

WHEN Jacqueline Thousand saw the photographs that her trainer had taken, something clicked. "I saw this little old lady slouched over, looking 70," she said. "I'm 55, a very young 55." But Dr. Thousand, a professor of education at California State University, San Marcos, said: "I had molded myself through the way I stand and move into a person who slouches."

Dr. Thousand, a runner, had gone to Function First, a private fitness studio in San Diego, not to straighten her spine but to rehabilitate a torn ligament in her left knee. Anthony B. Carey, the gym's founder, helped her see how her bum knee and her bad posture were connected. He first took the pictures, he said, to give her "a snapshot of how her whole body works." He pointed out how her pelvis hung forward and her hip joints rotated inward. Then he prescribed corrective exercises.

Every two weeks or so she went back for an evaluation and new drills to do at home. After three months she could run five miles, her regular distance, without pain, but that was not the only improvement. She now stands at 5-foot-3, an inch taller than at previous physical exams. "I stand differently, and I run differently," she said.

Mention posture, and people conjure antiquated images of stiff-backed children walking with books balanced on their heads. But today there is a new focus on standing tall that is less a matter of etiquette than a strategy for keeping aging bodies supple and pain free. Mr. Carey is one of a new breed of fitness professionals who consider posture a crucial part of fitness.

"Too many people are working on their mirror muscles, what they see in the mirror," instead of paying attention to how their bodies move, said Mr. Carey, who is the author of "The Pain-Free Program: A Proven Method to Relieve Back, Neck, Shoulder and Joint Pain."

Trainers have realized that without correct posture their clients cannot receive the full benefit from exercise. "The fitness industry has evolved," said Paula Tett, the corporate education manager for the Sports Club/LA and a personal trainer for 11 years. "If I am working with someone's structure, I cannot ignore the position that it is in."

At Sports Club/LA gyms specialized personal trainers teach members to stretch and strengthen specific muscles to realign their bodies. At Equinox all new members have an assessment of their posture; trainers look for things like hip tilt and how far the head is pitched forward.

Gyms are also creating classes focused on posture. Equinox, for example, will introduce Posture Break classes in January.



Robert Presutti for The New York Times

Sue O'Grady, who runs Fitness Quest Personal Training in Cambridge, Mass., says she has seen body alignment grow in importance not only in her own work but also as a topic at fitness industry conferences. "Everything," she said, "is coming around to emphasizing the importance of posture."

This month the National Posture Institute, an organization that educates the public about proper alignment, began offering online training and certification (at www.npionline.org) for trainers interested in

Poor posture can limit the benefits from regular exercise.

alignment. Hands-on educational workshops at fitness conventions are soon to follow.

Ken Baldwin, the institute's founder and the coordinator of the program in personal training at Purdue University, said most trainer certification programs paid little or no attention to posture. Nor did standard texts and manuals on fitness training.

Yet trainers and posture specialists have seen how exercising without being aligned (shoulders back, chest proud and abs tight)



Marty Katz for The New York Times

can lead to muscle and joint problems.

"You think people who are fit and strong don't have to worry about posture," said Janice Novak, the author of "Posture, Get It Straight!" who also runs workshops for hospitals and corporations. But when people exercise without making sure their bodies are aligned, they risk strengthening muscles

CORE STRENGTH Lisa Avellino, left, teaches exercises to clients who are seeking to improve their posture. Anthony B. Carey, below, instructing a workshop with trainers on new techniques to improve body alignment.

a disruption in your gait.")

The popularity of yoga and Pilates have raised some people's awareness of posture, as have lesser-known disciplines like Feldenkrais, Rolfing and the Alexander Technique, which leave practitioners feeling aligned. Sometimes, trainers say, people come to them looking for help with their posture. "I have been surprised that it's not just my senior clients that are concerned about rounded shoulders," said Lisa Avellino, the owner of the Susan Marlowe Fitness Club For Women in Scarsdale, N.Y. "Women in the 30's and 40's are saying, 'Give me something to help my posture,' either to improve their appearance or to prevent injury."

But more often, trainers say, posture awareness is a tough sell. Lashaun Dale, the group fitness creative manager for Equinox, says she has had to sneak postural tips into the conditioning classes she teaches. She devised Equinox's new posture class as a way to teach universal principles of alignment, which people can apply to their favorite workout, whether it's Spinning or running on a treadmill. Ms. Dale intends to use props to make the posture lessons fun. Walking while holding a fake egg in a spoon, for example, helps a person keep her chest out and shoulders back as does lunging while attempting not to spill glasses of water.

Posture awareness is especially critical when lifting weights. "If your body is out of line, you tend to become a stronger version of your crooked self," explained Dr. Paul D'Arezzo, a retired emergency medicine doctor and the author of "Posture Alignment: The Missing Link in Health and Fitness."

That is why so many body builders, in the past, appeared to be hunch forward, said Bob Fields, a personal trainer in Carmel, Ind. "The old school body builder focused on pecs and abs and never did anything for their back," he said.

Ideally, trainers say, posture training should not happen only at the gym. Since she started training with Ms. Avellino, Kristina Skrela, 24, has tried to keep her abs tight and her shoulders back while driving, which she does at least two hours a day for her job as a sales representative for a yearbook publishing company. "I am more conscious of my muscles and my posture," she said. "The more you do it, the more it becomes natural, instead of homework."

Ms. Dale of Equinox said it took this kind of constant awareness to strengthen core muscles. "You can do all the abdominals you want," she said, "but if you're not using your core, and you're slumping in your chair and sticking out your abs the rest of the day, you're not going to achieve the strong core you want."

that maintain their bad form, in effect reinforcing the problem and raising their chance of getting muscle and joint pain.

Many postural problems stem from the way people sit arched forward peering at computers for hours every day. This sedentary slouch weakens the so-called core muscles (those closest to the spine) so that they can no longer hold the body upright. That can lead to chronic pain, lower back problems and wear-and-tear joint injuries.

There are many general exercises that trainers suggest to engage the core. One is the basic crunch, done lying face-up on the floor with knees bent. To make sure your core is activated, trainers suggest using your hands to press on your stomach as you raise your shoulders. Another is the back extension, an exercise done lying face-down with the arms at the sides. You raise the chest and arms off the floor to work the back and the upper buttocks.

High heels also throw the body out of alignment, causing the wearer's weight to shift forward and, more often than not, her shoulders to become rounded. In January, Crunch will offer Stiletto Strength, a new class that will teach exercises to strengthen the core muscles as well as the calves and ankles so that women can wear high heels without succumbing to bad posture.

(Mr. Carey suggested it might be better to scrap wearing high heels altogether, because "really, really tight calves can cause