



# WHAT IS NDT?

NDT is a problem-solving approach to the examination and treatment of the impairments and functional limitations of individuals with neuropathology, primarily children with CP and adults with stroke or traumatic brain injury (TBI). These individuals have dysfunction in posture and movement that lead to limitations in functional activity. NDT focuses on the analysis and treatment of sensorimotor impairments and functional limitations that physical therapists (PT), occupational therapists (OT), and speech and language pathologists (SLP) can address.

A thorough examination and evaluation is the basis for treatment. The examination begins with the identification of an individual's abilities and limitations. The NDT approach considers the individual as a whole and recognizes that every expression of the person—psychological, emotional, cognitive, perceptual, and physical—has value and contributes to the overall level of function. Examination focuses on identifying functions and their limitations. Evaluation analyzes and prioritizes the effectiveness of posture and movement and hypothesizes which systems affect function. Examination and evaluation lead to the establishment of treatment goals and the development of treatment strategies commensurate with the individual's current needs, while aiming for the long-term outcome of achieving the best possible inclusion in society across the life span.

The NDT clinician's understanding of typical movement and how it changes across the life span provides a critical framework for treatment planning. In addition, the clinician must anticipate the progression of atypical postures and movements and understand how they develop from limited neuronal repertoires, the individual's unique movement experiences and the attempt to compensate with stereotyped movement strategies. The clinician plans treatment in partnership with the client and meaningful persons in the individual's life. Implementation of treatment depends on the examination and evaluation outcomes, the client's competencies and integrity, and the limitations of the multiple internal systems and external resources. The clinician constantly guides and modifies treatment according to the individual's response to the selected strategies.

Therapeutic handling is integral to the NDT approach. It is an essential tool in both examination and treatment. Therapeutic handling allows the therapist to (a) feel the client's response to changes in posture or movement, (b) facilitate postural control and movement synergies that broaden the client's options for selecting successful actions, (c) provide boundaries for movements that distract from the goal, and (d) inhibit or constrain those motor patterns that, if practiced, lead to secondary deformities, further disability, or decreased participation in society.

The clinician selects an appropriate model of service and delivery of intervention that will fit the client's lifestyle, then helps to integrate the activities developed in treatment into the client's daily life to broaden the contexts. Carryover, which is essential for motor learning, requires practice by the client throughout the day, independently or with caregivers.

As a result of NDT intervention, the individual will use the new or regained posture or movement strategies to carry out life skills more efficiently. These strategies will minimize secondary impairments that can create additional functional limitations or disability.

The NDT approach continues to be enriched as new information, new theories, and new models consistent with available clinical evidence emerge in the movement sciences. In addition, as the characteristics of the populations with CNS pathophysiology change, the approach will continue to evolve to meet their needs.

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