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BRAIN POWER

At the Bridge Table, Clues to a Lucid Old Age

By [BENEDICT CAREY](#)

LAGUNA WOODS, Calif. — The ladies in the card room are playing bridge, and at their age the game is no hobby. It is a way of life, a daily comfort and challenge, the last communal campfire before all goes dark.

“We play for blood,” says Ruth Cummins, 92, before taking a sip of Red Bull at a recent game.

“It’s what keeps us going,” adds Georgia Scott, 99. “It’s where our closest friends are.”

In recent years scientists have become intensely interested in what could be called a super [memory club](#) — the fewer than one in 200 of us who, like Ms. Scott and Ms. Cummins, have lived past 90 without a trace of [dementia](#). It is a group that, for the first time, is large enough to provide a glimpse into the lucid brain at the furthest reach of human life, and to help researchers tease apart what, exactly, is essential in preserving mental sharpness to the end.

“These are the most successful agers on earth, and they’re only just beginning to teach us what’s important, in their genes, in their routines, in their lives,” said Dr. Claudia Kawas, a neurologist at the University of California, Irvine. “We think, for example, that it’s very important to use your brain, to keep challenging your mind, but all mental activities may not be equal. We’re seeing some evidence that a social component may be crucial.”

Laguna Woods, a sprawling retirement community of 20,000 south of Los Angeles, is at the center of the world’s largest decades-long study of health and mental acuity in the elderly. Begun by [University of Southern California](#) researchers in 1981 and called the 90+ Study, it has included more than 14,000 people aged 65 and older, and more than 1,000 aged 90 or older.

Such studies can take years to bear fruit, and the results of this study are starting to alter the way scientists understand the aging brain. The evidence suggests that people who spend long stretches of their days, three hours and more, engrossed in some mental activities like cards may be at reduced risk of developing dementia. Researchers are trying to tease apart cause from effect: Are they active because they are sharp, or sharp because they are active?

The researchers have also demonstrated that the percentage of people with dementia after 90 does not plateau or taper off, as some experts had suspected. It continues to increase, so that for the one in 600 people who make it to 95, nearly 40 percent of the men and 60 percent of the women qualify for a diagnosis of dementia.

At the same time, findings from this and other continuing studies of the very old have provided hints that some genes may help people remain lucid even with brains that show all the biological ravages of [Alzheimer’s disease](#). In the 90+ Study here, now a joint project run by U.S.C. and the University of California, Irvine, researchers regularly run genetic tests, test residents’ memory, track their activities, take blood samples, and in some cases do postmortem analyses of their brains. Researchers at Irvine maintain a brain bank of more than 100 specimens.

To move into the gated village of Laguna Woods, a tidy array of bungalows and condominiums that blends

easily into southern Orange County, people must meet several requirements, one of which is that they do not need full-time care. Their minds are sharp when they arrive, whether they are 65 or 95.

They begin a new life here. Make new friends. Perhaps connect with new romantic partners. Try new activities, at one of the community's fitness centers; or new hobbies, in the more than 400 residents' clubs. They are as busy as arriving freshmen at a new campus, with one large difference: they are less interested in the future, or in the past.

"We live for the day," said Dr. Leon Manheimer, a longtime resident who is in his 90s.

Yet it is precisely that ability to form new memories of the day, the present, that usually goes first in dementia cases, studies in Laguna Woods and elsewhere have found.

The very old who live among their peers know this intimately, and have developed their own expertise, their own laboratory. They diagnose each other, based on careful observation. And they have learned to distinguish among different kinds of [memory loss](#), which are manageable and which ominous.

A Seat at the Table

Here at Laguna Woods, many residents make such delicate calculations in one place: the bridge table.

Contract bridge requires a strong memory. It involves four players, paired off, and each player must read his or her partner's strategy by closely following what is played. Good players remember every card played and its significance for the team. Forget a card, or fall behind, and it can cost the team — and the social connection — dearly.

"When a partner starts to slip, you can't trust them," said Julie Davis, 89, a regular player living in Laguna Woods. "That's what it comes down to. It's terrible to say it that way, and worse to watch it happen. But other players get very annoyed. You can't help yourself."

At the Friday afternoon bridge game, Ms. Cummins and Ms. Scott sit with two other players, both women in their 90s. Gossip flows freely between hands, about residents whose talk is bigger than their game, about a 100-year-old man who collapsed and died that week in an exercise class.

But the women are all business during play.

"What was that you played, a spade was it?" a partner asks Ms. Cummins.

"Yes, a spade," says Ms. Cummins, with some irritation. "It was a spade."

Later, the partner stares uncertainly at the cards on the table. "Is that —"

"We played that trick already," Ms. Cummins says. "You're a trick behind."

Most regular players at Laguna Woods know of at least one player who, embarrassed by lapses, bowed out of the regular game. "A friend of mine, a very good player, when she thought she couldn't keep up, she automatically dropped out," Ms. Cummins said. "That's usually what happens."

Yet it is part of the tragedy of dementia that, in many cases, the condition quickly robs people of self-awareness. They will not voluntarily abandon the one thing that, perhaps more than any other, defines their daily existence.

"And then it's really tough," Ms. Davis said. "I mean, what do you do? These are your friends."

Staying in the Game

So far, scientists here have found little evidence that [diet](#) or exercise affects the risk of dementia in people over 90. But some researchers argue that mental engagement — doing crossword puzzles, reading books — may delay the arrival of symptoms. And social connections, including interaction with friends, may be very important, some suspect. In isolation, a healthy human mind can go blank and quickly become disoriented, [psychologists](#) have found.

“There is quite a bit of evidence now suggesting that the more people you have contact with, in your own home or outside, the better you do” mentally and physically, Dr. Kawas said. “Interacting with people regularly, even strangers, uses easily as much brain power as doing puzzles, and it wouldn’t surprise me if this is what it’s all about.”

And bridge, she added, provides both kinds of stimulation.

The unstated rule at Laguna Woods is to support a friend who is slipping, to act as a kind of memory supplement. “We’re all afraid to lose memory; we’re all at risk of that,” said one regular player in her 90s, who asked not to be named.

Woody Bowersock, 96, a former school principal, helped a teammate on a swim team at Laguna Woods to race even as dementia stole the man’s ability to form almost any new memory.

“You’d have to put him up on the platform just before the race, just walk him over there,” Mr. Bowersock said. “But if the whistle didn’t blow right away, he’d wander off. I tell you, I’d sometimes have to stand there with him until he was in the water. Then he was fine. A very good swimmer. Freestyle.”

Bridge is a different kind of challenge, but some residents here swear that the very good players can play by instinct even when their memory is dissolving.

“I know a man who’s 95, he is starting with dementia and plays bridge, and he forgets hands,” said Marilyn Ruekberg, who lives in Laguna Woods. “I bring him in as a partner anyway, and by the end we do exceedingly well. I don’t know how he does it, but he has lots of experience in the game.”

Scientists suspect that some people with deep experience in a game like bridge may be able to draw on reserves to buffer against memory lapses. But there is not enough evidence one way or the other to know.

Ms. Ruekberg said she cared less about that than about her friend: “I just want to give him something more during the day than his four walls.”

Drawing the Line

In studies of the very old, researchers in California, New York, Boston and elsewhere have found clues to that good fortune. For instance, Dr. Kawas’s group has found that some people who are lucid until the end of a very long life have brains that appear riddled with Alzheimer’s disease. In a study released last month, the researchers report that many of them carry a gene variant called APOE2, which may help them maintain mental sharpness.

Dr. Nir Barzilai of the [Albert Einstein College of Medicine](#) has found that lucid Ashkenazi Jewish centenarians are three times more likely to carry a gene called CETP, which appears to increase the size and amount of so-called good [cholesterol](#) particles, than peers who succumbed to dementia.

“We don’t know how this could be protective, but it’s very strongly correlated with good cognitive function at this late age,” Dr. Barzilai said. “And at least it gives us a target for future treatments.”

For those in the super-memory club, that future is too far off to be meaningful. What matters most is continued independence. And that means that, at some point, they have to let go of close friends.

“The first thing you always want to do is run and help them,” Ms. Davis said. “But after a while you end up asking yourself: ‘What is my role here? Am I now the caregiver?’ You have to decide how far you’ll go, when you have your own life to live.”

In this world, as in high school, it is all but impossible to take back an invitation to the party. Some players decide to break up their game, at least for a time, only to reform it with another player. Or, they might suggest that a player drop down a level, from a serious game to a more casual one. No player can stand to hear that. Every day in card rooms around the world, some of them will.

“You don’t play with them, period,” Ms. Cummins said. “You’re not cruel. You’re just busy.”

The rhythm of bidding and taking tricks, the easy conversation between hands, the daily game — after almost a century, even for the luckiest in the genetic lottery, it finally ends.

“People stop playing,” said Norma Koskoff, another regular player here, “and very often when they stop playing, they don’t live much longer.”

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