PUSHING THE LIMIT

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All Ken Pitetti could think about, as white-hot pain blasted his mangled right leg like a blowtorch and as the green tracer bullets of AK-47s zinged past and as the flimsy sling carried his blood-soaked body into the belly of the medivac helicopter, all Ken Pitetti could think about was Technicolor Death.

For months he had been writing his wife lies, telling her there was no jungle fighting, not telling her about the body bags he’d had to fill. But any second now the doomed chopper was sure to explode and come crashing down, smashing man and machine into the Vietnamese mountainside where his decimated and frightened platoon struggled desperately to survive.

For a brief moment as the horror of combat blurred reality, Pitetti sensed it was a miracle he had made it that far.

"I was the last officer when my leg got blown off, and we were still in the fight," Pitetti remembered. "And the kids in my platoon, psychologically they started to fall apart. And I’m thinking, it’s all over with. We’re going to get overrun. I’m going to be a damn POW. Well, I won’t tell you all that happened, but I did a little bit of motivating and the kids kinda woke up. And they got me ought of there.

"But it seemed like forever before I finally got in the helicopter. There are four wounded in with me, two extremely bad. I’m sliding in the blood. I look out the helicopter and I finally see the lowlands. I said, 'We’re out of it. We’re out of the mountains. I made it. I’m going home.' " Pitetti laughed. "And from that point on, I never thought about my leg. I said, 'I'm alive.' That’s all I wanted. If it cost me part of my leg, fine."

Twenty years later, Pitetti still works hard to keep his options open. But more importantly than that, he works hard at breaking down barriers for others who are physically or mentally handicapped.

Pitetti, 44, is an assistant professor in the College of Health Professions at Wichita State University. He teaches physiology classes to future doctors and nurses, and runs what some consider the finest facility in the Midwest devoted to the scientific study of rehabilitating disabled people.

In a small research laboratory in Ahlberg Hall, Pitetti and his colleagues employ everything from pressure suits worn by fighter pilots to custom-built treadmills to study and monitor whether rigorous exercises improve the circulation in the muscles of people with spinal cord injuries, diabetes, Down Syndrome, Guillain-Barre Syndrome and other diseases and injuries. Pitetti, in his plainspoken style, calls the lab the "best-kept secret in the state of Kansas."
Pitetti himself walks with a prosthetic leg to replace the one destroyed in the war. His own loss naturally helps him better identify with those who volunteer for the groundbreaking studies the lab has been responsible for since Pitetti came to WSU. Everyone who takes part in exercise studies is invited to continue using the equipment to work out to continue to improve their physical development — and many take Pitetti up on the offer.

"There's no doubt that the distance that I have covered in a very short time with my research is due to the fact that I understand them," Pitetti said. "I know that they go through states of depression sometimes. And I also know that it's so important to get them out of the house and back into the mainstream of the community. If coming into my lab, if that gets them back into the mainstream, great. They get excited when they find somebody who really cares about their problem and is trying to do something about it, because they don't see that very often."

Pitetti's university office is cluttered with an overworked computer, shelves of research studies and awards. There are his degrees: a bachelor of science degree in biology from the University of San Francisco in 1968, a master's in biology from Fort Hays State University in 1980, and a doctorate in physiology from the University of Texas Southwestern Medical School in Dallas in 1986. They hang proudly alongside certificates attesting to the Purple Heart and Bronze Star which Pitetti earned in combat.

"I don't think I would be in this area of research had I not lost my leg," Pitetti said. He bemoaned the paucity of valid, published baseline studies upon which to base research. "It has become very obvious that most of the research work that's done for the disabled is poorly done. It's not good science. ...What I always say is, to hell with that. Let's do good science and get it published in the best journals. And that's what we've been doing."

When Pitetti walked in the door in 1987, he was a freshly-minted post-doctorate with only a handful of academic papers to his credit. In a few short years, he has written or co-written 25 articles, produced 11 abstracts, and taken part in 11 juried performances or shows before national or international audiences. Last year, he was a visiting scholar at the University of Sydney, Australia. Pitetti's goals are to continue to improve the quantity and quality of research equipment, to make the lab internationally famous through its research, to attract major funding to make the lab self-sufficient, and to add to the number of high-quality graduate students.

Much of Pitetti's research effort has centered around measuring how disabled people react to stressful exercise conditions, and developing ways to improve their cardiovascular response and physical strength.

The approach is tailor-made for people such as Chuck Lewis, a 56-year-old Augusta man who has been in a wheelchair since the lower half of his body was ripped away in a motorcycle accident 13 years ago. Lewis took part in lab tests last fall, and continues to work out three times a week on a treadmill and hand cycle, keeping his arms and upper torso in good shape.

"I came in the first time, was gung-ho, run it up to about 55 rpm for three minutes," Lewis said on a recent visit to the lab. "Then, I went home and cried that night and the next day, too. I couldn't do much. But now I can run it for 45 or 55 minutes and get out of here and go over to the Heskett Center, work out for 30 minutes over there, and go home and never even feel it. It's built up my chest. Anytime you cut down a physical barrier, you're cutting down a mental barrier, too."
Lewis led an active life before his accident. An ex-Marine who was wounded by a bullet to the arm in the Korean War, an avid hunter and fisherman, an officer for the Augusta department of safety at Santa Fe Lake for 15 years — Lewis didn’t want to waste away after his accident, either.

"Pitetti’s not fake. He’s real," Lewis explained. "And that makes it easier, because I don’t have to play mental fencing games with him, like you sometimes have to do with people who don’t understand disabilities. That means I can put all my concentration — all my mental effort — into the machine and I don't have to worry about offending him. I can concentrate on my exercise, and that mental edge makes a difference in my development physically."

Like Pitetti, Lewis didn’t give up on life after his injury. He helped found the local chapter of Paralyzed Veterans of America, and in June plans to compete in the 11th annual Veterans Wheelchair Games in Miami. He still hunts and fishes, enjoys water-skiing and archery, builds custom trailers and six years ago had the controls of an ultralight plane modified so he could fly.

The lab work has just made it easier for Lewis to cope with the things in life most people take for granted.

"It’s helped just in the stress of getting in and out of a vehicle. Give you an example. I was out fishing, waiting for a Wings game. I hung into a channel cat that just knocked me right over and off my chair," Lewis said. "A month before I went to Pitetti, I would have started worrying right then. Because there was nobody around, and I’m laying halfway in the rocks and halfway in the pond. This time, I said, ‘Well, phooey, I don’t have to worry. I just stacked up a couple of rocks, put one hand on that, one hand on the chair and I was back in. So there’s the satisfaction of knowing that I’m not in trouble. I do have the upper strength now."

Not everyone comes into the lab as mentally or physically prepared to succeed as Lewis. Pitetti recalled giving a speech at which he invited audience members to volunteer for testing.

"After that luncheon, a kid came up in an electric wheelchair. Gaunt, like this," Pitetti said, affecting a drawn, haggard look. " He said, ‘Um, I’m interested in your study, could I set up a time?’...I said, ‘Do you have a regular wheelchair at home?’ And he said, ‘Yeah.’ I said, ‘When you come to my lab, you come in the one that you can push.’ Because I know from experience, those damn electric chairs will put a kid into a grave 10 to 15 years before he should. They stop doing things.

“So he came back with the chair, went the whole three weeks of ‘hardening,’ building up his muscles to do the real tests. We did a series of tests on him with the pressure suits and everything, and he said, ‘I’d like to get into an exercise program. I’m going to be going to school next year at Wichita State. I’m going to be taking some classes. Can I come into the lab before I go to class?’ I said, ‘No problem.’

"On Mondays, Wednesdays and Fridays, he comes wheeling in here around 9:15, a graduate student takes him through a workout, and off to class he goes," Pitetti said. "I have not seen him in that electric chair again. Now he’s taking courses, he’s booming around the campus. He’s thinking about his life now. He’s thinking he has options. He's a different kid. He's got color in his face. He jokes with you. He’s sort of turned it around. ...This is what you see, from those who stay with you. And then there'll be others who'll say, basically, "I want to stay home, sit in my wheelchair and rot."
Pitetti can't conceive of rotting away. He was born in San Francisco and grew up with a love of sports, coaching high school football, basketball and track in California and at Dodge City and Spearville in Kansas in the 1970s and early 1980s. Pitetti grew tired of high school coaching and teaching, but he still coaches his son, James, in the summer.

When Pitetti began classes at The University of San Francisco in 1964, he hoped to become a medical doctor. The campus was only four blocks from Haight-Ashbury and the burgeoning hippie movement, but he was too busy taking classes, playing football and trying to make ends meet to get involved in "that esoteric stuff." Four years later, Pitetti enlisted as an Army officer to avoid being drafted as a private. He met his wife, Carol Sue McConnell of Dodge City, while stationed at Fort Riley, and they married in 1970.

"When I came back from Vietnam, I was in physical therapy at a hospital in San Francisco," Pitetti said. "You would throw the medicine ball around, and you would do some push-ups and you'd do some situps and you'd do some real mamsey-pamsey type stuff, and work on your walking and work on your gait. Ho-hum. I said to the head physical therapist there, he was a major, and asked: 'What else is there?' He said, 'Oh, we have some ski trips every once in a while, and we have some horseback riding.' I said, 'Wait a minute. I never skied in my life and I'm not going to start it with one leg. Second of all, I'm not at all crazy about sitting on a horse.'

"People have to realize that you're the same person after a disability as you were before. You still have the same wants after a disability. So if you were a real active person, mentally, you still want to be active. You go back to the same thing we always talk about — options. Basically, I was asking the major: 'What are my options?' and basically he was saying, 'Not very many.' And I said, 'Bullshit.' So in the afternoons I would get on my crutches and go across the base to the main gymnasium where they had this exercise room with bikes and all sorts of neat stuff. I used to get on those bikes and work out, sweat like a dog, feel great, crutch back to my room, take a shower and be ready for dinner. So I began on my own to find options."

Pitetti said that it's good to be able to give others those options — whether they realize it or not — in recruiting them for studies that may take months to bear fruit.

"The psychological benefits to the mentally retarded, one doesn't know. It's hard to gauge that. They just love the opportunity that somebody cares about them and is spending time with them. They love to come here because they're treated like adults. We say, 'Here's what were going to do, and we expect this.' It makes them feel important. If that's a benefit, fine," Pitetti said. "With the non-mentally retarded disabled group, they — especially with the wheelchair people — not all of them will stay with you. A lot of them will just say, 'I don't want to do this. But those who catch the bug, if you will, there's a dramatic change in their life."

"Let me give you some insight on that. I may have a disease or disability, and in order for me to start feeling like I can make it, I've got to find something that that disease can't control. If that disease controls all aspects of your life, you're dead," Pitetti said. "You've got to find something else so you can say, 'I can do this, my disability can't stop my life.' Once you get ahold of that, then you're ready to get ahold of something else, and then something else, and pretty soon they start realizing, 'I've got a whole lot more options here. I don't have to sit at home in this wheelchair, I've got options.'

"That's what I try to give them, to say to amputees, 'You don't have to gain weight if you don't want to. You want to exercise? If you want to exercise and you're an amputee,
here's your program — you've proven it to be effective in the lab. That's all I can do. Some amputees start working out on the equipment and they say, 'I haven't felt this way in so long. I go to bed at night and I'm tired at night because I worked out, I love the feeling of sweating again.' And then they start saying, 'You know, I've got more energy to do things.' So they extend their activity level."

Pitetti himself seems tireless. He has been honored both for his research and teaching. In 1989, Pitetti won the Dolores, Etta, and Sidney Rotenberg Award for Excellence in Teaching. Last year, he received the Young Faculty Scholars Award from WSU.

"I think teaching and research is a grand marriage," he said. "I don't think you can have one without the other. When I talk in my classrooms, I don't talk from the book. I say, 'Hey, I want to give you an example of a study I was in and how this works. And they start saying, this guy really knows what the hell he's talking about."

"There's a tendency, and it's on this campus and probably on every other campus, that if you're producing academically — that is, you're being invited to go places to talk, you're going places to present your research, you spend a lot of time in your lab — that you're not doing any good at teaching. And that's a fallacy. The people who preach that should recheck their academic capacities."

Pitetti does not seem to doubt his own. But he insisted that anyone contemplating research and teaching — particularly the kind that offers hands-on options to others — had better be sure they're ready to dedicate their life to the cause.

"You've got to want it real bad. You've got to love it," he said. "You don't get paid that much. You put in a lot of hours. You have to love it. It has to be part of your life, or you're not going to be any good at it. You have to have a real dedication to that area of research that you're doing, because that's what really gets you out of bed every morning."