehabilitation
Patient
Coordinator
Program
Physical Therapy
Hospital Nurses and Paramedical Personnel
Occupational Therapy
Family

J Rehabil Med 2015; 47: 58–65

ORIGINAL REPORT

MULTIPROFESSIONAL TEAMWORK IN WORK-RELATED MEDICAL REHABILITATION FOR PATIENTS WITH CHRONIC MUSCULOSKELETAL DISORDERS

Betje Schwarz, DipSoc[1,2], Silke Neuderth, PhD[3], Christoph Gutenbrunner, MD[1] and Matthias Bethge, PhD[1,2]

From the [1]Department of Rehabilitation Medicine, Hannover Medical School, Hannover, and [2]Institute for Social Medicine and Epidemiology, University of Lübeck, Lübeck, and [3]Department of Medical Psychology, Medical Sociology and Rehabilitation Sciences, University of Würzburg, Würzburg, Germany

Homework

Any question?

The role of the physiotherapist

The primary role of a PT involves direct patient care.

,patient care remains the predominant employment activity. For this reason ,The Standards of Practice for Physical Therapy are perhaps the foremost core document approved by the House of Delegates of the American Physical Therapy Association (APTA).

provide a foundation for assessment of physical therapist practice. The sections of the Standards are as follows:

I. Ethical/Legal Considerations
II. Administration of the Physical Therapy Service
III. Patient/Client Management
IV. Education
V. Research
VI. Community Responsibility

Primary, Secondary, and Tertiary Care

Individuals who seek health care may move through multiple levels of providers as they enter the system and may eventually reach a specialist.

The first level of care, primary care, is defined as the level of health care delivered by a member of the health care system who is responsible for the majority of the health needs of the individual

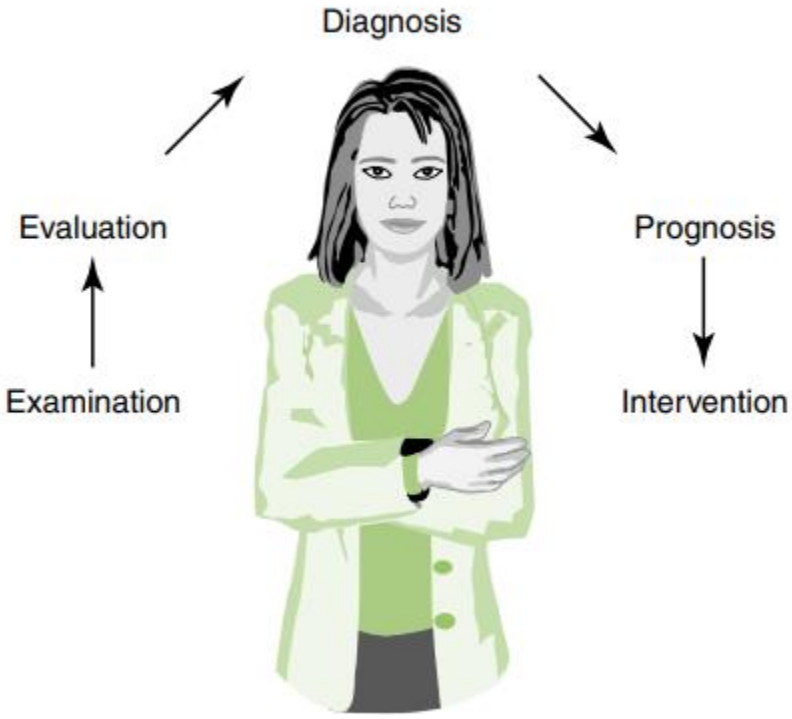
Secondary care is provided by clinicians on a referral basis—that is, after the individual has received care at the primary level.

In tertiary care the service is provided by specialists, commonly in facilities that focus on particular health conditions. These services may also be provided on a referral basis.

PTs are engaged in practice at all three levels of care. Physical therapy is most often delivered by referral as secondary or tertiary care. Tertiary care may be provided in a highly specialized unit, such as a burn care center. The entry point for an individual seeking physical therapy services, however, is shifting to primary care.

Patient/Client Management Model

The Guide to Physical Therapist Practice has been instrumental in defining and describing what PTs do as clinicians These activities have been summarized in the patient/client management model. This model reflects the process of gathering information, designing a plan of care, and implementing that plan to result in optimal outcomes for the patient/client.



Examination: The first component of the patient/client management model,

examination, is the process of gathering information about the past and current status of the patient/client. It begins with a history to describe the past and current nature of the condition or health status of the patient/client. Sources for this information include the patient/client, caregivers, other health professionals, and medical records. A systems review is then conducted to obtain general information about the anatomic and physiologic status of the musculoskeletal, neuromuscular, cardiovascular/pulmonary, and integumentary systems, as well as the cognitive abilities of the patient and client. This review provides information to determine if referral to other health professionals is necessary.

Tests and Measures Used in a Physical Therapy Examination

Test or Measure	Description
Aerobic capacity/endurance	Ability to use the body's O2 uptake and delivery system
Anthropometric characteristics	Body measurements and fat composition
Arousal, attention, and cognition	Degree of responsiveness and awareness
Assistive and adaptive devices	Equipment to aid in performing tasks
Circulation (arterial, venous, lymphatic)	Analysis of blood and lymph movement to determine adequacy of cardiovascular pump, oxygen delivery, and lymphatic drainage
Cranial and peripheral nerve integrity	Assessment of sensory and motor functions of cranial and peripheral nerves
Environmental, home, and work barriers	Analysis of physical restrictions to functioning in the environment
Ergonomics and body mechanics	Analyses of work tasks and postural adjustment to perform tasks
Gait, locomotion, and balance	Analyses of walking, moving from place to place, and equilibrium
Integumentary integrity	Health of the skin
Joint integrity and mobility	Assessment of joint structure and impact on passive movement
Motor function	Control of voluntary movement
Muscle performance	Analysis of muscle strength, power, and endurance
Neuromotor development and sensory integration	Evolution of movement skills and integration of information from the environment
Orthotic, protective, and supportive devices	Determination of need for fit of devices to support weak joints

In this table shown Note that these activities involve observation, manual techniques, simple and complex equipment, and environmental analysis.

Tests and Measures Used in a Physical Therapy Examination

Test or Measure	Description
Pain	Analysis of intensity, quality, and frequency of pain
Posture	Analysis of body alignment and positioning
Prosthetic requirements	Selection, fit, and use of prostheses
Range of motion	Amount of movement at a joint
Reflex integrity	Assessment of developmental, normal, and pathologic reflexes
Self-care and home management	Analysis of activities necessary for independent living at home
Sensory integrity	Assessment of peripheral and central sensory processing, awareness of movement, and position
Ventilation and respiration/gas exchange	Assessment of movement of air into and out of the lungs, exchange of gases, and transport of blood to perform activities of daily living and exercises
Work, community, and leisure integration or reintegration	Analyses to determine whether the patient/client can assume a role in community or work

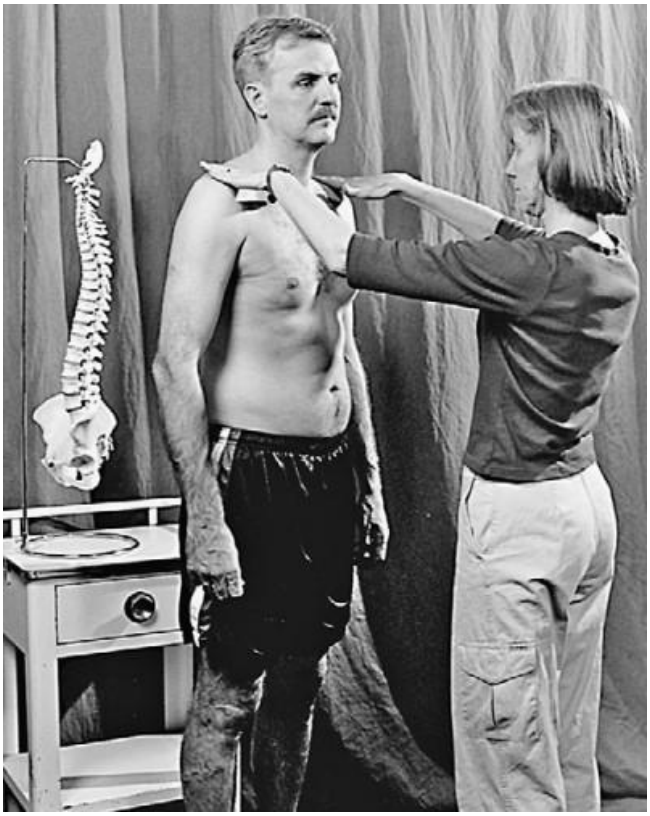
Data from American Physical Therapy Association (APTA): Guide to physical therapist practice, rev ed 2, Alexandria, Va, 2003, APTA.

Evaluation: The examination results in multiple assessments or assigned values from the tests and measurements. The PT then reviews these data and findings and performs an evaluation, which is a clinical judgment based the data gathered through the test and measurements and other examination sources. This is an essential step that may involve consultation with others to determine the meaning of the data.

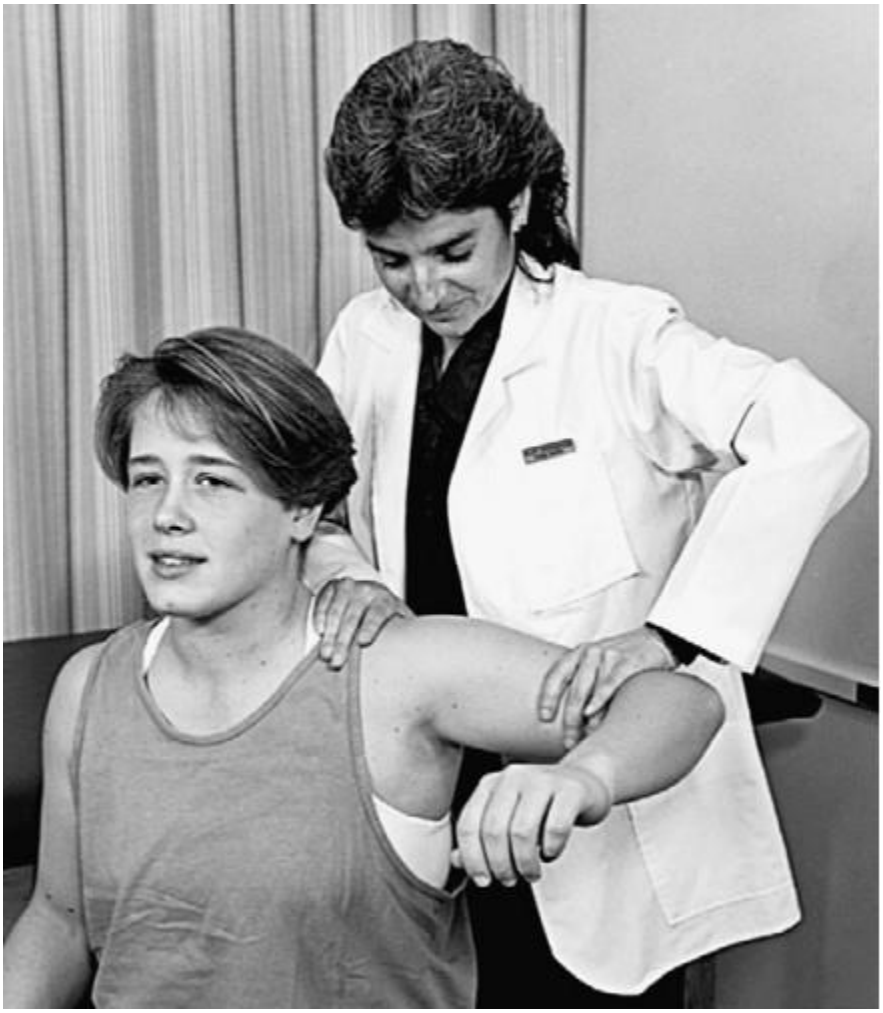
Diagnosis. Evaluation is essential to establish a diagnosis, the next component of the model. The diagnosis is a categorization of the findings from the examination through a defined process

Prognosis. At this point in the model, attention shifts to the future to establish a prognosis, or a prediction of the level of improvement and time necessary to reach that level. The therapist also designs a plan of care that incorporates the expectations of the patient/client, It identifies short- and long-term goals (alleviation of impairments), outcomes (results of interventions), interventions (type and frequency), and discharge criteria.

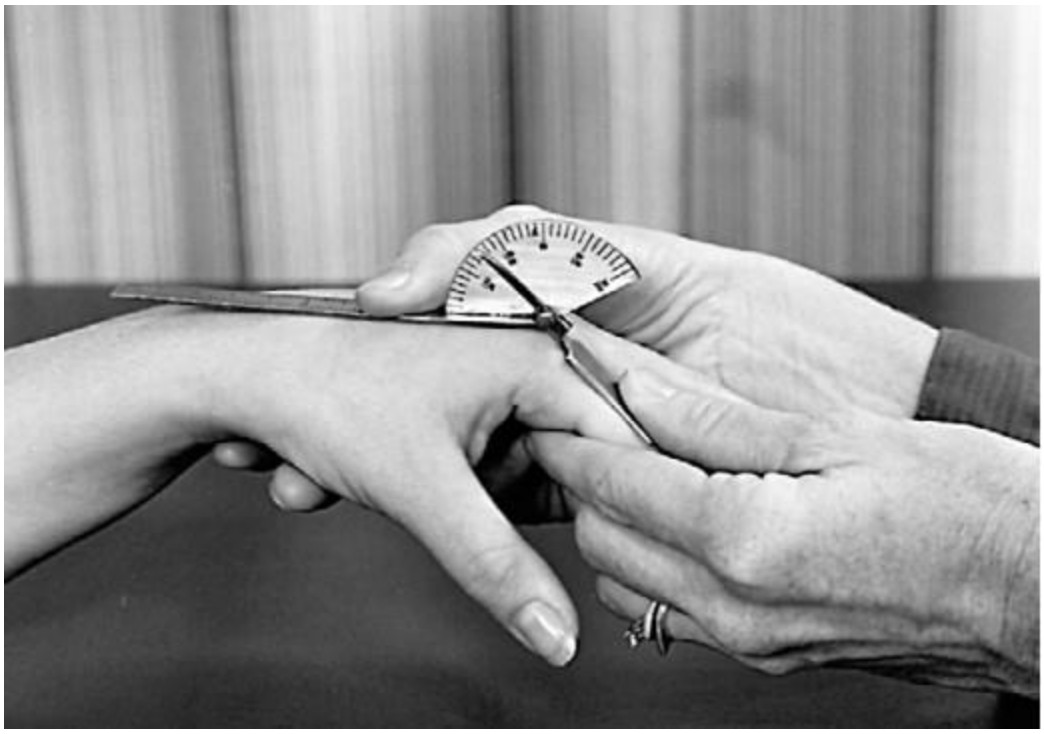
Intervention. The last component of the model, intervention, occurs when the PT and PTA conduct procedures with the patient/client to achieve the desired outcomes. This component is subdivided into three activities. Coordination, Communication, and Documentation.



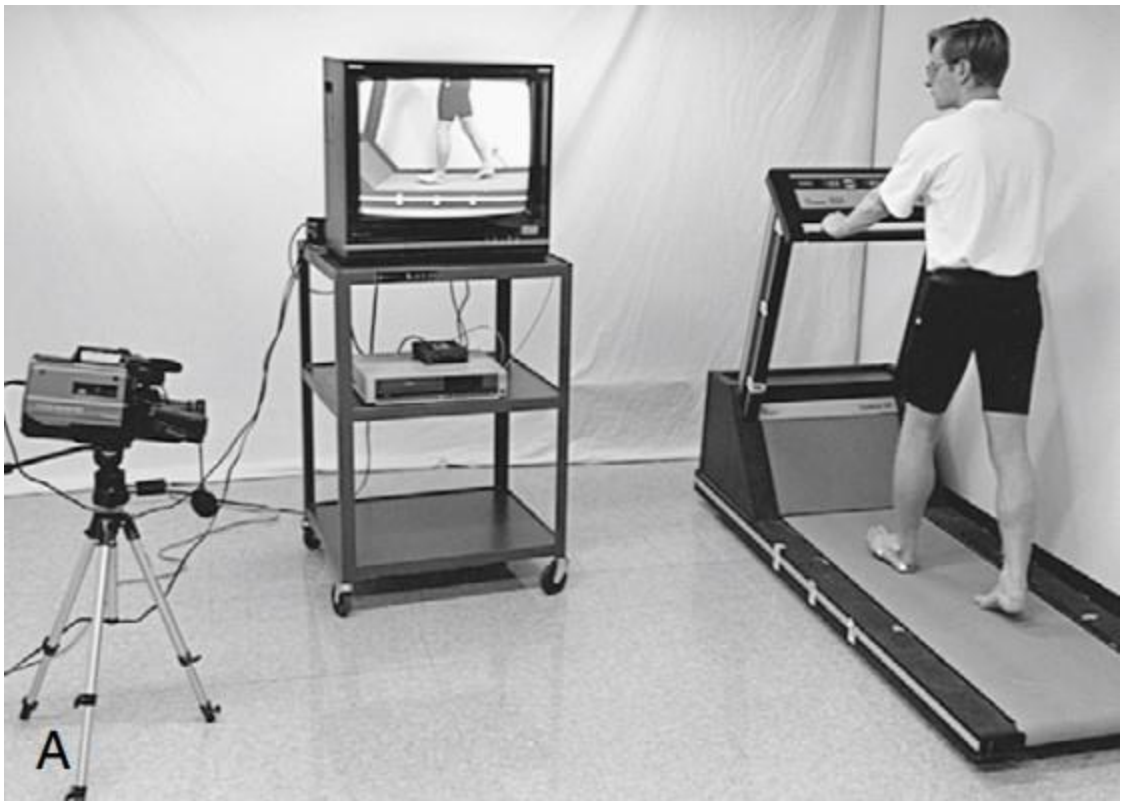
Observation is an essential component of a physical therapy examination. In this case the therapist examines the patient's cervical posture.



Manual techniques such as manual muscle testing are critical in physical examination. Here the therapist is performing a muscle test on the patient's shoulder musculature



Passive range of motion in the joints of the fingers is measured with a simple finger goniometer



The equipment used by physical therapists for examinations can be complex. A, In motion analysis of the lower extremity, the patient is videotaped with markers at the joint axes while walking on a treadmill. The videotape is analyzed with computer technology to provide an objective measure of performance

Electrodiagnostic equipment is used to measure the conduction velocity of nerves.

6 Lecture

Occupational Therapy

Based on Willard & Spackman's Occupational Therapy

Prepared for Prosthetics & Orthotics Rehabilitation Students

Definition of OT

- Occupational Therapy (OT) helps individuals participate in meaningful daily activities.
- Focuses on independence, function, and quality of life.
- Uses therapeutic activities to improve physical, cognitive, and psychosocial abilities.

History of Occupational Therapy

- Developed in the early 20th century.
- Influenced by rehabilitation medicine and mental health care.
- Growth after World Wars due to rehabilitation needs.

Philosophy of OT

- Humans are occupational beings.
- Participation in activities promotes health.
- Therapy should be client-centered and holistic.

Domains of OT

- Activities of Daily Living (ADLs)
- Instrumental Activities of Daily Living (IADLs)
- Education and Work
- Play and Leisure
- Social Participation

Role of Occupational Therapist

- Assessment and evaluation
- Treatment planning
- Functional training
- Adaptive equipment prescription
- Environmental modification

OT Evaluation Process

- Patient interview
- Observation
- Functional assessment
- ROM and muscle testing
- Cognitive and sensory evaluation

OT Frames of Reference

- Biomechanical Frame
- Neurodevelopmental Frame
- Cognitive Behavioral Frame
- Sensory Integration Frame

ADL Training

- Feeding
- Dressing
- Bathing
- Toileting
- Functional mobility

Upper Limb Rehabilitation

- Strengthening exercises
- Fine motor training
- Coordination activities
- Splinting and positioning

OT in Neurological Conditions

- Stroke rehabilitation
- Spinal cord injury
- Traumatic brain injury
- Parkinson’s disease

OT in Orthopedic Conditions

- Fractures
- Joint replacement
- Tendon injuries
- Arthritis management

OT in Pediatrics

- Developmental disorders
- Cerebral palsy
- Autism spectrum disorder
- Play-based interventions

OT in Mental Health

- Stress management
- Social skills training
- Coping strategies
- Vocational rehabilitation

Assistive Technology

- Wheelchairs
- Adaptive utensils
- Communication devices
- Environmental control systems

Splinting in OT

- Static splints
- Dynamic splints
- Prevention of deformity
- Functional support

End

Any questoin please

7 Lecture

- Occupational therapy
- By ; pt Siaf Mahdi

Splinting in OT

- Static splints
- Dynamic splints
- Prevention of deformity
- Functional support

Ergonomics and OT

- Proper posture
- Workplace adaptation
- Prevention of musculoskeletal disorders
- Energy conservation

OT and Prosthetics

- Functional training with prosthesis
- ADL retraining
- Grip and coordination training
- Patient education

OT and Orthotics

- Functional positioning
- Joint protection
- Contracture prevention
- Support for daily activities

Sensory Rehabilitation

- Sensory re-education
- Desensitization techniques
- Tactile discrimination training

Cognitive Rehabilitation

- Attention training
- Memory exercises
- Executive function activities
- Problem-solving tasks

Community Reintegration

- Home assessment
- Return to work training
- Driving rehabilitation
- Social participation

Evidence-Based Practice

- • Use of scientific evidence in treatment.
- • Integration of clinical expertise and patient goals.
- • Improves treatment outcomes.

Interdisciplinary Teamwork

- Collaboration with physiotherapists
- Physicians
- Prosthetists & Orthotists
- Speech therapists
- Nurses

Conclusion & References

- Conclusion:
- Occupational Therapy plays a major role in rehabilitation by improving independence, function, and participation.

- References:
- • Willard & Spackman’s Occupational Therapy
- • AOTA Practice Framework
- • Pedretti’s Occupational Therapy

End

- Any question please ！

Therapeutic Exercises in Physiotherapy 8 lecture

PREPARED BY: PT.SAIF MAHDI ALHAR

Introduction

Therapeutic exercises are essential in physiotherapy for restoring movement, reducing pain, and improving function.

Objectives of Therapeutic Exercises

- Reduce pain
- Improve ROM
- Increase muscle strength
- Improve balance and coordination
- Enhance endurance

Definition

Therapeutic exercise is a planned physical activity designed to restore and improve physical function.

Range of Motion Exercises

- Passive ROM
- Active ROM
- Active Assisted ROM

Strengthening Exercises

- Isometric
- Isotonic
- Isokinetic

Stretching Exercises

- Static stretching
- Dynamic stretching
- Ballistic stretching

Balance and Coordination Exercises

Used for elderly patients, stroke rehabilitation, and neurological disorders.

Endurance Exercises

Examples include

walking,

cycling, and stair climbing.

Breathing Exercises

- Diaphragmatic breathing
- Pursed lip breathing

Principles of Therapeutic Exercises

- Gradual progression
- Patient safety
- Regular evaluation
- Individualized program

Contraindications

- Severe pain
- Unstable fractures
- Acute inflammation
- Fever

Role of Physiotherapist

Assessment

treatment planning

patient education

exercise supervision.

Conclusion

Therapeutic exercises are fundamental in physiotherapy to restore function and improve quality of life.

References

Kisner & Colby

Susan O'Sullivan

Mark Dutton

Any question?