

Chronic Disabling Fatigue in Adolescents

The study by Lamers et al. in this issue (1) is important in several respects. Fatigue in adolescents was investigated in a large representative sample from the general population by structured interviews. The study demonstrated that persistent fatigue without anxiety or depression occurred in 1.4% of the adolescents. This prevalence rate is surprisingly high, and in about 60% of this group the fatigue was associated with substantial disability. Despite these disabilities, the adolescents with persistent fatigue without anxiety or depression generally did not seek help from the health care system. This reflects perhaps the assumption of both adolescents and health care professionals that fatigue is a transient state that will resolve spontaneously. But is that true? Or should more attention be paid to this debilitating symptom? Fatigue indeed occurs frequently in adolescents. It is not unusual that youngsters experiment with extreme behavior, thereby exhausting themselves. Usually the fatigue resolves when the adolescent changes his or her behavior. Fatigue becomes a problem if it persists and leads to disability, such as school absence, or if the adolescent feels continuously unable to be physically active (e.g., participate in sports) and socially involved (e.g., take part in festivities, go out). Then fatigue threatens the adolescent's social, emotional, and intellectual development. In those instances, fatigue deserves attention from the health care system.

If severe fatigue is associated with disability, it threatens the normal development of adolescents.

Fatigue can best be considered as a continuum: from slight, temporary fatigue without disability to severe, persisting fatigue leading to extreme disability. At the utmost of this continuum is chronic fatigue syndrome. Chronic fatigue syndrome is characterized by a clinically evaluated, somatically unexplained persistent or relapsing disabling fatigue that lasts at least 6 months and is accompanied by at least four of a possible eight symptoms (memory or concentration problems, sore throat, tender lymph nodes, muscle pain, multijoint pain, headache, unrefreshing sleep, postexertional malaise) (2). Chronic fatigue syndrome is found in adolescents as well as adults. Its primary adverse impact in adolescents is extreme disability associated with considerable school absence (3).

To consider the prevalence of fatigue, it is important to know where on the described continuum it was measured. Lamers et al. (1) asked for persistent fatigue of 3 months' duration and found a prevalence of 3.0%. More than half of these youngsters also had anxiety or depression; the others had only persistent fatigue. A recent epidemiological study using a questionnaire to assess fatigue showed a prevalence rate of 2.4% for disabling fatigue of 3 months' duration, but at 6 months a much lower rate, 1.3%, was found (4). This suggests that the prevalence of persistent fatigue would probably be much lower if Lamers et al. had asked for fatigue of 6 months' duration.

It is known that chronic fatigue syndrome in adolescents is less prevalent than in adults (5) and also less prevalent than persistent fatigue (3). Prevalence rates of adolescent chronic fatigue syndrome vary from 0.04% to 0.57% (5, 6).

The natural course of chronic fatigue syndrome in adolescents is much more favorable than the course in adults. In adults fewer than 10% of patients return to premorbid levels of functioning (7), whereas in adolescents the rate is about 50% (8). The natural course of persistent fatigue not meeting the Centers for Disease Control and Prevention criteria for chronic fatigue syndrome is still better (9).

In the study by Lamers et al., more than half of the adolescents with persistent fatigue alone had substantial disability. Unfortunately, the authors do not mention what exactly the disability in their youngsters means. It is not specified. Is it school absence as a consequence of fatigue? Or is it not being able to do sport or other leisure activities?

A useful way of looking at chronic unexplained fatigue, especially chronic fatigue syndrome, is to make distinctions among predisposing, precipitating, and perpetuating factors. The precipitating factors elicit the fatigue. These can be (somatic) factors such as infections or inflammations, but they can also be (psychological) stress factors. Family adversity appears to be a precipitating factor in adolescents (4). Predisposing factors are present before the fatigue starts, facilitating chronicity of the fatigue after the appearance of a fatigue-precipitating factor. A history of childhood maltreatment and adult psychopathology, but not childhood psychopathology, appear to be predisposing factors, enhancing the chance that a person will develop chronic fatigue syndrome as an adult (10). But these factors have never been specifically tested for adolescent chronic fatigue syndrome. So little is known about the predisposing factors in adolescents.

Precipitating factors can explain why fatigue arises but not why it persists when the precipitating factor is not active anymore. Perpetuating factors impede recovery. Psychological processes are involved in the perpetuation of symptoms in chronic fatigue syndrome. These processes involve fatigue-related cognitions and behavioral factors such as perceived problems with activity. A strong belief in a physical cause of the illness, a strong focus on bodily sensations, and a poor sense of control over symptoms (and other factors) contribute to maintenance of fatigue severity and functional impairment (11). In adolescents severe fatigue in the mother can be a perpetuating factor (12, 13).

Now that Lamers et al. have shown the prevalence of the different fatigue types, an important next step would be to determine the course of the fatigue. One would expect a more favorable course if there is less disability or less psychological comorbidity. Unfortunately, because of the cross-sectional character of the study we do not know.

If severe fatigue is associated with disability, it threatens the normal development of adolescents, and timely treatment can prevent developmental disruption. Cognitive-behavioral therapy (CBT) is an evidence-based treatment for adolescents with chronic fatigue syndrome (13, 14), and recently it has become available on the Internet, with the same cognitive-behavioral principles (15). CBT for adolescent chronic fatigue syndrome is directed at the perpetuating factors of fatigue. The parents are actively involved. First, the goal of return to full-time education is discussed. Next, the sleep-wake cycle is regulated by choosing fixed times for going to bed and getting up. Then patients learn to change their focus of attention from fatigue to activities or their social environment. Adolescents with a fluctuating activity pattern first learn to divide their activities more evenly, after which they incrementally increase physical activity. The passive patients start immediately with this program. The essence of the step-by-step program is the adolescents' realization that they are able to enlarge their possibilities. Their sense

of control over symptoms increases thereby. Later they also do the same with mental and social activities, if necessary. Then the plan for returning to school is discussed and also carried out step by step. During the last phase adolescents experiment with relaxing the principles of the treatment, such as the fixed bedtimes and the incremental approach. Only then can they consider themselves recovered from chronic fatigue syndrome and experience fatigue as a normal, daily phenomenon.

In a comparison of face-to-face CBT and a waiting list (14) and a comparison of Internet CBT and usual care (15), this treatment was effective; 60%–70% of the patients recovered. They were no longer severely fatigued, were attending school, and no longer were physically impaired.

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