## **IAAF decision on "Cheetah" prosthetics** The IAAF, the governing body of athletics, appears set to rule that Oscar Pistorius, who runs with carbon fibre blades after having both legs amputated below the knee. gains an unfair advantage from his prosthetic legs "CHEETAH" PROSTHETIC VERSUS BIOLOGICAL LIMBS 1. FOOT STRIKES Quadriceps **GROUND** Ablebodied runner: Ankle. Calf calf, knee and Pistorius: quadriceps absorb Blade compresses. impact, storing energy storing energy 2. MID STANCE Gluteus and Gluteus Calf muscle quadriceps maximus begins muscles to fire. must All lea produce Stored muscles twice energy of eneray in blade moves provide able-bodied locomotion to front edge runner 3. TAKE OFF: Blade Foot pushes off releases - leg generates energy like a spring over twice energy stored in first Energy Under impact loss in ankle 10% energy loss Socket: **RECORD COMPARISONS** Time (seconds) Snug fit to lea Competition 400 metres 200m 100m Foot: Carbon 2004 Olympic gold, men 19.79 9.85 44.00 composite Pistorius' records 46.34 21.58 10.91 2004 Olympic gold, women 49.41 22.05 10.93 Spikes Picture: Getty Images Sources: Ossur, IAAF @ GRAPHIC NEWS