Rheumatism – what is it?
The term “rheumatism” stems from the Greek (“rheo” – English “I flow”). It means roughly “pulling, flowing pain”. Today, this term includes all diseases of the locomotor system that are not the result of injury or tumorous growths.
Within rheumatology, over 100 different disease patterns have been identified. Many of these rheumatic diseases affect not only the joints, spine, bones, and their surrounding muscles and tendons, but often also the skin, nervous system, and eyes, as well as the lungs, heart, or kidneys.
The World Health Organization (WHO)\(^1\) considers rheumatism to be an umbrella term for “all diseases or the musculoskeletal and locomotor systems, which are almost always associated with pain, and frequently also loss of movement”.
This definition has also been adopted by the International League of Associations for Rheumatology (ILAR)\(^2\) and the European League Against Rheumatism (EULAR) at the European level\(^3\), and the American College of Rheumatology (ACR).\(^4\)
According to data from the German Society for Rheumatology (Deutsche Gesellschaft für Rheumatologie, DGRh), around one quarter of the population in Germany suffers from a loss of function due to musculoskeletal diseases. Around 10 million Germans have a clini-
cally manifest, chronic disease of the musculoskeletal and locomotor system that requires treatment.

Some seven million Germans have severe chronic back pain; around six million suffer from osteoarthritis of the knee, four million from polyarthritis in the hands. Inflammatory rheumatic diseases affect 1.5 million Germans, which is two percent of the adult population. In addition, there are about 15,000 children with rheumatism. The economic costs resulting from rheumatic diseases in Germany are estimated to be about 40 billion Euros annually.5

The German Society for Rheumatology, the medical professional association for rheumatology in Germany, subdivides the rheumatic diseases into four groups, based on the dysfunction at cause:

- **inflammatory rheumatic** diseases, e.g. rheumatoid arthritis (RA, also: chronic polyarthritis, “true rheumatism”), ankylosing spondylitis (Bechterew’s disease), psoriatic arthritis, collagenosis (autoimmune disease of the connective tissue), systemic vasculitis (inflammation of the blood or lymph vessels)
- age- or wear-induced **degenerative rheumatic diseases**, e.g. osteoarthritis, spondylarthritis
- diseases of the locomotor system caused by **metabolic disorders**, e.g. osteoporosis, gout, diabetes
- **rheumatic pain syndromes** (“soft-tissue rheumatism”) such as fibromyalgia

“Typical” rheumatism includes the **inflammatory rheumatic diseases**:

- rheumatoid arthritis (RA, also: chronic polyarthritis, “true rheumatism” or “inflammatory articular rheumatism”)
- chronic inflammation of the spine, e.g. ankylosing spondylitis (Bechterew’s disease), psoriatic arthritis (arthritis psoriatica), reactive arthritis
- inflammatory diseases of the connective tissues (collagenoses), e.g. systemic lupus erythematosus (SLE)
- inflammatory diseases of the blood vessels (vasculitis), e.g. Wegener’s granulomatosis (Wegener’s disease), temporal arteritis (arteritis temporalis)
• inflammatory rheumatic diseases in children and youth (juvenile idiopathic arthritis, JIA)

Numerous other, rare diseases fit into the classification of rheumatic diseases: Lyme disease (a chronic disease transmissible by tick bite subsequent to bacterial infection), systemic sclerosis (pathological systemic hardening of tissues or organs), polymyalgia (polymyalgia rheumatica, “rheumatic pain in many muscles”), Sjögren’s syndrome (a disease of the tear and saliva glands), or myositis (inflammatory disease of the musculature).

In the early stages, many rheumatic joint diseases cannot be precisely attributed to a single disease, which is why physicians often refer to “undifferentiated arthritis”.

**Societal and economic consequences of rheumatic diseases:**

• Rheumatic diseases are among the most common diseases requiring treatment. The most recent report on rheumatism from the German government estimates that about one third of all disability pensions, one fifth of hospital stays, and a high percentage of all visits to physicians are caused by rheumatic diseases.\(^6\)

• Among patients with rheumatism, disability is significantly higher than in the general population. Increasing duration of the disease causes the disability rate to rise disproportionately.\(^7\)

• Nearly one quarter of the population suffers from a rheumatic disease or arthritis. Rheumatic diseases thus rank in first place among chronic diseases throughout Europe.\(^8\)

• With 0.5 to 1 percent of individuals affected, rheumatoid arthritis (RA) is the most common inflammatory autoimmune disease. The peak age is between 55 and 75,\(^9\) and women are affected three to four times more commonly than men. Within the first ten years of onset of the disease, about one half of all patients suffer from severe declines in health.\(^10\) In addition to health problems, the loss of social and financial independence is a major problem for affected patients.
Within the first year of onset of rheumatoid arthritis, inability to work occurs in three quarters of the patients.\textsuperscript{11} Other studies document a disability rate of 20 to 30 percent within the first three years\textsuperscript{12 13 14} for RA patients and 29 to 50 percent over the first five years of having RA.\textsuperscript{15 16}

After over 10 years with RA, more than 40 percent of patients are no longer able to work. For systemic lupus erythematosus (SLE), this rate is 39 percent; among psoriatic arthritis patients it is 29 percent. More than one quarter of those affected by ankylosing spondylitis (27 percent) are disabled after ten years.\textsuperscript{11}

A cure for rheumatic diseases is not possible with the current level of knowledge. However, early diagnosis and effective therapies make these diseases controllable, and permanent damage can be substantially prevented. In the last ten years, tremendous progress has been made in the treatment and diagnosis of rheumatoid arthritis.\textsuperscript{17 18 19}

The direct treatment costs of rheumatic diseases amount to 1,500 to 10,000 Euros a year.\textsuperscript{20} More serious than the direct costs, however, are the indirect costs due to inability to work and disability pensions, which can amount to over 15,700 Euros a year after 10 years of disease (data for Germany).\textsuperscript{11}

**Who is at risk for rheumatism?**

The precise causes for many of the rheumatic diseases remain unknown. However, certain risk factors have been identified for many of these diseases. Personal lifestyle seems to have a significant influence on the risk of disease. Excess weight and obesity, for example, are risk factors that can promote the occurrence of rheumatic diseases, as are smoking and physical inactivity.

In osteoarthritis, an inflammation of the joints with involvement of the bones, congenital weakness of the cartilage probably plays an important role. However, heavy strain on the affected joints also advances the disease. Systemic lupus erythematosus, ankylosing spondylitis (Bechterew’s disease), rheumatoid arthritis, and scleroderma are assumed to stem from a genetic predisposition that favours onset of these diseases,\textsuperscript{21} and from certain environmental factors that eventually trigger them.\textsuperscript{22}
Commonly, rheumatoid arthritis and other rheumatic diseases are considered to be typical “old age” diseases. This is a misconception, because inflammatory rheumatic diseases can occur in children and youth and require early and appropriate treatment in all cases.

What are the symptoms?
Typical of the rheumatic diseases are inflammatory reactions that are expressed as reddening of tissues, overheating and/or swelling, and pain, as well as significant loss of function in the affected joints, tendons and ligaments, bones, or muscles. The general symptoms are pain, swelling and stiffness of the joints. In some rheumatic diseases the inner organs, such as the heart, lungs, or kidneys, may also be affected.

How do these diseases affect quality of life?
Individuals with chronic inflammatory or degenerative diseases of the locomotor system usually suffer for the rest of their lives. Rheumatic diseases are a significant cause of decreased quality of life for those affected.
For rheumatoid arthritis, the most common rheumatic disease, it was strikingly demonstrated that the ability to work is massively reduced over the duration of the disease, and that the need for assistance increases to the point of total disability as the disease progresses. According to the German Society for Rheumatology, after 20 years of disease barely every other patient can live an autonomous life, over 15 percent of the patients require care. In addition, life expectancy is reduced.

How is a rheumatic disease diagnosed?
Diagnosis is often difficult because the symptoms of the various rheumatic diseases are not unambiguous in the early phase of the disease. The earlier the primary physician recognizes the disease and refers the patient to a rheumatologist, the better the chance of a positive therapeutic outcome. Early, adequate treatment can bring the disease to a standstill and can possibly prevent severe permanent damage.
For rheumatoid arthritis, the most common rheumatic disease, an early diagnosis and proper treatment are particularly of critical significance for the progression of the disease. In addition to the case history and clinical findings, physical examinations with imaging
techniques such as X-rays, magnetic resonance imaging (MRI), or ultrasound examination of the joints, play an important role in making a diagnosis. In addition, laboratory diagnostics, with detection of disease-specific autoantibodies like the rheumatoid factors or antibodies against citrullinated proteins are the third column in the diagnosis of rheumatic diseases. Laboratory diagnostics can support early detection when imaging techniques do not yet show damage to the joints.

**How are rheumatic diseases treated?**

The goal of treatment in inflammatory rheumatic diseases today is remission, meaning a halt, of the disease; this includes an absence of symptoms and pain, as well as broad maintenance of quality of life. With drugs that slow progression of the disease, irreparable damage can be prevented or postponed. Because rheumatic diseases can generally not be cured, “disease management” and early diagnosis are the primary goal of medical treatment. Successful treatment of these diseases requires the coordinated efforts of rheumatologists and other specialists, primary physicians, physical therapists, occupational therapists, psychologists, and caregivers. In order to help patients as rapidly as possible upon suspicion of inflammatory rheumatic disease, practice doctors, rheumatism centres, and clinics have now introduced “early diagnosis consultations”. Self-help organizations such as the German, Austrian, and Swiss Rheumatic Leagues offer information for self-help and support those affected to live broadly normal daily lives.

**For Editors:**

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25 www.rheuma-liga.de, Deutsche Rheuma-Liga
26 www.rheumaliga.at, Österreichische Rheumliga
27 www.rheumaliga.ch, Rheumaliga Schweiz

Links:
www.arthritis.org – The Arthritis Foundation
www.deutsche-rentenversicherung.de – Leitlinien zur Rehabilitationsbedürftigkeit – Erkrankungen des Stütz- und Bewegungsapparates (German)
www.dgrh.de – Deutsche Gesellschaft für Rheumatologie (DGRh) (German)
www.eular.org – European League against Rheumatology
www.gesundheit.de/roche/ – Roche Lexikon Medizin, 5th edition 2003, Urban & Fischer Verlag (German)
www.gbe-bund.de/ – Gesundheitsberichterstattung des Bundes, Statistisches Bundesamt (German)
www.ilar.org – International League of Associations for Rheumatology
www.rheumaliga.at – Österreichische Rheumliga (German)
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www.rheumanet.org – Kompetenznetz Rheuma (German)
www.rheuma-online.de – nach eigenen Angaben die „größte Website mit rheumatologischen Informationen und Services im deutschsprachigen Raum“ (German)
www.rheumatology.org – American College of Rheumatology
www.who.int – World Health Organisation WHO