

# Depression and Arthritis

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The onset of symptoms and eventual diagnosis of chronic disease typically cause emotional distress. In most cases this distress subsides over time as psychological adaptation to the condition occurs.<sup>1</sup> A significant minority of people, however, develop less transient, more severe psychological distress that can result in significant additional disability and suffering. The comorbidity of depression and arthritis is a major problem compromising the health of a significant number of Americans. This type of comorbidity is far more prevalent than previously thought and can have a negative impact greater than the sum of the 2 illnesses separately.<sup>2</sup> Thus, failure to appreciate the presence of depression in patients with arthritis can significantly compromise not only diagnosis and treatment of the affected patient but the impact of both illnesses and the health of the public overall.

## Depression: Prevalence and Impact

In a lead editorial in the *American Journal of Public Health* in 1999, Neugebauer called for increased attention by the medical and public health communities to the devastating personal and economic impact of mental illness.<sup>3</sup> He cited findings from the 1994 National Comorbidity Survey showing that 17% of a national probability sample of US noninstitutionalized adults aged 15 years to 54 years had experienced one or more episodes of major depressive disorder in their lifetime.<sup>4</sup> Of equal concern were the 12-month prevalence findings; in the previous year, 10% of adults had experienced one or more depressive disorders. In a replication study of the 1994 survey, Kessler found that the prevalence numbers from 2001-2002 for a new population sample of 9282 were similar for lifetime prevalence (16.6% of people with one or more episodes of major depression in their lifetime) and somewhat lower (6.6%) for those experiencing an episode in the past year.<sup>5,6</sup> These findings are important because of the intense suffering and the significant morbidity and mortality associated with depression. One of the most tragic consequences of depression is suicide. In 2004, 32 439 people died by suicide in the US making it the 11th most frequent cause of death. In contrast, the number of homicides in 2004 was almost half this

number at 17 357.<sup>7</sup> Further, more than 90% of people who commit suicide have a diagnosable mental disorder, most commonly a depressive disorder or a substance abuse disorder.

When Schulz et al examined mortality in adults over 65 years of age, they found that depressive symptoms at baseline were an independent risk factor for all cause mortality 6 years later even after controlling for multiple sociodemographic, disease, and health risk factors.<sup>8</sup> Pennix et al also studied the relationship of earlier self-reported depressive symptoms to later morbidity in older adults (age greater than 64 years) who were initially free of disability. Of these 6247 disability free people, 496 had scores greater than 20 out of 60 on the Center for Epidemiologic Symptoms Depression Scale, scores suggestive of depression.<sup>9</sup> At follow-up, instances of new heart attacks and new hip fractures occurred more frequently among those with more initial depressive symptoms but no initial disability. In addition, incident activities of daily living and mobility disability were higher in the initially-depressed group which, by 6 years of follow-up, had an activities of living disability rate of 36% and a mobility disability rate of 67% compared to those with fewer or no initial depressive symptoms (24% and 48% for activities of daily living and mobility disability, respectively). This significant difference in activities of daily living scores between those with more versus fewer depressive symptoms emerged after the first year of the study and steadily increased over the following 5 years. Almost half of this increased disability risk was explained by sociodemographic (gender, education, and income) factors, and a smaller part of the increase was explained by physical activity and having close contacts with relatives. However, after controlling for all of these factors, arthritis and angina were the 2 health conditions that contributed the most to the increased risk for disability in depression.

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Increasing recognition of the importance of studying psychiatric and medical comorbidity has emerged over the past 15 years due to several large scale and pivotal studies in the areas of health services research and psychiatric epidemiology.

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The Medical Outcomes Study involved over 22 000 patients who visited 523 different medical providers during a specified period of time in 1986.<sup>2</sup> The major focus of this 4-year prospective study was on the consequences (outcomes) of chronic illness; it was the first large scale study “to include a psychiatric condition (depression) on equal footing with chronic medical conditions.” Of the many important findings that have emerged from the Medical Outcomes Study, 4 are particularly relevant. First, Wells et al found that depression was associated with the same level or more of disability than 6 of the major medical chronic conditions studied and that only myocardial infarction in the previous year or current congestive heart failure and arthritis were associated with greater morbidity in any domain of functioning when compared with the functioning of people with depression.<sup>2</sup> Moreover, this finding was maintained over time in the longitudinal analyses. Second, Wells et al concluded that when arthritis was comorbid with depression, the resulting disability exceeded the disability level one would expect from simply combining disability due to depression with disability due to arthritis. That is, the negative effects of depression and arthritis are multiplicative rather than additive. Third, the negative consequences of subthreshold depression (ie, having some depressive symptoms without reaching the threshold for a depressive disorder diagnosis) were similar to consequences for people whose symptoms did reach diagnostic criteria. And, fourth, people’s subthreshold depressive symptoms “remained unchanged in functioning and well-being over two years,” which suggests that subthreshold depressive symptoms are not transient.

Other studies underscore the negative impact of comorbid depression and arthritis. Ang et al followed 1290 consecutive outpatients with rheumatoid arthritis over an 18-year period and found that depressive symptoms at baseline increased the risk of mortality many years later.<sup>10</sup> Stang et al used National Comorbidity Survey Replication data to examine the relationship between major depressive disorder and self-reported arthritis.<sup>11</sup> When controlling for age and other sociodemographic factors, they found that arthritis and major depressive disorder were

significantly associated. Finally, Lin et al did the first, and to our knowledge only, major intervention study aimed at decreasing depression in patients with arthritis.<sup>12</sup> Their randomized controlled trial included 1801 depressed older adults (aged 60 years or older) from 18 primary care clinics in 5 states. The intervention consisted of antidepressant medications and/or 6 to 8 sessions of psychotherapy (Problem Solving Treatment in Primary Care). At 12 months they found a significant decrease of depressive symptoms in the intervention group compared to the usual care treatment control group as well as lower mean pain scores. In addition, they found improved activities of daily living and improved quality of life.

Overall, the pattern of findings from research indicates a substantial impact of depression on the trajectory of comorbid arthritis. In addition, the pain and loss of function associated with arthritis can contribute to depression. Both arthritis and depression have substantial prevalence rates. Thus, patients presenting with comorbid arthritis and depression are fairly common. It is important that health care providers recognize the presence and effects of depression as they treat patients with arthritis. Better control of depressive symptoms should be an integral component of treating people with arthritis who also experience depression. Helping arthritis patients obtain relief from their depression promises both to mitigate the added risk associated with depression and to enable the patient and physician to manage the arthritis itself more effectively. A first step to optimal treatment may simply be an awareness of the role that depression can play in the course of arthritis and its treatment. A second achievable step is screening for depression using one of several brief instruments developed for use in primary medical care settings. Finally, physicians should assist patients who have depression in finding appropriate care. Doing so will not only reduce unnecessary suffering arising from the depression itself but will also improve arthritis outcomes. **NCMJ**

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