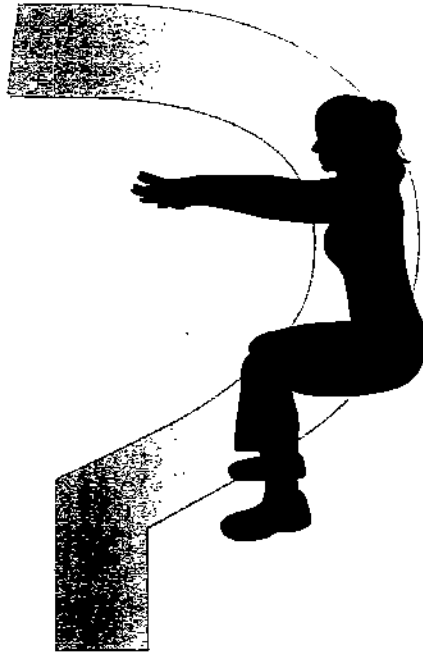


Fm. functional score



What is your

# Functional

# IQ

By C. Jessie Jones, Ph.D.

**T**he first thing you are probably thinking is, "What is a Functional IQ?" You've heard of an intelligence quotient, or IQ, test that measures people's cognitive abilities (intelligence) in relation to their age group. Well, a functional independence quotient (IQ) test measures your functional (physical) abilities.

**THE FUNCTIONAL IQ TEST** includes 12 items designed to assess physical function across a wide range of abilities—from basic activities of daily living (ADLs such as dressing and bathing oneself) to intermediate or instrumental activities of daily living (IADLs such as housework and shopping), to advanced activities such as strenuous household chores, sports, and exercise. Although the test (scale) was originally designed to measure the functional ability of older adults<sup>1</sup>, research indicates that the test can be used to assess functional status with the fibromyalgia community.<sup>2</sup>

The Functional IQ test (see Table 1) has 12 items with a five choice response category: can do with no difficulty, can do with some difficulty, can do with a lot of difficulty, cannot do without help, and cannot do at all.

When you have taken the test in Table 1, one way of interpreting your Functional IQ score is to count the number of items on the test that you can do with no difficulty; then determine if you fall into an advanced functioning, moderate functioning, or low functioning category. If you can perform all 12 items with no difficulty, you have an "Advanced



Functional IQ." If you can perform 7 to 11 items with no difficulty, you have a "Moderate Functional IQ." If you can only perform six or fewer items with no difficulty, you have a "Low Functional IQ." (Levels of Functional IQ are based on research conducted by Rikli and Jones.<sup>3,4</sup>)

If you are a woman with FM, you can further interpret your level of Functional IQ by comparing your score to those of healthy older women and/or women with FM, provided in Table 2. Data in Table 2 summarizes two previous national studies. Data on the healthy older women (n = 4,886, ages 60-89) was from a national study of functional fitness for community-residing older adults.<sup>3</sup> The data for women with FM (n = 1,735) was taken from a recent internet survey (121-item questionnaire) conducted by the National Fibromyalgia Association; the Functional IQ test (referred to as the physical function scale) was included in the survey.<sup>4,5</sup> Keep in mind that

the average age of the FM respondents was 47 years, with an age range of 16-78 years of age. An overview of the results of the survey was published in the March 2007 issue of *BMC Musculoskeletal Disorders*.<sup>5</sup>

A third way of interpreting your responses on the Functional IQ test is by comparing your individual responses to each item with those of women who completed the National Fibromyalgia Association survey.<sup>6</sup> (Refer to Table 3.) Unfortunately, the study found that over 25 percent of women had difficulty taking care of personal needs and bathing, over 60 percent had difficulty going up or down one flight of stairs, doing light household tasks, walking ½ mile, and lifting or carrying 10 lbs., and over 90 percent had difficulty doing heavy household tasks, lifting or carrying 25 lbs., and doing strenuous activities. However, it should be noted that perception of ability to perform tasks is often times different

**TABLE 1.** Functional IQ Test  
(Adapted by Rikli & Jones<sup>2</sup> with permission)

Directions: Please indicate your ability to do each of the following. Your response should indicate whether you are able to do these activities, not if you actually do the activities.

ACTIVITY	4 = NO DIFFICULTY	3 = SOME DIFFICULTY	2 = MODERATE DIFFICULTY	1 = SEVERE DIFFICULTY	0 = COMPLETELY INABLE
1. Take care of own personal needs (e.g., dressing yourself)	4	3	2	1	0
2. Bathe yourself, using tub or shower	4	3	2	1	0
3. Climb up and down a flight of stairs (e.g., second story in a house)	4	3	2	1	0
4. Walk outside (one or two blocks)	4	3	2	1	0
5. Do light household activities (e.g., cooking, dusting, washing dishes, sweeping a walkway)	4	3	2	1	0
6. Do own shopping for groceries or clothes	4	3	2	1	0
7. Walk ½ mile (six to seven blocks)	4	3	2	1	0
8. Walk 1 mile (12 to 14 blocks)	4	3	2	1	0
9. Lift and carry 10 lbs. (e.g., full bag of groceries)	4	3	2	1	0
10. Do light household activities (e.g., cooking, dusting, washing dishes, sweeping a walkway)	4	3	2	1	0
11. Do heavy household activities (e.g., scrubbing floors, vacuuming, raking leaves)	4	3	2	1	0
12. Do strenuous activities (such as hiking, calisthenics, moving heavy objects, bicycling, aerobic dance activities, strenuous digging in the garden)	4	3	2	1	0

from the actual ability to perform tasks.

In fact, the average FM woman in this study reported having less functional ability related to ADLs and IADLs than the average community-dwelling woman in her 80s.<sup>6</sup> Without significant intervention to improve physical function, the interactive effects of aging and the physical deconditioning associated with FM and physical inactivity will be devastating.

**Breaking the Disability Pathway**

Since many people with FM have a lower Functional IQ than desired, the risk for becoming disabled is high, especially considering the normal declines in physical function due to the aging process.<sup>5</sup> In order to understand how you can break the disability pathway, it helps to understand what it is. The disability pathway in Figure 1 describes four main stages in the progression to disability.<sup>7,8</sup>

The pathway basically indicates that the combination of disease/

medical conditions and physical inactivity leads to physiological impairment that affects one or more body systems (e.g., neurological, musculoskeletal, special sense organs, respiratory, cardiovascular). These physiological impairments, in turn, can lead to various types of functional limitations (restrictions in physical behaviors such as rising from a chair, walking, lifting, bending, or climbing stairs). Eventually these functional limitations can lead to disability (an inability to perform, or difficulty in performing, normal daily activities such as bathing oneself, housework, shopping, and various types of work-related activities).

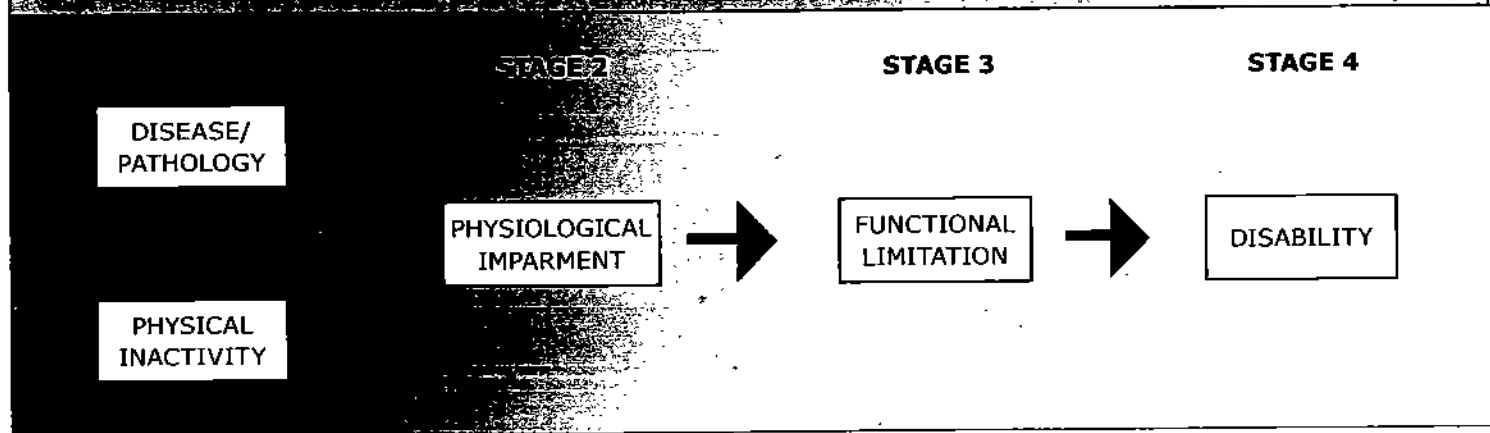
Although you may have been diagnosed with FM and other medical conditions, you are not necessarily "doomed" to experience significant loss of functional ability. On the contrary: there is much you can do to help reduce your risk of becoming or staying disabled. Most important is to recognize that physical inactivity is on par with chronic disease as an underlying cause of disability, and that finding ways to increase physical activity (especially exercise that targets specific physical impairments) can help to break the disability pathway.

Having FM myself, I know it is often hard to find the motivation to exercise. The key to reducing pain and fatigue enough to exercise is a trial and error method; what works for one person with FM is not necessarily going to work for another. Some strategies that help me to reduce pain and fatigue include a variety of stress management techniques (e.g., imagery, meditation, prayer, massage, warm baths, positive thinking, humor), social supports (e.g., exercise buddy, personal trainer, my dog), healthy nutrition, medication (a very minimum amount), and finding a physical activity I enjoy (such as dancing around the house). Most importantly, I have found that when I do anything that distracts me from thinking about my pain, I'm better off.

On a final note, I know being more physically active is hard, and it is not going to take away all your symptoms related to FM; but as a researcher I know being physically inactive will eventually cause more pain and fatigue, and it is a sure pathway to increased disability. So let's try to be little more active, a little more often. ■

AGE	60-69	70-79	80-89	FM (mean 47 yr)
	1,704	2,285	897	1,735
Functional level (%)	55.6	40.3	20.2	1.4
	38.6	49.5	51.4	21.4
	5.8	10.2	38.6	77.1

**Figure 1.** An amended version of Nagel's model of the progression leading to disability, suggesting that an inactive lifestyle can have comparable effects on the disabling process.



ACTIVITY	CANDO without difficulty	CANDO with some difficulty	CANDO with a lot of difficulty	CANNOT DO without help	CANNOT DO with help
1. Take care of own personal needs (e.g., dressing yourself)	69.3	24.9	5.0	8	0
2. Bathe yourself, using tub or shower	72.1	21.8	4.6	1.5	0.1
3. Climb up and down a flight of stairs (e.g., second story in a house)	31.0	44.9	19.7	2.7	1.6
4. Walk outside (one or two blocks)	48.8	29.9	12.5	3.1	5.8
5. Do light household activities (e.g., cooking, dusting, washing dishes, sweeping a walkway)	34.8	40.4	17.9	5.5	1.4
6. Do own shopping for groceries or clothes	39.0	34.9	14.6	10.0	1.5
7. Walk 1/2 mile (six to seven blocks)	29.6	27.9	20.7	4.6	17.2
8. Walk 1 mile (12 to 14 blocks)	20.0	20.1	25.2	6.3	28.4
9. Lift and carry 10 lbs. (e.g., full bag of groceries)	32.7	36.4	18.7	5.8	6.3
10. Do light household activities (e.g., cooking, dusting, washing dishes, sweeping a walkway)	8.7	24.9	27.4	15.8	23.2
11. Do heavy household activities (e.g., scrubbing floors, vacuuming, raking leaves)	7.3	23.9	33.6	19.0	16.1
12. Do strenuous activities (such as hiking, calisthenics, moving heavy objects, bicycling, aerobic dance activities, strenuous digging in the garden)	3.2	14.7	25.4	14.3	42.4

## References

- Rikli, R.E. & Jones, C.J. (1998). The reliability and validity of a 6-minute walk test as a measure of physical endurance in older adults. *Journal of Aging and Physical Activity*, 6, 363-375.
- Jones, C.J., Rutledge, D., Lindemann, J., Rigali, B. (2006). Validity and Stability of the Composite Physical Functional (CPF) scale for women with fibromyalgia. National Fibromyalgia CME Conference.
- Rikli, R.E. & Jones, C.J. (1999). Functional fitness normative scores for community-residing older adults, ages 60-94. *Journal of Aging and Physical Activity*, 7, 162-181.
- Rikli, R.E. & Jones, C.J. (2001). Senior Fitness Test Manual. Champaign, IL: Human Kinetics.
- Bennett, R.M, Jones, C.J., Turk, D.C., Russell, I.J., & Matallana, L. (March, 2007). An internet-based survey of 2,596 people with diagnoses of fibromyalgia. *BMC Musculoskeletal Disorders*, 8, 1-24.
- Jones, C.J., Rutledge, D.N., Rooks, D.S., Matallana, L., Jones, K. (2007). Perceived physical functional levels of women with fibromyalgia. *Medicine and Science in Sports and Exercise*, 37.
- Rikli, R.E. & Jones, C.J. (1997). Assessing physical performance in "independent" older adults: Issues and guidelines. *Journal of Aging and Physical Activity*, 5, 244-262.
- Nagi, S.Z (1991). Disability concepts revisited: Implication for prevention. In A.M. Pope & A.R. Tarlov (Eds.) *Disability in America: Toward a National Agenda for Prevention* (pp. 309-327). Washington, DC: National Academy Press.

## Key Lyme Proteins

Often misdiagnosed as fibromyalgia—and vice versa—Lyme disease is the most common vector-borne disease in the United States, with an estimated 25,000 new cases each year. Early indicators of the disease include flu-like symptoms; if not properly treated with antibiotics, Lyme disease can lead to neurological and joint complications.



Thanks to the development of chimeric proteins, now there is hope that the development of vaccines and diagnostic tests for Lyme disease may be advancing.

These proteins, genetically engineered by scientists

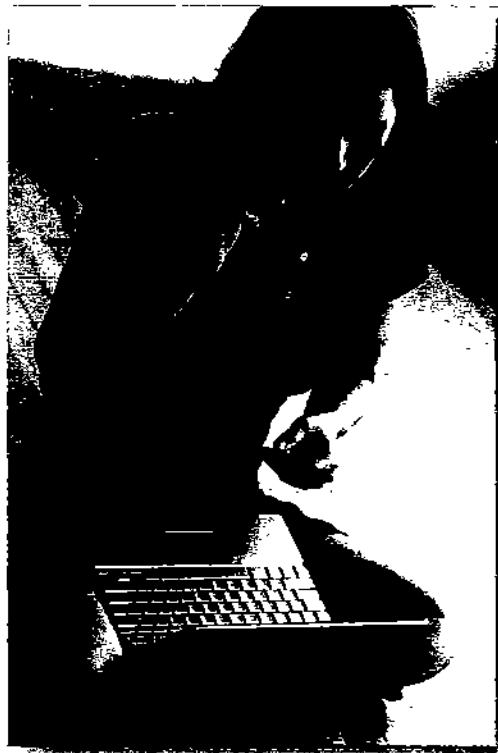
at the U.S. Department of Energy's Brookhaven National Laboratory, along with collaborators at Stony Brook University, combine pieces of two proteins normally present on the surface of the bacterium that causes Lyme disease, but at different parts of the bacterium's life cycle. Scientists believe combining the two proteins should trigger an immune response more capable of defending against the bacterium—and that the chimeric proteins could lead to the development of a vaccine that will be effective at different stages of the bacterium's life cycle.

## Online Buyer Beware

Recently the Food and Drug Administration released a warning about purchasing specific drug products online—including Ambien and Xanax. A number of Americans placing online orders for those drugs instead received a product containing haloperidol, a powerful anti-psychotic that can cause muscle stiffness and spasms, agitation, and sedation. (The origin of the products in question is unknown, but the packages were postmarked in Greece.)

If you buy drugs online, follow these FDA tips to stay safe:

- Make sure the site requires a prescription and has a pharmacist available for questions.
- Buy only from licensed US pharmacies.
- Check with your state board of pharmacy to find out if a website is state licensed, is in good standing, and is located in the United States. Find contact information for your state board of pharmacy at [www.nabp.info](http://www.nabp.info).
- If you have a complaint about a site, go to [www.fda.gov/buyonline](http://www.fda.gov/buyonline) and click on "Report problem websites."



## Pain's Memorable Impact

Cognitive dysfunction is, unfortunately, nothing new to people with FM. Often dubbed "fibrofog," this symptom exhibits as short-term memory loss—forgetting the name of an object, forgetting what you went into a room to fetch, forgetting what you'd intended to say. But research indicates that such problems are not only something people with FM have to deal with; they may be part of the general chronic pain experience.

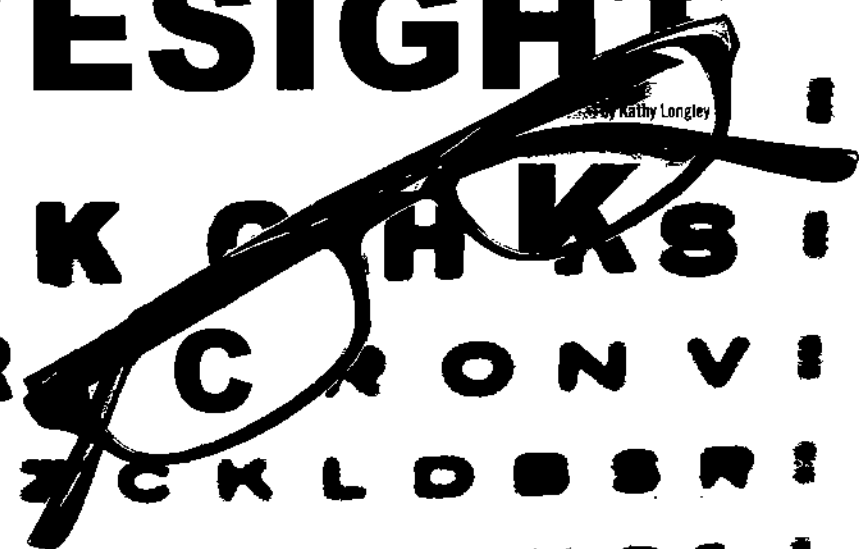
A study in the May 2007 issue of *Anesthesia Et Analgesia* looked at the impact of chronic pain on short-term memory. In this small study of 24 men and women undergoing treatment at a university pain clinic, researchers found that people with chronic pain may have difficulty remembering a piece of information while simultaneously undertaking another task. Study co-author Dr. Bruce D. Dick speculates that pain disrupts a person's attention and uses up resources that could otherwise be devoted to working memory.

PM - 0709

Eye Test Chart for use in eye

# F IBRO- MYALGIA & EYESIGHT

D C N K P H K S  
H U D R C R O N V  
O A H V Z C K L D B S R  
Z V O R B H O E A K C M P S  
P R H V T N U H A R B M B J E D C I O



by Kathy Longley

“**E**verything is slightly blurred, sort of misty, as if you are looking through a mild fog,” Rifkin told me. “It would be blurry one day and then it would go for a few days. But now it is a permanent thing, and I simply can’t focus clearly. I also have these terrible dry eyes, and wake up in the morning feeling as though my eyes are . . . stuck together and gritty.”

HAVING NEVER really experienced eyesight problems, I listened to Rifkin in amazement. It wasn’t until I posted a request to talk to people who have struggled with their eyesight since having FM that I began to appreciate just how many people experience these types of symptoms. Being inundated with phone calls and e-mails soon opened my eyes (so to speak!).

To Dr. Mark Pellegrino, a medical expert in FM and a sufferer himself, this is no surprise. At his Canton, Ohio, clinic, he has diagnosed and treated over 20,000 people with fibromyalgia—at least 50 percent of whom report eye problems associated with FM.

### Reported Eyesight Symptoms

“Patients can commonly experience symptoms of eye pain, sensitivity to light, blurred vision and fluctuating visual clarity, difficulty focusing, visual overload, and dry eyes,” explains Pellegrino. “Many patients have to change their glasses prescription frequently because of fibromyalgia-related vision fluctuations and changes in visual acuity. They also find their eyes are particularly sensitive to smoke, or that environments with very dry air cause vision difficulty.”

Susan can relate to changes in visual clarity. She currently owns three different pairs of glasses. “My ability to see things at a distance can vary,” she explains. “Sometimes [everything] looks fuzzy and I need to use my distance glasses—whereas other times, my distance vision is fine. Also, I can’t focus on things for too long before they become distorted. It is as though your eyes become too tired to focus.”

Lynette, who had perfect eyesight before developing FM, also finds it difficult to focus—and struggles with sensitivity to light. “Even on cloudy days . . . I will be wearing my sunglasses. If I don’t wear tint-

ed glasses, I find myself really squinting. I feel dizzy and sick, and it is actually painful . . . I struggle with fluorescent lights too, and often wear sunglasses indoors.”

Another more unusual symptom, but one that can be extremely frightening, is the sudden appearance of flashing lights or zigzag patterns across the plane of vision. “I get bright wiggly lines and flashes of light in my field of vision,” says Lynette. “It can be either right across my eyes or on the edge, almost like a ring of light—similar to the aura you experience before a migraine, but the migraine never develops.”

“Flashing symptoms are more common in patients who experience migraines, but can still occur without the headache ‘aura,’” confirms Pellegrino. “I don’t hear this complaint as often as the other eye symptoms I have mentioned, however.”

### What Could Cause These Symptoms?

Our eyes each have postural muscles involved in moving the eyeball and allowing us to focus. If these muscles are not functioning correctly due to spasms or trigger points, then eyesight can be distorted.

“In order for vision to be clear, both eyes must take the same picture at the same time,” explains Devin Starlanyl in her book, *The Fibromyalgia Advocate*. “When this doesn’t happen, double vision, blurry vision, and/or changing vision can result. Misalignment of the eyes can be caused by trigger points interfering with the muscles

that hold the eyeballs in place. Trigger points can be responsible for contracting these muscles at different tensions. Muscle fatigue would make things worse.”

Trigger points could also be responsible for the sharp pains in the eyes that some people report. Lynette experiences what she describes as “intense stabbing pains.”

“It actually feels like someone has just stuck a pin in my eye,” she says. “It does seem to be related to the myofascial pain

DRY EYES, A SYMPTOM  
COMMONLY REPORTED BY PEOPLE  
WITH FM, HAS LED TO THE  
SUGGESTION OF A POSSIBLE LINK  
WITH THE AUTOIMMUNE DISORDER  
SJÖGREN’S SYNDROME.

around my facial area; I have a problem with my neck, shoulder and arm on that side, and when that is bad I get the stabbing pain more often.”

Susan experiences strange muscle spasms in her eyes. They suddenly close tightly four or five times in a row. “It only happens every now and again,” she says, “but there is nothing I can do to stop it.”

Dry eyes, a symptom commonly reported by people with FM, has led to the suggestion of a possible link with the autoimmune disorder Sjögren’s syndrome. Here the body’s immune system attacks the moisture-producing glands, like the tear glands and salivary glands, leading to

dry eyes that can feel itchy, gritty, or burning, and a dry mouth, which can affect talking, chewing, and swallowing. Interestingly, around 90 percent of people with Sjögren's are women, and it most often occurs between the ages of 40 and 60 years. Like all autoimmune disorders, Sjögren's can be diagnosed by looking for the presence of specific antibodies in the blood, but other tests are also used to measure the amount of tears produced, and their stability and distribution.

A research study carried out at Eberhardt-Karls University in Tübingen, Germany, by Dr. I. Koetter and colleagues, assessed a group of 285 people with FM for the symptoms of dry eyes and the possible presence of Sjögren's syndrome. They reported that 40 of these participants experienced dry eyes (sicca), but only 15 could be shown to have Sjögren's.<sup>1</sup> The research group suggests that the presence of chronic blepharitis (inflammation of the eyelids) and the use of tricyclic antidepressants may play a role in developing sicca symptoms.

Pellegrino sees the situation differently. Firstly, he has many patients who are not taking tricyclic antidepressants, but still complain of dry eyes. He believes that tricyclics can certainly aggravate a pre-existing problem, but dry eyes are unlikely to be a side effect. Secondly, he suggests that within the fibromyalgia spectrum there is a subset of patients who have autoimmune dysfunction and therefore are more likely to experience "autoimmune" symptoms like allergies, chemical sensitivities, frequent infections, and dry eyes.

"A subset of those with FM who are near an autoimmune disease, but never go through the disease door, so to speak, ... may have elevated antinuclear antibody levels [and] experience more rashes, infections, and of course dry eyes," he explains. "These would be autoimmune-type symptoms but not true autoimmune disease, like Sjögren's, for example: hence an autoimmune dysfunction subset."

He goes on to explain that autoimmune dysfunction is closely related to the dysfunction of the autonomic nervous system, known to be out of balance in fibromyalgia. Autonomic dysfunction could contribute to the fluctuating level of eye moisture, which in turn would affect focusing and visual clarity.

Another factor could involve cognitive dysfunction, in which patients have difficulty processing or comprehending what their eyes see. "We may see things clearly, but all this information which normally gets 'automatically' processed by the brain gets delayed, distorted, or detoured on its way from the eyes to the brain, resulting in visual comprehension problems," explains Pellegrino. "A good example of this occurs when fibromyalgia patients say they

read the same paragraph over and over again but still don't understand what they just read. It is like fibrofog in the eyes, with the symptoms aggravated by fatigue and poor sleep."

**Treatment of Eye Symptoms**

There are various steps you can take to help reduce the pain and discomfort of eyesight challenges.

If you have:

**Sensitivity to the environment**

- avoid fluorescent lights when indoors
- wear sunglasses or tinted lenses when outdoors
- avoid contact lenses if you work in a dry environment like a hospital
- avoid smoky environments

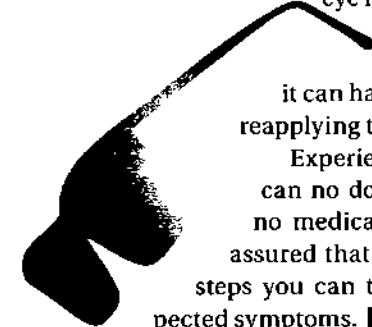
**Dry eyes**

- use artificial tears to keep the eyes moist
- use prescription eye 'inserts' that slowly dissolve and release artificial tears
- the tear ducts can be plugged (called punctal plugs) to keep natural tears around longer
- review medications and change those that cause mucus-drying effects
- use a humidifier during the winter and in dry areas
- before an eye test, ensure that your eyes are well moisturized; the amount of moisture over the tear film and lens affects light refraction and, thus, visual perception

**Eye pain/strain**

- Gentle eye exercises can help stretch eye muscle trigger points: look up, down, right, left; close your eyes tight, hold them wide open; gently massage the eyeball
- stay focused on one thing at a time to avoid getting overwhelmed
- wear the correct glasses to avoid eye strain
- put clear plastic over a page to decrease print contrast
- ensure adequate lighting when reading
- avoid eye fatigue

It is also sensible to take precautions to avoid contracting eye infections.



Jan's general physician advised her to change her mascara regularly because

it can harbor germs that you then keep reapplying to your eyes.

Experiencing problems with your eyes can no doubt be quite scary, especially if no medical explanation is offered. Be reassured that you are not alone and there are steps you can take to help relieve these unexpected symptoms. ■

1. Koetter I, Kanz L, Daikeler T, Eckstein A, Terhorst T, Gunaydin I, "Assessment of Keratoconjunctivitis sicca in patients with fibromyalgia: results of a prospective study." *Rheumatology International*, 1999; 19 (1-2): 7-9.