

THIRD EDITION

Know your  
DISEASE ACTIVITY SCORE

# DAS

And stay one step  
ahead of your RA

A patient guide

Disease activity score (DAS)28

NOW INCLUDING TIPS  
ON SELF-ASSESSMENT



**nras**  
National Rheumatoid  
Arthritis Society



*The development and printing of this booklet was sponsored by Roche Products Limited., Chugai Pharma UK Ltd and created in partnership with NRAS.*

## Personal Information

Name:

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Contact details:

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Emergency contact details:

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Name of consultant:

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Name of specialist nurse:

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Nurse helpline:

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Treatment info:

e.g. 'I have rheumatoid arthritis and currently I am taking ... (name of treatment)'

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My RA is sero-positive/sero-negative

(delete where appropriate)

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## Introduction



Is your rheumatoid arthritis (RA) under control?  
Do you have any or all of these symptoms despite being on treatment?<sup>1</sup>

- Fatigue
- Morning stiffness
- Flu-like symptoms
- Painful, tender or swollen joints
- Depression / feeling low

People with RA often find their symptoms vary from day to day,<sup>1</sup> and that at times they can experience a flare-up of particular symptoms, while during other times their RA can settle down.

However, experiencing any of the above while on treatment could be a sign that your current treatment isn't doing the most it could do, and it might be time to try something different e.g. adding or changing to another medication; altering dosage; utilising other interventions such as physiotherapy, pain management, meditation or any combination of these. It might also just be a sign that it is time for your next dose of treatment.

There are many ways to assess how well your treatment is working for you – one important way involves checking how active your RA inflammation is by calculating your **disease activity score**, or **DAS28** (so called because it assesses 28 joints).<sup>2</sup> Disease activity should be measured by your doctor or nurse on a monthly basis and acted upon if it remains high.<sup>3,4</sup> You should also have an annual holistic review to assess how RA is impacting on your life.<sup>4</sup>

Knowing what DAS28 is and how it works will help you to stay one step ahead of your RA.

1 Scott DGI, Bosworth A. What is RA – what are the symptoms? NRRAS 2014. Available at: <http://www.nrras.org.uk/what-is-ra-what-is-ra-295> Last accessed: April 2015

2 Kiely P. The DAS28 score. NRRAS 2014. Available at: <http://www.nrras.org.uk/the-das28-score> Last accessed: April 2015

3. Deighton C et al. BSR and BHRP rheumatoid arthritis guidelines on eligibility criteria for the first biological therapy. *Rheumatology* 2010; 49(6): 1197-9

4. BSR. Top ten quality standards for RA. January 2012. Available at: [http://www.rheumatology.org.uk/includes/documents/cm\\_docs/2012/10\\_quality\\_standards\\_for\\_ra.pdf](http://www.rheumatology.org.uk/includes/documents/cm_docs/2012/10_quality_standards_for_ra.pdf) Last accessed: April 2015

## What is DAS28 and how is it calculated?

DAS28 is a common measurement of disease activity in RA and provides you with a score that tells you how well controlled your RA is and whether treatment is working for you.<sup>1,2</sup>

Your doctor or nurse will calculate your DAS28 using a special calculator, based on the results of several tests involving: joint examinations, blood tests and also your personal assessment of how you feel your condition is at the time of examination.<sup>1</sup> As a rule, the lower your DAS28 score, the better controlled your condition is, with joint damage often associated with a higher DAS28 score.<sup>1</sup>

Here, a little more detail is provided on how your DAS28 is calculated.



### Can I calculate DAS28 myself?

It can be helpful to monitor your level of disease activity between consultations; some of the examinations involved in calculating a DAS28 score – such as joint examinations – can be carried out by you, with advice and support from your healthcare professional.

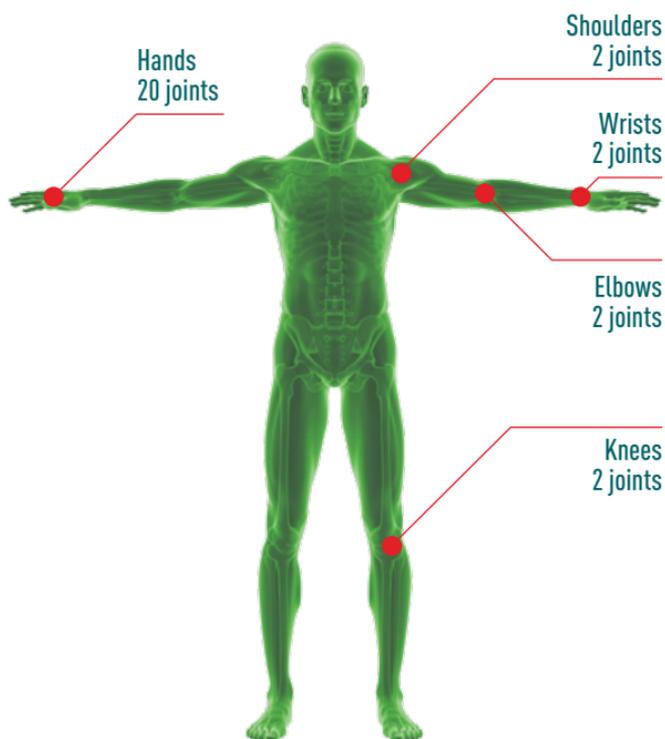
Once you know how to do it, a DAS28 joint self-assessment can take less than five minutes to perform.

<sup>1</sup> Kieley P. The DAS28 score. NRAS 2014. Available at: <http://www.nras.org.uk/the-das28-score> Last accessed: April 2015

<sup>2</sup> J. Franssen, P.L.C.M. van Riel. The Disease Activity Score and the EULAR response criteria. Clin Exp Rheumatol 2005;23 (Suppl.39): S93-S99

## 1. Joint examination

Twenty-eight joints are examined throughout your body.<sup>1</sup> Each joint is squeezed and the number of tender and swollen joints is calculated.<sup>1</sup> Please note that not all joints are assessed by DAS28. For example, the feet and ankles are not included in the tender and swollen joint count, so if you have pain in these areas you should make sure you tell your healthcare team.<sup>1</sup>



<sup>1</sup> Kiely P. The DAS28 score. NRAS 2014. Available at: <http://www.nras.org.uk/the-das28-score> Last accessed: April 2015



## Supporting your healthcare professional by calculating your own DAS28 score?

Joint assessment involves recording the tenderness and swelling of your joints.<sup>1</sup> Consider the following questions when doing yourself:<sup>1</sup>

- What's your range of joint movement independently and then with assistance?
- Does joint movement cause you pain or discomfort?
- Have you looked at your joints from as many angles as possible?
- What level of swelling and tenderness are you feeling by pressing on your joints?

<sup>1</sup> Pala O, Cavaliere LF. Chapter 7: Joint counts. Available at: <http://www.rheumatology.org/Search.aspx?SearchText=pala> Last accessed: April 2015

## 1. Shoulder joints:

Starting from the outside of the shoulder joint, move your fingers around to the top, feeling for the dent in the shoulder. Move shoulder forwards and backwards.



## 2. Elbow joints:

Hold the elbow either side of the joints and bend the arm up. Feel the side of the elbow with the arm straight out.



### 3. Wrist joints:

Move the thumb across the top of the joint until the nail blanches. Move hand up and down to feel the wrist joint.



### 4. Hand joints:

Hand and finger knuckles; move up and down the outside of each knuckle with the thumb and finger on either side of the joint. Move finger and thumb up and down the knuckle where it bends.



## 5. Knee Joints

Feel with finger and thumb from the top of the knee, round the outside of the joint and straighten the knee.



**Please speak with a healthcare professional for detailed information on how to conduct a joint self-assessment and record the results.**

Watch the online video on  
**[www.nras.org.uk/patients](http://www.nras.org.uk/patients)**

## 2. Blood tests



There are two blood tests that could be performed to indicate the degree of inflammation present in your body:<sup>1</sup>

- **The erythrocyte sedimentation rate (ESR)**

This measures how long it takes for red blood cells to fall to the bottom of a test tube. The quicker they fall, the more likely it is that there are high levels of inflammation; one of the aims of treatment is to reduce the ESR to normal levels

- **C-reactive protein (CRP)**

This is produced by the liver and if there is a higher concentration of this protein than usual, there is inflammation present.

<sup>1</sup> Panayi G. Laboratory tests used in the diagnosis and monitoring of rheumatoid arthritis. NRAS 2013. Available at: <http://www.nras.org.uk/laboratory-tests-used-in-the-diagnosis-and-monitoring-of-rheumatoid-arthritis> Last accessed: April 2015

### 3. Personal assessment



On the day of your assessment, you will be asked to mark on a scale (called a Visual Analogue Scale) the level of pain and discomfort you feel.<sup>1,2</sup> You will have to mark this on a scale that ranges from not active at all to extremely active.<sup>1,2</sup>

In advance of your consultation, it may help to ask yourself the following:

- How have you been feeling in the days leading up to your consultation / DAS28 assessment?
- Have you started experiencing new symptoms? When?
- When are your symptoms particularly bad?
- How has your RA impacted on your day to day activities?
- How long have you felt this way since your last treatment?

#### Patient's global assessment of disease activity



Be as honest as possible – there are no prizes for putting on a brave face and it will only mask the true extent of how well your disease is being controlled.

### Please note:

The following factors are not measured by DAS28, however, your doctor or nurse should take them into account so it's important to raise it if you have had or are experiencing any of the following:

- Pain<sup>1</sup>
- Fatigue<sup>1</sup>
- Eye problems<sup>2</sup>
- Heart problems<sup>2</sup>
- Lung or breathing problems<sup>2</sup>

Changes in treatment (for example if you have recently started or stopped steroids) need to be considered when assessing your DAS28. You should also mention any symptoms you think might be side effects related to your current treatment.

“

Knowing your DAS score is an important part of understanding about your disease and can help you feel more in control of your RA when it comes to making shared decisions with your team about your treatment options. It can also help you and your RA team to get the most out of your consultation.

*Ailsa Bosworth, Chief Executive and Founder, NRAS*

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<sup>1</sup> Scott DGI, Bosworth A. What is RA – what are the symptoms? NRAS 2014. Available at: <http://www.nras.org.uk/what-is-ra-what-is-ra-295> Last accessed: April 2015  
<sup>2</sup> NRAS. Biologics – the story so far. September 2013. Available at: <http://www.nras.org.uk/data/files/Publications/Biologics.pdf> Last accessed: April 2015

## Why is it important to know your DAS28?

DAS28 is a measure of how well controlled your RA is and how well you're responding to treatment.<sup>1,2</sup>



Current treatments include traditional disease-modifying anti-rheumatic drugs (DMARDs) and newer biologic therapies.<sup>3,4</sup> Biologic medications are given either by self-administered injection under the skin or by intravenous drip.<sup>3</sup>

Treatments can 'switch off' the inflammation associated with RA, slowing down the joint damage that causes pain and disability.<sup>3,4</sup> DAS28 is therefore important in deciding on the best treatment to control the disease for each person. What works for one person may not work for another so monitoring your own disease activity is unique to you.

### DAS28 score < 2.6

The goal of treatment is to achieve remission – to be symptom-free or have significantly reduced symptoms.<sup>1</sup> Clinical remission is defined as a DAS28 score of less than 2.6,<sup>1</sup> although this is not achievable for everyone.<sup>2</sup> Therefore, the aim for many people is to achieve the best disease state, or the lowest DAS28 score possible for you to prevent further joint problems and more importantly to provide the best possible quality of life.

1 Kieley P. The DAS28 score. NRAS 2014. Available at: <http://www.nras.org.uk/the-das28-score> Last accessed: April 2015

2 J. Fransen, P.L.C.M. van Riel. The Disease Activity Score and the EULAR response criteria. Clin Exp Rheumatol 2005;23 (Suppl.39): S93-S99

3 NRAS. Biologics – the story so far. September 2013. Available at: <http://www.nras.org.uk/data/files/Publications/Biologics.pdf> Last accessed: April 2015

4 NHS Choices. Rheumatoid arthritis – information prescription. 2014. Available at: <http://www.nhs.uk/Conditions/Rheumatoid-arthritis/Pages/Treatment.aspx> Last accessed: April 2015

The table below shows what different levels of the DAS28 represent:<sup>1,2</sup>

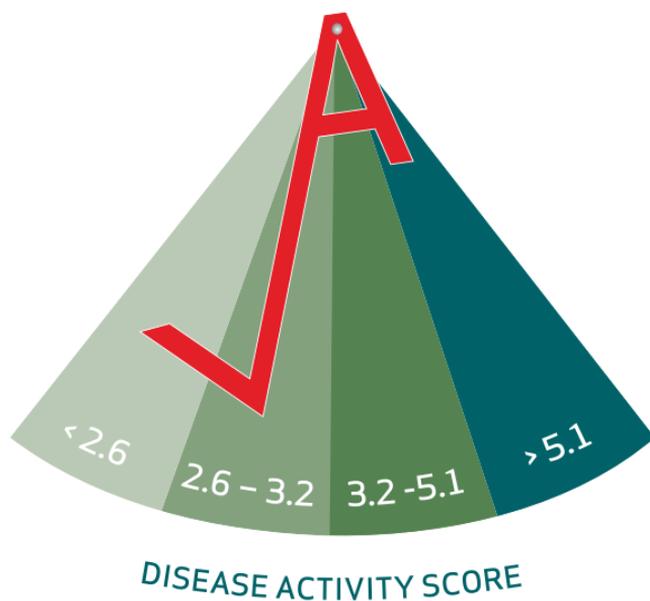
| <b>DAS28</b>         | <b>Implication</b>   |
|----------------------|--|
| <b>Less than 2.6</b> | Disease remission. Usually no action necessary except remain on current medication.  |
| <b>2.6 to 3.2</b>    | Low disease activity. May merit change in therapy for some patients  |
| <b>3.2 to 5.1</b>    | Moderate disease activity. May merit change in therapy for some patients unless mutually agreed to be the best outcome on current treatment                                |
| <b>More than 5.1</b> | Severe disease activity likely to require change in therapy. This is the current threshold for being considered for biologic treatment as per NICE guidelines <sup>3</sup> |

1 Kieley P. The DAS28 score. NRAS 2014. Available at: <http://www.nras.org.uk/the-das28-score> Last accessed: April 2015

2 J. Franssen, P.L.C.M. van Riel. The Disease Activity Score and the EULAR response criteria. Clin Exp Rheumatol 2005;23 (Suppl.39): S93-S99

DAS28 can help you and your health professional decide whether you might need a treatment change to improve the management of your condition. This may involve increasing, decreasing or even stopping the dose of a particular treatment. It may also involve starting another treatment or giving a steroid injection to manage a flare.

Your doctor or nurse can tell you more about the treatment options available to you. If you feel your treatment isn't working, then raise this with your health professional and ask to have your DAS28 measured.



## DAS28 self-assessment frequently asked questions



Dr Waji Hassan, Consultant Rheumatologist from University Hospitals Leicester, answers some common questions:

### Should I consider doing a DAS28 self-assessment?

“ Conducting a DAS28 self-assessment can be a useful way of monitoring your own progress and supporting your healthcare professional - and may provide you with early signs of an impending flare. If you notice you may be heading for a flare, you could use self-management strategies to reduce the impact, e.g. pacing, tailored exercises, etc. as well as access early intervention by your rheumatology team as appropriate. It's important to speak with a healthcare professional about how to conduct a self-assessment – particularly a joint self-assessment – and record the results as accurately as possible. ”

### How often should I consider performing DAS28 self-assessment?

“ Your healthcare professional will advise you based on your needs, but in the early days, you could consider doing a DAS28 every four weeks; as symptoms improve, you could do DAS28 every 2-3 months, or when you feel you may be experiencing a flare. ”



### How will I know if I am performing DAS28 self-assessment correctly?

“

You should be supported by training from your doctor or nurse; if you have any concerns then speak to your rheumatology team or watch the short film on the NRAS website of how a health professional examines the joints. Following these instructions, and being consistent, should give you an indication as to how your RA is being controlled.

”

### How will my self-assessment be used by my doctor or nurse?

“

It forms part of an overall assessment of your disease activity; your own self-assessment will not take the place of your healthcare professional making their own DAS28 examination, but will complement their measure to allow your doctor or nurse to make a decision regarding your treatment if necessary.

”

## Other tests for RA

DAS28 is one of the most useful tests currently available for measuring how your RA responds to treatment.<sup>1,2</sup> Other investigations include:<sup>3</sup>

- **Ultrasound**
- **Physical examinations**
- **Blood tests** (including rheumatoid factor and anti-CCP – which refer to your sero status: the presence of, or absence of, autoantibodies in the blood that can help identify if you are more likely to respond to a specific drug)<sup>4</sup>
- **X-rays**
- **Other forms of imaging such as MRI**

Regardless of how your RA is monitored, it is important that you have a management plan that works well for **you**. Your plan will most likely comprise of drug treatment but physiotherapy, podiatry, occupational therapy or sometimes even surgery may also play a part in your management plan.<sup>3,5</sup>

## Tools available from NRAS

- **Raise it** booklet to help track your symptoms and get the best out of your consultations
- **‘Know your DAS28’** online videos for more information on the DAS28 examination

Please visit **[www.nras.org.uk](http://www.nras.org.uk)** or call 0800 298 7650 for more information.

1 Kieley P. The DAS28 score. NRAS 2014. Available at: <http://www.nras.org.uk/the-das28-score> Last accessed: April 2015

2 J. Fransen, P.L.C.M. van Riel. The Disease Activity Score and the EULAR response criteria. Clin Exp Rheumatol 2005;23 (Suppl.39): S93-S99

3 NHS Choices. Rheumatoid arthritis – information prescription. 2014. Available at: <http://www.nhs.uk/Conditions/Rheumatoid-arthritis/Pages/Diagnosis.aspx> Last accessed: April 2015

4 NRAS. Raise it! Booklet. September 2013. Available at: <http://www.nras.org.uk/data/files/Publications/Raise%20it.pdf> Last accessed: April 2015

5 NRAS. The team of experts involved in your care. 2015. Available at: <http://www.nras.org.uk/the-team-of-experts-involved-in-your-care> Last accessed: April 2015









## Further information

Achieving a better life for people living with RA is the primary goal of the NRAS. One of the ways we achieve this is by providing high quality health and social care information for people living with RA, their families, friends and health professionals.

The best way to find out more about managing your disease and keep up to date with developments in care is by becoming a member of NRAS.

Join today by visiting **[www.nras.org.uk](http://www.nras.org.uk)** or call 0845 458 3969.

For further help or information, please contact the NRAS helpline on: 0800 298 7650 or visit: **[www.nras.org.uk](http://www.nras.org.uk)**.



If you have found this publication helpful others may too. To help NRAS continue to be the voice of RA in the UK donate online via **[www.nras.org.uk/donate](http://www.nras.org.uk/donate)** or text NRAS to 70660 to donate £3.

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