

An initiative of the ABIM Foundation



### Five Things Patients and Providers Should Question

### Don't provide intervention activities that are non-purposeful (e.g., cones, pegs, shoulder arc, arm bike).

Purposeful activities—tasks that are part of daily routines and hold meaning, relevance, and perceived utility such as personal care, home management, school, and work—are a core premise of occupational therapy. Research shows that using purposeful activity (occupation) in interventions is an intrinsic motivator for patients. Such activities can increase attention, endurance, motor performance, pain tolerance, and engagement, resulting in better patient outcomes. Purposeful activities build on a person's ability and lead to achievement of personal and functional goals. Conversely, non-purposeful activities do not stimulate interest or motivation, resulting in reduced patient participation and suboptimal outcomes.

### Don't provide sensory-based interventions to individual children or youth without documented assessment results of difficulties processing or integrating sensory information.

Many children and youth are affected by challenges in processing and integrating sensations that negatively affect their ability to participate in meaningful and valued occupations. Processing and integrating sensations are complex and result in individualized patterns of dysfunction that must be addressed in personalized ways. Interventions that do not target the documented patterns of dysfunction can produce ineffective or negative results. Therefore, it is imperative to assess and document specific sensory difficulties before providing sensory-based interventions such as Ayres Sensory Integration<sup>®</sup>, weighted vests, listening programs, or sensory diets.

## Don't use physical agent modalities (PAMs) without providing purposeful and occupation-based intervention activities.

The exclusive use of PAMs (e.g., superficial thermal agents, deep thermal agents, electrotherapeutic agents, mechanical devices) as a therapeutic intervention without direct application to occupational performance is not considered occupational therapy. PAMs provided with a functional component can lead to more positive health outcomes. PAMs should be integrated into a broader occupational therapy program and intervention plan in preparation for or concurrently with purposeful activities or interventions that ultimately enhance engagement in occupation.

### Don't use pulleys for individuals with a hemiplegic shoulder.

Use of an overhead pulley for individuals with a hemiplegic shoulder resulting from a stroke or other clinical condition is considered too aggressive and should be avoided, as it presents the highest risk of the patient developing shoulder pain. Gentler and controlled range of motion exercises and activities are preferred.

# Don't provide cognitive-based interventions (e.g., paper-and-pencil tasks, table-top tasks, cognitive training software) without direct application to occupational performance.

To improve occupational performance, cognitive-based interventions should be embedded in an occupation relevant to the patient. Examples of cognitive-based interventions include awareness approaches, strategy training, task training, environmental modifications, and assistive technology. The use of cognitive-based interventions not based on occupational performance will result in suboptimal patient outcomes.

These items are provided solely for informational purposes and are not intended as a substitute for consultation with a medical professional. Patients with any specific questions about the items on this list or their individual situation should consult their health care provider.

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### Five More Things Patients and Providers Should Question

### Don't initiate occupational therapy interventions without completion of the client's occupational profile and setting collaborative goals.

Best practice occupational therapy relies on a practitioner's understanding of a client's occupational history and experiences, patterns of daily living, interests, values, and needs, as well as active partnership with the client and care partners (e.g., partners, parents, caregivers) to develop meaningful goals. As stated in the fourth edition of the *Occupational Therapy Practice Framework: Domain and Process* (OTPF-4), "only clients can identify the occupations that give meaning to their lives and select the goals and priorities that are important to them" (AOTA, 2020). If the client or care partners are not involved in developing the profile and identifying goals, priorities, and outcomes, full engagement in occupations may not be accomplished.

### Don't provide interventions for autistic persons to reduce or eliminate "restricted and repetitive patterns of behavior, activities, or interests" without evaluating and understanding the meaning of the behavior to the person, as well as personal and environmental factors.

Occupational therapy practitioners should provide person-centered, strengths-based interventions, and advocate for autistic persons on individual and societal levels by providing information to promote inclusivity and belonging, and to decrease stigma. Actions that are considered "restricted and repetitive behaviors" by the DSM-5 (American Psychiatric Association, 2013) may serve as meaningful activities for self-regulation, communication, or self-expression. Attempting to change or extinguish these behaviors without direct request from the individual, without understanding and incorporating the underlying meanings, or substituting other actions to meet self-regulatory reasons for the behavior commonly results in camouflaging (e.g., masking or hiding behaviors), that can result in negative self-image, depression, and an increased risk of suicidality.

# Don't use reflex integration programs for individuals with delayed primary motor reflexes without clear links to occupational outcomes.

Interventions designed solely to integrate retained reflexes do not promote participation in occupation, and while they may be observed in clients with difficulties in occupational performance, the presence of retained reflexes does not necessarily equate to functional impairment. If reflex integration techniques (i.e., techniques designed to *integrate*, or inhibit, primary motor reflexes that are retained beyond the typical developmental stage of integration) are being considered for intervention, standardized tools and assessment approaches are necessary to connect impairment to occupational performance. Intervention should focus on improving occupational participation and performance rather than solely on reflex integration.

#### Don't use slings for individuals with a hemiplegic arm that place the arm in a flexor pattern for extended periods of time.

Standard shoulder slings immobilize the upper extremity in a flexor pattern (i.e., a position of elbow flexion, and shoulder adduction and internal rotation). Utilizing a sling that places a person's hemiplegic arm in this position for extended periods of time increases the risk of contractures and pain, and limits active use of the extremity, thereby decreasing opportunities for neuroplastic changes that support an organic increase in function. Education should be provided to clients and caregivers on safe positioning of the hemiplegic arm during activity and at rest.

### Don't provide ambulation or gait training interventions that do not directly link to functional mobility.

Occupational therapy practice requires consideration of contextual factors that affect a person's ability to participate in meaningful occupations. Gait training and ambulation interventions do not necessarily consider the context of performing everyday activities. While occupational therapists can assess underlying performance skills for ambulation and gait and utilize related interventions, they must address functional mobility by considering the context in order to implement effective, evidence-based interventions that are personally meaningful to the individual.

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### How This List Was Created (1–5)

The American Occupational Therapy Association (AOTA) conducted a three-phase project to develop the final Choosing Wisely recommendations of services that occupational therapy practitioners should not provide. The phases of the project included Phase I—building member awareness and support, Phase II—soliciting member input, and Phase III—dissemination of the final items. Phase I was accomplished through presentations to AOTA member and volunteer groups, a Town Hall session at AOTA Annual Conference, an online webinar and related materials, and coverage in AOTA publications. Phase I was completed with an online member survey that resulted in 328 responses. Following the elimination of duplicate responses and items outside the scope of occupational therapy practice, the list was narrowed down to 62 items. Additional input was received from AOTA Special Interest Section volunteer leaders to rank the items based on established criteria. An extensive literature search was conducted on the highest ranked strategies. Phase II involved an online member survey presenting 12 items for evaluation with a goal of picking the top 5. This survey resulted in 4,860 responses that were analyzed, resulting in the final 5 items. These items were reviewed by the AOTA Board of Directors. Phase III included the development of a communication and dissemination plan.

AOTA's disclosure and conflict of interest policy can be found at www.aota.org.

### How This List Was Created (6–10)

In 2018, The American Occupational Therapy Association (AOTA) published its first set of Choosing Wisely recommendations. Between 2018 and 2020, numerous practice articles, clinical resources, and webinars were created to promote the recommendations and assist AOTA members with implementation efforts. In 2019, AOTA selected two members as Choosing Wisely Champions, based on their implementation efforts in practice and education. The initial recommendations are reviewed annually.

In 2020, AOTA initiated the process to develop additional recommendations. The process to select and refine the recommendations followed the same member survey and selection process that was used for the initial recommendations. Interventions identified, but not selected for a final recommendation in the 2018 survey, were included in an online member survey. Respondents were to select 5 out of 10 items for development of additional recommendations. This survey resulted in 999 responses that were analyzed, resulting in 7 highly ranked selections. These selections, along with a write-in suggestion identified in multiple surveys, were then ranked by AOTA Special Interest Section (SIS) steering committees. Results from the member survey and SIS rankings were compared, and the top 5 items were selected. A final literature review was conducted for each item, and recommendations were developed in collaboration with AOTA staff members and member content experts.

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#### Sources

	American Occupational Therapy Association. (2014). Occupational therapy practice framework: Domain and process (3rd ed.). American Journal of Occupational Therapy, 68(Suppl. 1), S1–S48. https://doi.org/10.5014/ajot.2014.682006
	Hinojosa, J., & Blount, M. (Eds.). (2017). The texture of life: Occupations and related activities. Bethesda, MD: AOTA Press.
1	Hsieh, C. L., Nelson, D. L., Smith, D. A., & Peterson, C. Q. (1996). A comparison of performance in added-purpose occupations and rote exercise for dynamic standing balance in persons with hemiplegia. American Journal of Occupational Therapy, 50, 10–16. https://doi.org/10.5014/ajot.50.1.10
	Lin, K., Wu, C., Tickle-Degnen, L., & Coster, W. (1997). Enhancing occupational performance through occupationally embedded exercise: A meta-analytic review. Occupational Therapy Journal of Research, 17(1), 25–47. https://doi.org/10.1177/153944929701700102
	Steinbeck, T. (1986). Purposeful activity and performance. American Journal of Occupational Therapy, 40, 529–534. https://doi.org/10.5014/ajot.40.8.529
	Bodison, S. C., & Parham, L. D. (2018). Specific sensory techniques and sensory environmental modifications for children and youth with sensory integration difficulties: A systematic review. American Journal of Occupational Therapy, 72, 7201190040. https://doi.org/10.5014/ajot.2018.029413
2	Council for Exceptional Children. (2014). Council for Exceptional Children standards for evidence-based practices in special education. Retrieved from http://www.cec.sped.org/~/media/Files/Standards/Evidence%20based%20Practices%20and%20Practice/EBP%20FINAL.pdf
	Council for Exceptional Children. (2015). CEC's standards for classifying the evidence base of practices in special education. Remedial and Special Education, 36, 220–234.
	Pfeiffer, B., May-Benson, T. A., & Bodison, S. C. (2018). Guest Editorial—State of the science of sensory integration research with children and youth. American Journal of Occupational Therapy, 72, 7201170010. https://doi.org/10.5014/ajot.2018.721003
	Schaaf, R. C., Dumont, R. L., Arbesman, M., & May-Benson, T. A. (2018). Efficacy of occupational therapy using Ayres Sensory Integration®: A systematic review. American Journal of Occupational Therapy, 72, 7201190010. https://doi.org/10.5014/ajot.2018.028431
	Schaaf, R., & Mailloux, Z. (2015). Clinician's guide for implementing Ayres Sensory Integration®: Promoting participation for children with autism. Bethesda, MD: AOTA Press.
	Watling, R., Kuhanek, H., Parham, D., & Schaaf, R. (2018). Occupational therapy practice guidelines for children and youth with challenges in sensory processing and sensory integration. Bethesda, MD: AOTA Press.
	American Occupational Therapy Association. (2012). Physical agent modalities: A position paper. American Journal of Occupational Therapy, 66(6_Suppl.), S78–S80. https://doi.org/10.5014/ajot.2012.66S78
3	Bracciano, A. G. (2008). Physical agent modalities: Theory and application for the occupational therapist (2nd ed.). Thorofare, NJ: Slack.
	Kim S. H., Park J. H., Jung M. Y., & Yoo, E. Y. (2016). Effects of task-oriented training as an added treatment to electromyogram-triggered neuromuscular stimulation on upper extremity function in chronic stroke patients. Occupational Therapy International, 23, 165–174. https://doi.org/10.1002/oti.1421
	Nakano, J., Yamabayashi, C., Scott, A., & Reid, W. D. (2012). The effect of heat applied with stretch to increase range of motion: A systematic review. <i>Physical Therapy in Sport</i> , 13, 180–188. https://doi.org/10.1016/j.ptsp.2011.11.003
4	Cotoi, A., Viana, R., Wilson, R., Chae, J., Miller, T., Foley, N., & Teasell, R. (2016). Painful hemiplegic shoulder. In R. Teasell, N. Hussein, N. Foley, & A. Cotoi (Eds.), Evidence-based review of stroke rehabilitation (17th ed., pp. 1–56). Ontario: Canadian Partnership for Stroke Rehabilitation.
	Kumar, R., Metter, E. J., Mehta, A. J., & Chew, T. (1990). Shoulder pain in hemiplegia: The role of exercise. Archives of Physical Medicine and Rehabilitation, 69, 205–208.

American Occupational Therapy Association. (2013). Cognition, cognitive rehabilitation, and occupational performance. American Journal of Occupational Therapy, 67(6 Suppl.), S9-S31. http://doi.org/10.5014/ajot.2013.67S9

Cicerone, K. D., Langenbahn, D. M., Braden, C., Malec, J. F., Kalmar, K., Fraas, M., ... Ashman, T. (2011). Evidence-based cognitive rehabilitation: Updated review of the literature from 2003 through 2008. Archives of Physical Medicine and Rehabilitation, 92(4), 519-530. http://doi.org/10.1016/j.apmr.2010.11.015

Gillen, G., Nilsen, D. M., Attridge, J., Banakos, E., Morgan, M., Winterbottom, L., & York, W. (2015). Effectiveness of interventions to improve occupational performance of people with cognitive impairments after stroke: An evidence-based review. American Journal of Occupational Therapy, 69(1), 6901180040. http://doi.org/10.5014/ajot.2015.012138

Smallfield, S., & Heckenlaible, C. (2017). Effectiveness of occupational therapy interventions to enhance occupational performance for adults with Alzheimer's disease and related major neurocognitive disorders: A systematic review. American Journal of Occupational Therapy, 71(5), 7105180010. http://doi.org/10.5014/ajot.2017.024752

American Occupational Therapy Association. (2020). Occupational therapy practice framework: Domain and process (4th ed.). American Journal of Occupational Therapy, 74(Suppl. 2), 7412410010. https://doi.org/10.5014/ajot.2020.74S2001

Improve your documentation with AOTA's updated occupational profile template. (2020). American Occupational Therapy Association. https://www.aota.org/profile Mroz, T., Pitonyak, J., Fogelberg, D., & Leland, N. (2015). Client centeredness and health reform: Key issues for occupational therapy. American Journal of Occupational Therapy, 69(5). https://doi.org/10.5014/ajot.2015.695001

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). https://doi.org/10.1176/appi.books.9780890425596 Benevides, T. W., Shore, S. M., Palmer, K., Duncan, P., Plank, A., Andresen, M.-L., ... Coughlin, S. S. (2020). Listening to the autistic voice: Mental health priorities to quide research and practice in autism from a stakeholder-driven project. Autism, 24(4), 822–833. https://doi.org/10.1177/1362361320908410

Cassidy, S., Bradley, L., Shaw, R., & Baron-Cohen, S. (2018). Risk markers for suicidality in autistic adults. Molecular Autism, 9(1), 42. https://doi.org/10.1186/s13229-018-0226-4. Cage, E., Di Monaco, J., & Newell, V. (2018). Experiences of autism acceptance and mental health in autistic adults. Journal of Autism and Developmental Disorders, 48(2), 473-484. https://pubmed.ncbi.nlm.nih.gov/29071566/

Hull, L., Petrides, K. V., Allison, C., Smith, P., Baron-Cohen, S., Lai, M. C., & Mandy, W. (2017). "Putting on my best normal": Social camouflaging in adults with autism spectrum conditions. Journal of Autism and Developmental Disorders, 47(8), 2519–2534. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5509825

Patten Koenig, K. (2019). A strength-based frame of reference for autistic individuals. In P. Kramer, J. Hinojosa, & T. Howe (Eds.). Frames of reference for pediatric occupational therapy (4th edition). Philadelphia: Lippincott Williams & Wilkins.

Stallings-Sahler, S., Reinoso, G., & Frauwirth, S. (2019). Neurodevelopmental soft signs: Implications for sensory processing and praxis assessment—Part One. AOTA CE. https://www.aota.org/-/ media/Corporate/Files/Publications/CE-Articles/CE-Article-%20September-2019.pdf

McPhillips, M., Hepper, P. G., & Mulhern, G. (2000). Effects of replicating primary-reflex movements on specific reading difficulties in children: A randomised, double-blind, controlled trial. Lancet, 355, 537-541.

Gillen, G. & Nilsen, D.M. (2021). Upper extremity function and management. In Gillen, G. and Nilsen, D.M.(eds.) Stroke rehabilitation: A function based approach (5th ed.). St. Louis: Elsevier Science. van Bladel, A., Lambrecht, G., Oostra, K. M., Vanderstraeten, G., & Cambier, D. (2017). A randomized controlled trial on the immediate and long-term effects of arm slings on shoulder subluxation in stroke patients. European Journal of Physical and Rehabilitation Medicine, 53(3), 10.

American Occupational Therapy Association. (2020). Occupational therapy practice framework: Domain and process (4th ed.). American Journal of Occupational Therapy, 74(Suppl. 2), 7412410010. https://doi.org/10.5014/ajot.2020.7452001

Elliot, S., & Leland, N. (2018). Occupational therapy fall prevention interventions for community-dwelling older adults. American Journal of Occupational Therapy, 72(4), 7204190040. https://doi.org/ 10.5014/ajot.2018.030494

#### About the ABIM Foundation

The mission of the ABIM Foundation is to advance medical professionalism to improve the health care system. We achieve this by collaborating with physicians and physician leaders, medical trainees, health care delivery systems, payers, policymakers, consumer organizations and patients to foster a shared understanding of professionalism and how they can adopt the tenets of professionalism in practice.



#### About the American Occupational Therapy Association

The American Occupational Therapy Association (AOTA) is the national professional association established in 1917 to represent



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the interests and concerns of 213,000 occupational therapy practitioners and students of occupational therapy and to improve the quality of occupational therapy services. AOTA's major programs and activities are directed toward assuring the quality of occupational therapy services, improving consumer access to health care services, and promoting the professional development of members. AOTA educates the public and advances the profession by providing resources, setting standards, and serving as an advocate to improve health care.

For more information about AOTA, visit www.aota.org.

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