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OT and the management of RA
Occupational therapy: A vital member of the interprofessional team-based approach for the
management of rheumatoid arthritis

Applying the 2022 ACR Integrative Guideline to Occupational Therapy

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The goal of occupational therapy (OT) is to support people with rheumatoid arthritis (RA) not just to live, but to live well. RA is a chronic disease that significantly affects every aspect of people's lives including everyday activities, mental health, and social participation (1). People with RA report pain, fatigue, reduced hand function, stress, and anxiety that contribute to decreased participation in valued activities of daily living including work and leisure (2–8). In the face of fluctuating symptoms and/or limited capacities, people with RA routinely minimize participation, ask for help, or forego even starting activities altogether (9). These practices ultimately affect emotional and mental health, contributing to isolation, frustration, stress, anxiety, and depression (10–12). People with RA must learn how to manage this lifelong disease and report they need information on exercise, symptom management, emotional support, assistive devices, environmental modifications, and advice and adaptations for how to continue to perform a range of activities and social roles including care for children and maintaining employment (13,14). All these topics are within the scope of OT practice (15).

Historically, OT has played a key role on the interdisciplinary team for people with RA (16–19). Yet, in recent decades, increased emphasis on pharmacological treatments, such as drug modifying antirheumatic drugs (DMARDs) and biologics, have left many people with RA without support from occupational therapists (7,8,20,21). Recognizing the importance of and current gaps in interdisciplinary and holistic care, the American College of Rheumatology (ACR) commissioned a group of experts to appraise evidence around non-pharmacological interventions and developed the 2022 ACR Guideline for Exercise, Rehabilitation, Diet, and Additional Integrative Interventions for Rheumatoid Arthritis (2022 ACR Integrative Guideline; 22). This guideline recognizes the role that occupational therapists should play as a key member of the healthcare team for people with RA. Referring to this Guideline's recommendations, this

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paper will provide further guidance on OT services for people with RA as well as considerations on how to integrate OT in real-world practice.

Comprehensive Occupational Therapy.

Occupational therapists collaborate with people with RA to support all aspects of participation in life (15,23). OT addresses symptoms of RA that may be interfering with participation by incorporating symptom management strategies in the context of performing daily activities. As indicated in the 2022 ACR Integrative Guideline, comprehensive OT consists of patient-centered services that aim to:

- provide people with RA with information and training on how to adapt daily activities using adaptive equipment, change the environment and/or modify the task or position.
- educate people with RA on chronic disease self-management such as coping, pain and stress management, fatigue management, joint protection, energy conservation and activity pacing.
- address limitations in the hand and upper extremity through focused exercise programs and/or the prescription of orthotics/splints;
- assist people with RA to maintain participation in daily life and social roles including work and leisure activities. (22)

In general, physicians should refer people with RA for comprehensive OT rather than a specific service. Occupational therapists will provide the best possible of these interventions for specific clients depending upon their disease status, stage in life, unique problems, and readiness to adopt changes. To determine the most appropriate treatment, occupational therapists evaluate the activities that clients with RA want and need to do and how the symptoms of RA, such as pain,

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strength, joint motion, and fatigue, affect their ability and satisfaction performing these activities (15). They may visit clients' homes, workplaces, or other relevant places in the community to assess whether these environments require modifications to support participation. Occupational therapists then collaborate with clients with RA to co-create treatment goals and determine how to approach self-management intervention plans (15). In most cases, clients with RA will need only four to six sessions of OT to achieve their goals. However, it is highly recommended that people with RA be referred for OT throughout the course of their disease for booster visits. As people with RA get older, they may develop additional co-morbidities (e.g., osteoporosis, fall risk), a different presentation of RA symptoms, and/or experience lifestyle and role changes (e.g., worker to retiree; parent to grandparent). With these changes, different challenges will emerge. Occupational therapists can help people with RA to navigate, adjust and adapt to new challenges.

In the following paragraphs we provide further context of the role of OT in the areas identified in the 2022 ACR Integrative Guideline.

Adapting daily activities

Occupational therapists are experts in breaking down and analyzing how individuals conduct daily activities and the context in which they are performed. Through these analyses they identify techniques, context adaptations, and/or tangible supports that empower people with RA to complete their daily activities with ease, satisfaction, and safety. Assistive devices, adaptive equipment, and modifications of the task and/or the environment are all solutions to problems people with RA experience as these increase physical function, maintain independence, and improve well-being (Table 1; 24–26). Involvement of experts in the prescription of assistive

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devices and adapted equipment is particularly important as devices may be abandoned if devices do not match the needs of users (26,27).

Education on self-management of RA as a chronic disease

Chronic illness requires additional ‘work’ or responsibilities that may impede peoples’ identities or social roles (1). People with RA meticulously orchestrate individualized routines to manage pain, fatigue, and morning stiffness and avoid flares, yet they find that doing so interferes with their ability to achieve *normal* lives (28) or reduces the quality of activity participation (29).

Managing RA has been described as a “dynamic, iterative balancing process” (30) or “juggling act” (31) wherein people with RA continually deliberate how to fulfill their roles and be considerate of the limitations of their bodies. Because the disease and life are ultimately unpredictable, people with RA must readjust their expectations on a micro scale when their symptoms fluctuate and on a macro scale as they redesign their lives in response to their diagnosis, changes to their social roles, and/or changes to their responses to treatment. Although this management is a lifelong process tied to coping and mental health, people with RA are often left to figure out what works for them without support from professionals. Occupational therapists assist people with RA to understand how their disease affects their lives and to determine what behaviors promote or hinder their health and well-being. Occupational therapists help people with RA to integrate disease management strategies into activities and roles that provide fulfillment. Their goal is to guide people with RA to orchestrate effective routines and habits that integrate disease management into their everyday life.

Occupational therapists educate people with RA on how to take an active role using non-pharmacological behaviors to manage current symptoms, slow down disease progression, and engage in desired activities. Pain management is one of the most important aspects of treatment

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for people with RA (32,33). Occupational therapists teach people with RA how to use thermal treatments and practice stress and coping interventions, collaborating with them to problem solve when and how to use these strategies in the context of their own symptoms and flares (Table 1; 34,35). Occupational therapists provide people with RA with joint protection education and energy conservation training (Table 1). Joint protection focuses on changing behaviors that place stress on joints implicated in RA. Energy conservation training provides guidance on how people with RA can pace themselves throughout the day or incorporate appropriate exercises or physical activities into their schedules (34,36). For both energy conservation and joint protection, occupational therapists move beyond how individual activities are performed and teach people with RA how to understand how patterns of activity affect one another to address fatigue, pain, and other symptoms.

Exercise Programs and/or Prescription of Orthotics/Splints or Compression

Almost all functional and work activities involve hand use and people with RA continue to report pain and decreased hand function despite use of biologics (7). Even people with low disease activity report they have problems with tasks that require dexterous movements or hand strength (37,38). Referrals to occupational therapists who are also Certified Hand Therapists (CHT) (39) could be particularly important for people reporting pain, weakness, or loss of function of the hand. A CHT can provide the appropriate tailored program that addresses strength issues, limitations in movement, coordination, and sensation (Table 1). Ideally, this therapy would occur early in the disease to provide people with RA with habits to manage how the disease affects their hand function over time. During routine health exams recognizing statements by people with RA about increased difficulties with simple daily tasks as a clue that hand exercises may be beneficial (40).

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Orthotics/splints are provided to people with RA for several reasons: to support and align weakened joints, to reduce pain or instability, to improve joint alignment and thus biomechanical function, and to assist with movements lost to disease or disability (41). Orthotics/splints should be designed to address specific client goals. For example, a resting splint is effective if a goal is to reduce pain (42,43). However, this splint restricts motion and prevents hand use and, therefore, would not be appropriate for pain reduction during activities. People with RA should obtain appropriate evaluation by an OT expert such as a CHT so that individualized prescriptions are provided. While some orthotics/splints can be purchased off the shelf, in some cases, CHTs may recommend and design custom-made orthotics to properly address deformities. CHTs examine and correct the fit of a device, whether custom-made or prefabricated, as a poorly fitting orthotic can cause pain, blisters and skin break down, or damage to underlying structures.

Participation in work activities: Work site evaluations, and/or modifications

Remaining at and consistently engaging in paid work is an important goal for many people with RA; yet, RA causes significant limitations in their ability to work. Estimates suggest that after 10 years, 35% of individuals with RA cease to work because of their RA (44). People with RA are more likely to have longer sick leaves (45), reduced productivity at work (46), and report that work performance is affected by the presence, severity, and variability of RA symptoms. They may also experience non-flexible work conditions that hinder their ability to work, including physical job demands, lack of control over time, and strenuous commutes (47). While flexible working arrangements and accommodations may help keep people with RA in the workforce, many people are unaware of legislations, such as the Americans with Disability Act, that support their ability to work (48). Moreover, some choose not to disclose their diagnosis as it may change how they are perceived by their co-workers and supervisors and/or negatively affect their

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job status (49). Emotional challenges, such as fear, stress, guilt, or loss of self-confidence, may be heightened as employment is often tied to family demands and financial concerns (47).

Occupational therapists provide a vital role in assisting people with RA to maintain employment. They are uniquely qualified to provide work interventions. Because of their expertise in activity analysis, they can help to develop customized environmental adaptations, address ergonomic problems, and provide education in stress management and communication skills. OT has been associated with improved work outcomes (49). It is important to note that while the 2022 ACR Integrative Guideline report that there were no studies that supported interventions at work for people with RA, work-related OT interventions exist but were not included in the guidelines because they did not examine just people with RA (50–53). Although ergonomics assessment and work self-management are effective strategies to reduce work disability, few workers with RA are referred for work interventions. Research suggests that those who do receive these types of intervention are less likely to experience work disability (47,54).

Challenges integrating OT into RA care

Occupational therapists provide services that significantly improve the lives of people with RA by helping them to develop and integrate skills to maintain participation in valued activities. In this section we will discuss some of the potential challenges to integrating OT into RA treatment and suggest some solutions.

One barrier to integrating OT into RA treatment is the limited awareness by members of the medical community and people with RA of the breadth of treatments that occupational therapists provide. To overcome this challenge, we must consistently education the medical community on the role of OT in the field of rheumatology. The publication of the 2022 ACR Integrative Guideline along with this companion piece provide an excellent starting point for

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rheumatologists and occupational therapists to develop collaborations. To further disseminate the guidelines, professional organizations such as the American Occupational Therapy Association (AOTA) should develop initiatives to educate the medical and lay communities on the benefits of including OT in the multi-disciplinary approach to rheumatology treatment. Rheumatology-specific patient organizations can also ask occupational therapists to educate their membership on how and when OT is necessary. Individual people with RA can request that their rheumatologists refer them to OT for care. To facilitate the integrative care as recommended by the 2022 ACR Integrative Guideline, rheumatology practices might consider including health professionals, such as occupational therapists, physical therapists, and dieticians, as part of their staff and develop clinical care systems that includes multi-disciplinary therapists as a complete package of treatment for people with rheumatological conditions (16,55,56). If including additional personnel is not feasible, rheumatologists could consider collaborating with local occupational therapists to develop robust referral patterns. The critical piece underlying these solutions is that rheumatologists and occupational therapists need to be build and foster collaborative relationships to provide the best care for people with RA. We encourage rheumatologists and occupational therapists to seek out opportunities to network with one another, whether at professional meetings or through other contacts such as patient organizations, state organizations, or word of mouth. Occupational therapists should reach out to rheumatology practices and introduce themselves as potential partners in care delivery.

A contributing problem for integrating OT into rheumatology practice is the limited access to occupational therapists who specialize in musculoskeletal disorders. As with many health professions who serve people with a variety of conditions, the amount of time spent in the OT curriculum on treating musculoskeletal disorders in general and RA specifically is limited. While

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all occupational therapists can provide self-management strategies and adapted equipment, not all occupational therapists will have expertise in complex cases. As noted, historically referrals to OT for people with RA was greatly reduced with the introduction of DMARDs and biologics which consequently reduced the workforce who specialized in treating rheumatological disorders. Now, workforce shortages must be addressed as part of ARP and ACR initiatives to improve RA care. They should partner with professional organizations such as AOTA to provide opportunities and incentives for OT and other practitioners to develop expertise in this area. As with all health professions in the United States, OT professional organization should strive to make sure that insurance covers OT for people with RA. Another method to increase access to OT is telerehabilitation. Current legislation supports telerehabilitation for OT services and organization should ensure that this access is maintained and extended. Methods to develop telerehabilitation of OT services for people with RA will also improve access to skilled practitioners.

A third challenge to integrating OT into the care of people with RA is the paucity of strong evidence, in the form of RCTs, to support OT interventions. Limited evidence reflects challenges in implementing robust behavioral research trials including recruiting and retaining participants, the need for multiple sites, difficulties blinding interventionists and participants, costs associated with training and paying interventionists, and the length of time needed for a study to show long term benefits. It is important to note that lack of strong evidence does not negate the value of OT interventions or that people with RA may benefit from OT. The 2022 ACR Integrative Guideline recognizes that these interventions are potentially valuable and have conditionally recommended them. A conditional recommendation means that an intervention potentially will benefit people with RA, but that greater consideration must be made as to whether the intervention is the right

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intervention for a particular person with RA given their disease state, lifestyle, financial abilities, preferences, and family. Occupational therapists through their skills and knowledge can help tailor interventions to ensure that they are appropriate and beneficial. Key to determining need is clear communication and discussion between people with RA and occupational therapists who together will determine a plan to address individual need.

Practical information and key points to share with people with RA

Despite the barriers noted above, there is evidence to support OT and skilled occupational therapists who can partner with rheumatologists and people with RA to collaborate on the best care. The two supplementary fact sheets provide practical information on when to consider an OT referral and some practicalities for finding a therapist and ensuring coverage for services.

Conclusion

The 2022 ACR Integrative Guideline clearly highlights the importance of and need for occupational therapists' unique perspective and experience to augment and improve RA care. With the addition of comprehensive OT to the multi-disciplinary team, people with RA are provided with strategies to self-manage the challenges of their disease, whether through behavioral changes, the addition of equipment, or changes in the environment. Rheumatologists and extended care providers should collaborate with OT for optimal patient management to ensure that people with RA live well.

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 Manuscript number (if known): ACR-23-0041

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11	Stock or stock options	<input checked="" type="checkbox"/> None	
12	Receipt of equipment, materials, drugs, medical writing, gifts or other services	<input checked="" type="checkbox"/> None	
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ICMJE DISCLOSURE FORM

Date: 3/14/2023

Your Name: Carole Dodge

Manuscript Title: Occupational therapy: A vital member of the interprofessional team-based approach for the management of rheumatoid arthritis.

Manuscript number (if known): ACR-23-0041

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Time frame: past 36 months			
2	Grants or contracts from any entity {if not indicated in item #1 above}.	-X- None	

3	Royalties or licenses	-X- None	
4	Consulting fees	-X- None	
5	Payment or honoraria for lectures, presentations, speakers bureaus, manuscript writing or educational events	-X- None	
6	Payment for expert testimony	-X- None	
7	Support for attending meetings and/or travel	-X- None	
8	Patents planned, issued or pending	-X- None	
9	Participation on a Data Safety Monitoring Board or Advisory Board	-X- None	
10	Leadership or fiduciary role in other board, society, committee or advocacy group, paid or unpaid	-X- None	
11	Stock or stock options	-X- None	
12	Receipt of equipment, materials, drugs, medical writing, gifts or other services	-X- None	
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Carole Dodge, OTR, CHT

3/14/2023

ICMJE DISCLOSURE FORM

Date: March 14, 2023
 Your Name: Janet L. Poole
 Manuscript Title: Occupational therapy: A vital member of the interprofessional team-based approach for the management of rheumatoid arthritis - Applying the 2022 ACR Integrative Guideline to Occupational Therapy
 Manuscript number (if known): ACR-23-0041

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Time frame: past 36 months			
2	Grants or contracts from any entity (if not indicated in item #1 above).	<input type="checkbox"/> None	National Scleroderma Foundation Grant, paid to institution
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4	Consulting fees	<input checked="" type="checkbox"/> None	
5	Payment or honoraria for lectures, presentations, speakers bureaus, manuscript writing or educational events	<input type="checkbox"/> None	Honoraria as presenter_Virtual Presentation Mary Pack Arthritis Center
6	Payment for expert testimony	<input checked="" type="checkbox"/> None	
7	Support for attending meetings and/or travel	<input type="checkbox"/> None	
8	Patents planned, issued or pending	<input checked="" type="checkbox"/> None	
9	Participation on a Data Safety Monitoring Board or Advisory Board	<input checked="" type="checkbox"/> None	
10	Leadership or fiduciary role in other board, society, committee or advocacy group, paid or unpaid	<input type="checkbox"/> None	American Occupational Therapy Foundation Board of Trustees- volunteer non paid position
11	Stock or stock options	<input checked="" type="checkbox"/> None	
12	Receipt of equipment, materials, drugs, medical writing, gifts or other services	<input checked="" type="checkbox"/> None	
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Table 1: Descriptions of Occupational Therapy (OT) Techniques

OT technique	Definition	Examples
Comprehensive OT	Occupational therapists collaborate with people with RA to enable performance of and participation in everyday, meaningful, occupations*	Assessment and goal setting: provision of adaptive equipment, environmental adaptations, provision of hand exercises and orthotics/splints, self-management training in joint protection, energy conservation, and mind body approaches in the context of performance of occupations*
<u>Adapting Daily Activities</u>		
Adaptive or assistive devices	Devices or equipment that are commercially available or custom fabricated by an occupational therapist to enable people to participate in their occupations* independently, more easily and with less pain. Assistive technology also includes high tech equipment, software programs, and product systems	Eating devices (built up handled cutlery, plates, cups), bathing devices (long handled sponges, wash mitt), dressing (long handled shoe horn, dressing stick, reacher, sock aide, button hook), grooming (tube dispenser/squeezer, adapted flosser, adapted nail clipper, long handled comb/brush), work (large speaker phones, voice recognition software, standing desks, ergonomic keyboards, ergonomic power tools), other (built up handles, knob turners, pill cutters, large size pill organizer, universal cuff, leg lifter, cellphone holder)
Environmental adaptation	Changes or modifications to the physical environment to facilitate mobility, safety, and independence in performing occupations*. Environmental adaptations are usually completed on individual home and work environments, but occupational therapists also advocate for environmental changes to public buildings and for community accessibility (e.g. playgrounds, public transportation)	Toileting adaptations (raised toilet seat, commode, toilet safety rail), Showering adaptations (tub seat, handheld shower, walk in bath), Grab bars, Ramps, Stairglide, Home modification, Worksite modifications (electric doors, badge access vs key access, rearrange furniture)

OT technique	Definition	Examples
<u>Education on Self-Management of RA as a Chronic Disease</u>		
Joint protection training	Self-management techniques/strategies to put less stress on painful or unstable joints	Respect pain, use larger stronger joints for activities, avoid staying in one position too long, maintain muscle strength, balance rest and work, use joint in its most stable position, maintain good postures, use adaptive devices, modify activities
Energy conservation training	Self-management techniques/strategies to manage fatigue	Four Ps of energy conservation/fatigue management (planning, prioritizing, activity pacing, positioning); activity modification, adaptive devices, joint protection, physical activity, mind body approaches
Thermal modalities	Modalities that use heat, cold, sound, or focused light to decrease pain and inflammation or warm up tissues	Cryotherapy, heat, therapeutic ultrasound, infrared sauna, paraffin therapy, and laser therapy
<u>Exercise Programs and/or Prescription of Orthotics/Splints</u>		
Resistive hand exercise programs	Exercises using resistance to improve strength in finger, thumb and wrist muscles leading to increased grip and pinch strength.	Resistance can be therapeutty, rubber bands, gravity, weights, or a static muscle contraction (isometric). Exercises depend on current strength of muscles, amount of active motion, inflammation, and pain
Orthotic/splint Compression prescription	Orthotics/splints are custom made or prefabricated devices that restrict or support motion in painful or deformed joints, or support weak muscles or ligaments surrounding a joint. Compression, in the form of gloves/gauntlets/sleeves, apply pressure to reduce swelling, stiffness, and pain and increase blood flow.	Resting hand, wrist support, figure 8 orthotic for boutonniere or swan neck deformity, hand based or wrist-based thumb orthotic. Isotoner gloves with closed or open fingertips; gauntlets or sleeves for the wrist only, thumb and wrist, or single finger
<u>Participation in Work Activities: Work Site Evaluations, and/or Modifications</u>		
Work site evaluations and modifications	Altering task demands, work environments, job, or work processes to keep workers in the workforce. Training in communication and negotiations	Ergonomic tools and equipment, environmental modifications, adaptive devices, assistive technology, work schedule modifications, energy management and joint protection.

OT technique	Definition	Examples

*Occupations are everyday activities that people do to occupy time and bring meaning and purpose to life. They include Activities of Daily Living (self-care activities such as dressing, bathing, sexual activities; Instrumental Activities of Daily Living (activities that support daily life at home in the community such as home care, dependent care, shopping), Health Management, Rest/Sleep, Education, Work, Leisure, Social Roles (15)

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