

# Musculoskeletal Disorders in Russia at the End of the 20th Century

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**ABSTRACT.** The situation with musculoskeletal disorders in Russia is described. Developments include markedly increased musculoskeletal morbidity in both adults and children. The burden of disease has also increased both from a medical and socioeconomic standpoint, as the numbers of disabled continue to grow. Recent initiatives under the auspices of the Institute of Rheumatology of the Russian Academy of the Medical Sciences, as well as state support for the Bone and Joint Decade, are highlighted. (*J Rheumatol* 2003;30 Suppl 67:56–58)

*Key Indexing Terms:*

MUSCULOSKELETAL SYSTEM  
RUSSIA

BONE AND JOINT DECADE  
EPIDEMIOLOGY

Musculoskeletal disorders are an important direction of research and practical activities of medical societies at the beginning of the new millennium. They include a wide spectrum of inflammatory, degenerative, and metabolic bone and joint diseases and systemic connective tissue disorders. What is the situation with musculoskeletal disorders in Russia?

At the end of the 20th century musculoskeletal disorders have become an extremely important problem in the Russian Federation and in the former Soviet republics, from both a medical and a socioeconomic standpoint (Table 1). In 10 years the prevalence of musculoskeletal disorders in Russian promptly increased from 5850 to 8690 per 100,000 population (Figure 1). The musculoskeletal morbidity rate in the Russian population as registered by the state statistical service is constantly growing. In 2000 more than 12 million patients with musculoskeletal disorders were registered, which is 16.9% more than in 1995; their growth was more rapid than other registered disease classes. For example, for the last 5 years musculoskeletal morbidity has been greater compared with all other classes of diseases (Figure 2).

Evidently, the aging of the population is resulting in an increase in musculoskeletal disorders. However, analysis of the trend of musculoskeletal morbidity in Russia demonstrates an abrupt growth of indices of general and primary morbidity among adolescents and children (Figure 3). In the period 1993 to 2000 the incidence of musculoskeletal disorders among adolescents increased 1.2 times and among children they doubled. The reason for such a dramatic negative shift is unclear and requires special evaluation on all levels.

The Russian community is bearing a heavy burden not only due to a growing number of patients with muscu-

Table 1. Prevalence and incidence of musculoskeletal disorders in 2000.

	Prevalence	Incidence
Russian Federation*	8690.9	3010
Belarus*	7650.9	3643.0
Ukraine*	8832.8	2225.3
Azerbaijan*	7359.0	2320
Armenia*	1548.0	1855/940
Kazakhstan**	76,049	546.3
Tadzhikistan**	42,572	364.8

\* Per 100,000; \*\* total number of registered patients.

loskeletal disorders, but also due to disability of these patients. For the last 10 years it was 5.7–8.3 in cases and 83.7–114.9 in days of disability per 100 working persons (Figure 4). According to this index, musculoskeletal disorders are constantly in second position in cases and in third position in days of disability per 100,000 population among all other classes of diseases. Simultaneously in 2000 compared with 1995, indices of temporary disability due to musculoskeletal disorders had grown almost 15% in cases and 25% in days.

The chronic, progressive character of rheumatic diseases is reflected in indices of invalidity, which are also growing. According to the data of state medical-social expertise, in 2000 more than 250,000 persons (or 21.5/10,000 population older than 16 yrs) were registered as completely disabled due to musculoskeletal disorders. Three years ago the number of such persons was 20% less (18.0/10,000). Taking into consideration that patients with constant disability were not included in state expertise reports, one could state that the real number of “rheumatic” invalids is considerably higher. In 2000 more than 27,000 children with musculoskeletal disorders became disabled, which is equal to 9 cases per 10,000 children in the population. The burden of musculoskeletal disorders is underscored by the fact that more than half such adult “rheumatic” patients during

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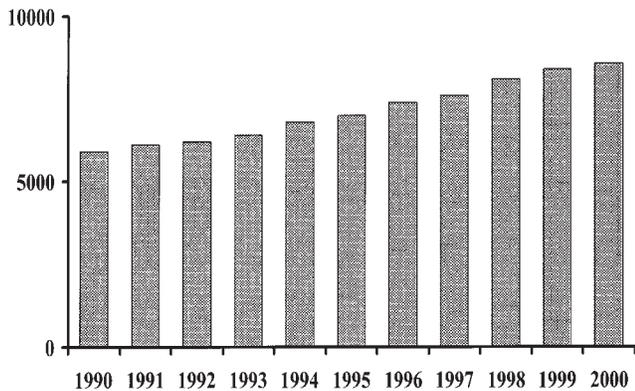


Figure 1. Prevalence of musculoskeletal disorders in the Russian Federation, per 100,000 population.

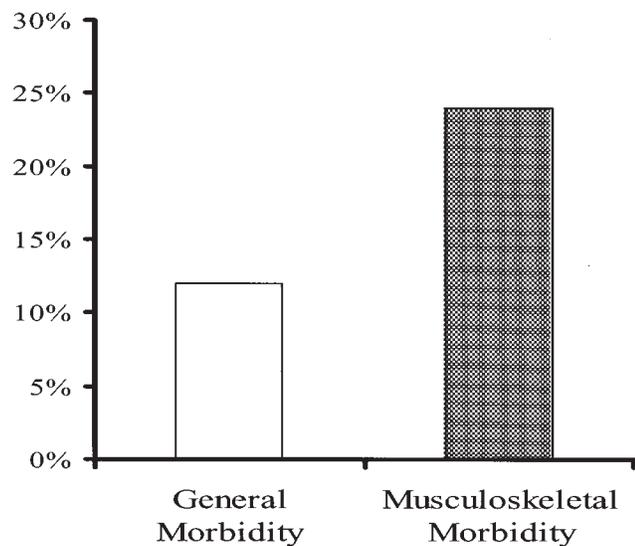


Figure 2. Changes in musculoskeletal disorder morbidity versus other disease classes in the Russian Federation (1995–2000).

primary examination in medical-social expertise were determined as “heavily” disabled (invalidity groups II and I). And about one-half of those examined are people of working and productive age: women younger than 44 and men younger than 49 years (Figure 5). Due to an imperfect rehabilitation system, once disabled, the majority of these patients have almost no chance of recovery. Hence, the number of disabled who take the yearly eligibility re-examination more than twice is higher than the number of primary disabled persons. Thus, the Russian population is constantly accumulating invalids due to musculoskeletal system pathology.

It is widely known that many systemic rheumatic diseases are the direct cause of death and considerably reduce life expectancy. Unfortunately, national statistics do not register these diseases as the cause of death and the data

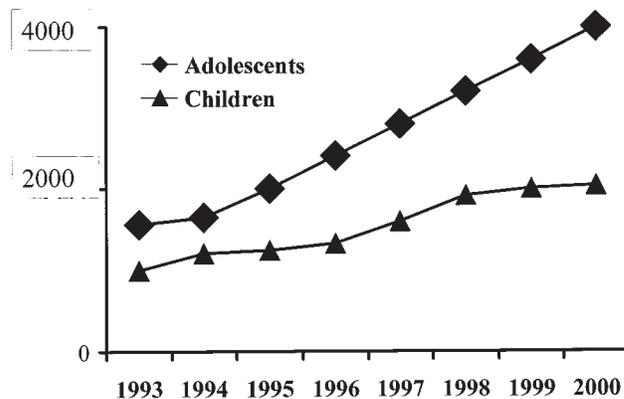


Figure 3. Annual incidence of musculoskeletal disorders in the Russian Federation, per 100,000 population.

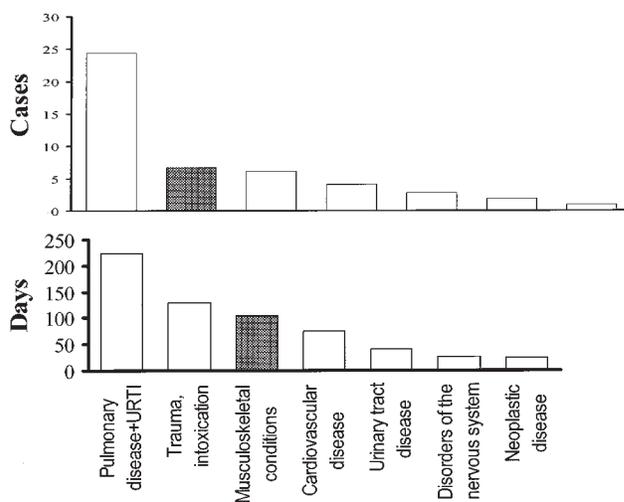


Figure 4. Temporary disability in the Russian Federation in 2000, per 100 working people. URTI: upper respiratory tract infection.

on mortality due to rheumatic diseases among the Russian population are absent.

Thus, musculoskeletal disorders are an important factor contributing a negative effect on health status and labor potential of the Russian population. In the course of further aging of the population the prevalence of chronic diseases of the joints, spine, bones (osteoporosis), and periarticular tissues will grow. Moreover, the observed growth of rheumatic morbidity among children and teenagers might soon aggravate negative demographic and economic tendencies in Russian society. All the above-mentioned factors contribute a considerable medical-social and economic burden of musculoskeletal disorders for patients, their families, and the community as a whole, in Russia as well as in other countries; however, considering the situation in Russia, the burden here is even higher.

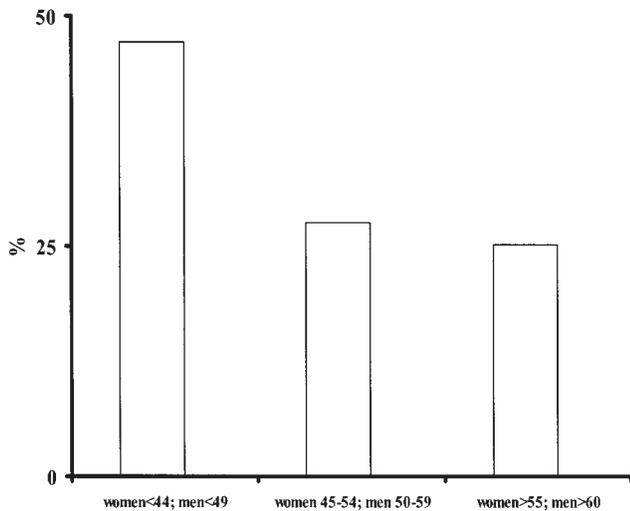


Figure 5. Primary disability due to musculoskeletal diseases in the Russian Federation (1999).

In Russia there are resources for solving many research and practical problems in rheumatology such as the Institute of Rheumatology of the Russian Academy of Medical Sciences, which was mandated by the Ministry of Public Health in 1999 to act as a federal center of rheumatology; in addition there are a number of regional rheumatic centers (Volgograd, Yaroslavl, St. Petersburg, Ekaterinburg, Orenburg, Saratov, Kazan, Irkutsk, among others). A federal center for osteoporosis has also been organized in the Institute of Rheumatology. The “antirheumatic” service in Russia employs about 2000 rheumatologists. More than 110,000 patients annually receive highly qualified medical

care in specialized rheumatic hospitals. Rheumatic centers headed by rheumatologists are functioning in almost two-thirds of Russian Federation territories. Outpatient and inpatient rheumatological centers carry out multilevel diagnostic, therapeutic, and organizational work in the corresponding region (city). The training and certification of rheumatologists comprises 4 chairs and courses of postgraduate education.

The Ministry of Health of the Russian Federation supports the participation of Russia in The Bone and Joint Decade, 2000–2010.

The Institute of Rheumatology and the Association of Rheumatologists of Russia have worked out a program: “The epidemiology and socioeconomic burden of rheumatic diseases on society, early diagnostics and prophylaxis in different regions of Russia and among socially different population groups.” Rheumatoid arthritis (in children and adults), osteoarthritis, lower back pain, and osteoporosis are targeted for investigation. Regions for investigation include different typical climatic and geographical parts of Russia. Investigations will include representatives of distinct social and economic groups, which will be provided by forming casual and randomized selections depending on the residence characteristics and populations of not less than 6000 residents. Based on the results of screening the casual method will allow selection of groups of persons for detailed clinical research of the above-mentioned rheumatic diseases. These patients will form the groups as a basis for longterm dynamic observation of quality of life and the economic burden of diseases.