

Physiotherapy in Rheumatoid Arthritis

What is appropriate and safe ?

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Outline for today

What is RA ? How do we identify it and why is this important ?

Are there repercussions of it not being identified ?

Is there anything we need to really look out for ?

Can physiotherapy help with management ?

Focus on Guidelines (not specific joint management)

- Cardiovascular disease risk - Fatigue - Sleep - Physical activity

Outcome measures

Take home messages and where to go for more information

What is Rheumatoid Arthritis ?

It's a systemic inflammatory auto-immune disease, causing chronic inflammation of the synovial membrane, which can destroy articular cartilage and peri-articular bone.

Usually affects smaller joints of the hands and feet.
May start with just one or a few areas but then develops into a symmetrical polyarthropathy
(Di Matteo 2023)



Women 2-3 x > men

Age 30-60 (peak 5th decade)

Cause unknown but genetic and environmental contributors

(Aletaha 2018)

Why is it important to diagnose RA?

Early diagnosis and treatment of RA can stop or substantially slow progression of joint damage in up to 80-90% of patients.

DMARDs aim to lead to remission or low disease activity within 6 months.
multi-drug resistant RA – ‘difficult to treat’ RA or those without diagnosis for a long time still have damage.

longer time till diagnosis = more irreversible joint damage
Optimal time between onset and drug commencement ≤ 3 months

Increased quality of life. – over time those with low disease activity stayed in the workforce longer, were more active.

Being physically active was also associated with increased social connection and participation and helped increase QOL.

Highly variable time to diagnosis

average lag time symptom onset to therapy 11.79 months (from 3.6-24 months)

Onset of symptoms to the first GP appt	3.14 months	(0–5.7 months)
physician visit to RA specialist referral	2.13 months	(0.5–6.6 months)
rheumatologist to diagnosis	2.91 months	(0–5 months)
diagnosis to initiation of DMARDS	2.14 months	(0–2.2 months)

Association with delays - gender, ethnicity, general attitudes, primary care physician knowledge of the condition and availability of diagnostics.
in Australia – patient delay and rheumatology delay bigger

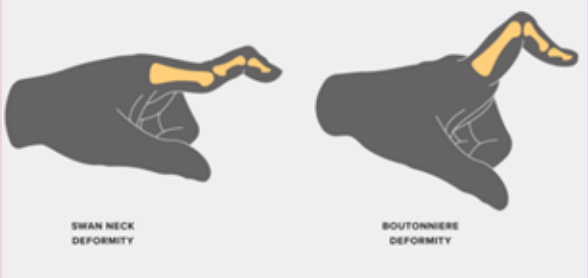
Identifying RA

- presents with pain and swelling and stiffness in the joints of the hands and feet.
- This is accompanied by morning joint stiffness lasting more than 30 minutes and usually up to several hours.
- The swelling is primarily in the wrists and MCP, MTP and PIP joints.
- The swelling is typically “soft” because of synovitis and effusion, in contrast to the “hard” (bony) swellings of osteoarthritis.

Identifying RA

- When the fingers are involved, swelling centres around the joint (fusiform) rather than involving the whole digit (“sausage digit”), as seen in psoriatic arthritis.
- Both small and large joints can be involved, although the distal interphalangeal joints are rarely affected.
- Large joints include the ankle, knee, elbow, and shoulder joints.

Red Flags — New, worsening symptoms or signs of flare ups

Articular / Periarticular	Extra-Articular (EA)
Cervical spine instability Tendon rupture / joint dislocations of the hand/wrist or foot/ankle joints Boutonnière / Swan neck deformity  Carpal tunnel, Hallux valgus, MLA flattening, claw toe Synovitis-driven rotator cuff and/or glenohumeral symptoms	Skin Pulmonary Interstitial lung disease Cardiovascular Neurological Peripheral neuropathy Cervical myelopathy Visual Sjögren's syndrome Haematological Metabolic/endocrine Osteoporosis

Guidelines

7. support to engage in physical activity

8. Pain management

9. *Emotional and Psychological wellbeing.*

11. *Cardiovascular disease risk management*

12. *Fracture risk management*



Cardiovascular disease risk management

Cardiovascular Disease Risk

links between the inflammatory processes of RA and atherosclerosis likely contribute to increased CVD risk

This is in addition to the usual risk factors for CVD including hypertension, hypercholesterolemia, diabetes, and smoking,

So

Adequate control of disease activity is necessary to lower the CVD risk

2015 study (cohort of 24,989) 21% reduction in CVD risk for every 10 point reduction in the Clinical Disease Activity Index (CDAI)

(Figus 2021, Solomon 2015)

Clinical Disease Activity Index (CDAI)

Joint	Left		Right	
	Tender	Swollen	Tender	Swollen
Shoulder				
Elbow				
Wrist				
MCP 1				
MCP 2				
MCP 3				
MCP 4				
MCP 5				
PIP 1				
PIP 2				
PIP 3				
PIP 4				
PIP 5				
Knee				
Total	Tender:		Swollen:	



Patient Global Assessment of Disease Activity

Considering all the ways your arthritis affects you, rate how well you are doing on a scale of 0 to 8.0.

Very Well 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0

Your Name _____ Date of Birth _____ Today's Date _____

Provider Global Assessment of Disease Activity

Very Well 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0

How to Score the CDAI

Variable	Range	Value
Joint count	(0-28)	
Global score	(0-10)	
Global score	(0-10)	
Global score	(0-76)	

CDAI Score Interpretation	
0.0 - 2.8	Remission
2.9 - 10.0	Low disease activity
10.1 - 22.0	Medium disease activity
22.1 - 76.0	High disease activity

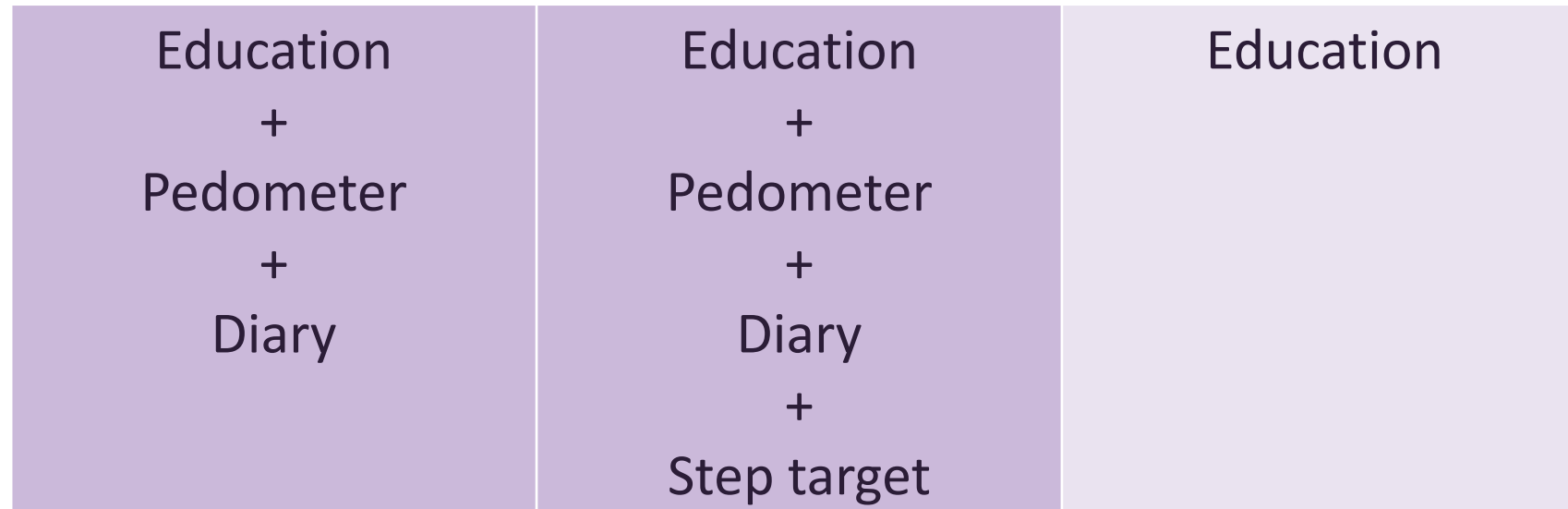
Emotional and psychological wellbeing – impact of fatigue.

Fatigue

Fatigue is the subjective experience of intense tiredness or exhaustion, is often unrelated to energy exertion and not relieved by rest (Druce 2019)

? effect of exercise on fatigue on RA,

- significant decrease in fatigue with a 21 week pedometer based program





Sleep



study on sleep disorders in the RA population found an increased prevalence of OSA (Obstructive sleep apnoea), RLS (restless legs syndrome) and SS (short sleep < 6 hours) compared to the general population.

Mixed results of exercise.

Most common sleep disorder was short sleep:

- Katz in 2025 found over 40% of their study's cohort reported an average of less than 6 hours of sleep per night.
- In comparison, estimates of the prevalence of short sleep in the general Australian population to vary from 12% to 18%



what do people with RA think ?

Positive impact on sleep

‘I would have thought I would be full of energy and not be able to sleep, but that didn’t happen, did it

Clear mental health benefits

‘I’d never considered it before. But I suppose it’s all linked, isn’t it? If you don’t sleep well then it will have a knock-on effect to your health.’

‘There’s always that tendency not to talk about depression and sleep ... I’m so glad I signed up for it all as I now feel able to discuss mental health with the family.’

empowerment and ownership

‘I feel empowered now and confident that I’m not doing harm to myself.’

‘Because I’m able to pace myself better now, I feel that I can really say that my daily exercise is my own.’

Positive experiences of the exercise

‘...really enjoyed it and found it very beneficial for my sleep.’

‘... I’m taking away from the course is pacing myself but increasing it now rather than just strolling.’

Support
to engage in
physical activity
(+ fracture risk
management)

Physical activity

2024 Norwegian study	2019 Swedish study
12 week exercise program of 2 x supervised HIIT session and 1 x moderate intensity independent exercise session/week	20 week intervention - moderate > high resistance and aerobic training. Progression of exercise to 80% 1 RM for 8-12 repetitions
↑ VO_{2peak} no significant differences in disease activity, patient-reported pain, fatigue or exercise beliefs and self-efficacy ↑ self-reported exercise habits at 6 months	↑ significantly improved aerobic capacity (Vo_2/kg/minute) ↑ Endurance ↑ functional balance (TUG) ↑ leg muscle strength (30 sec STS) <i>Only adverse event was pain – catered to by adapting exercise.</i>

Pain management

Pain Management

Improved sleep and physical activity can assist with reducing self-reported pain levels.



A 2025 review on the effect of non-pharmacologic pain management in RA shows mixed results. There is low level evidence in support of acupuncture, mixed evidence for Yoga and CBT and inconclusive evidence for cryotherapy.

(Norden 2024, Irwin 2012, Pham 2025)

Outcome measures

- *HAQ (Health Assessment Questionnaire)*
- *Arthritis Impact Measurement Scales (AIMS)*
- *SF36 (short form 36)*
- *Rheumatoid Arthritis Distress Scale (RADs)*
- *Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F)*
- *Bristol Rheumatoid Arthritis Fatigue Multi-Dimensional Questionnaire (BRAFM-DQ)*
- *Routine Assessment of Patient Index Data 3 (RAPID-3)*

Take home messages

- Early identification and treatment with DMARDs, preferably within 3 months is key.
- Early symptoms are stiffness, pain and swelling and don't necessarily start symmetrically.
- Remember red flags – cervical instability and refer on if suspected.
- Fatigue, sleep, pain, psychological health/mood, and reduced physical activity are all common. Consider other factors such as osteoporosis, falls risk, and cardiovascular disease risk.
- Physical activity at high and lower intensity is safe and effective at increasing cardiovascular fitness, reducing fatigue and self-reported pain scores and may help to lower risk of cardiovascular disease.

Take home messages cont...

- Being physically active is associated with increased social connection, participation and QOL.
- may benefit from strategies to help with improving sleep. Exercise is one these – Education is key
- People may adhere better and gain more from exercise if they have some way to measure that
- Exercise should address bone density and falls risk and this ideally be factored into the exercise program.

Further studies on the specific type of exercise needs to be done to establish if further changes to factors affecting CVD can be improved and what effect resistance training may have on several factors including RLS.

Where can I go for more information ?



<https://atlasarthritis.com.au/>

RAP-eL

e-Learning for physiotherapists

<https://www.rap-el.com.au/>

Thank you

Questions ?

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