Wearable 4MM jetpack tested on speed, agility for runners (w/ Video)

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"Everybody has always wanted to fly. When people hear the word 'jetpack,' that's what they really think about," said Jason Kerestes at Arizona State University. He is one of the busy explorers at ASU trying to bridge gaps between man and machine. Kerestes has done something different with the jetpack concept. He and team have reduced the amount of force; their device does not enable a person to fly, "but we have instantaneous thrust and we can pretty much trigger it to allow for faster movement and agile motion." His jetpack, simply put, does not help you to fly but to run faster, and for the Defense Advanced Research

Projects Agency (DARPA), his project's progress means a lot. Kerestes has built his prototype, which is now undergoing tests and refinements.

The project is called 4MM, for 4-minute mile. The overall goal is to get any soldier or any test subject to be able to run a 4-minute mile who was not already capable of doing so. Kerestes started doing his research "kind of by accident," he said. As the owner of a welding business and going to ASU, students came to him; the team at the time was just at the infancy of this project.

"We were developing robots that could assist amputees," said Professor Thomas Sugar of the Human Machine Integration Lab. "And DARPA came back to us and asked if we could develop robots that could assist able-bodied people, and make them able to run faster or do things they couldn't do." Dr. Sugar works on mobile robot navigation and wearable robotics for the rehabilitation of stroke survivors. Kerestes, already interested in the robotic process, welcomed the opportunity to get involved. He said the fact that he could work at designing something and then weld up a prototype the next day substantially reduced their overall time on moving from concept to prototype.

Dr. Sugar said he and Kerestes had their doubts they could come up with something but then decided it was possible. They have seen encouraging results so far. In trials over a 200-meter distance, with the jetpack, they saw a decrease in time and decrease in metabolic cost, the amount of energy required for a person to run at high speeds. In a test, a subject with the jetpack on a sprint ran three seconds faster, and that was with carrying an extra 11.2 pounds of weight, the jetpack.

As for military support, Kerestes noted that in a warfare arena, a device such as this could spell the difference between life and death, "if you think of a Navy SEAL or a soldier that must get in somewhere quickly

—and get out just as quickly," said Kerestes.

More information: researchmatters.asu.edu/videos … -soldiers-run-faster