



LIVESTRONG BAND

Nearly 50 million bands have been sold. The Lance Armstrong Foundation sponsors national advocacy initiatives to raise awareness and educate lawmakers and the public about health care issues facing cancer survivors and friends.

THE ANATOMY OF A RACER AND HIS RACE

Graphics by Michael Mode, Steve Cowden Text by Bonnie DeSimone, James Yu

THE BODY

Professional cyclists like Lance Armstrong burn 4,000 to 6,000 calories during a flat stage and more than 8,000 calories during a mountain stage. Studies say the average human burns between 1,400 and 2,500 calories per day. All that energy has to come from somewhere. Meals during the Tour are simple and nourishing. Breakfast consists of eggs, pasta, rice, bread, yogurt, cereals. During the race, lunch is handed to the riders in bags called musettes. They contain high-carb items, little sandwiches filled with honey and banana slices, cakes, energy bars, energy gels and water or sports drinks. After a stage, team members snack on cereal and high-protein foods. Dinner consists of meats, pasta, rice, salad, bread and dessert.

Drug testing: The International Cycling Union (UCI) accepts the World Anti-Doping Agency code and incorporates it into its regulations. As a result, every cyclist is tested for banned drugs before the race. Daily drug tests are given to the race leader and stage winner and a random sampling of six to eight riders in the race.

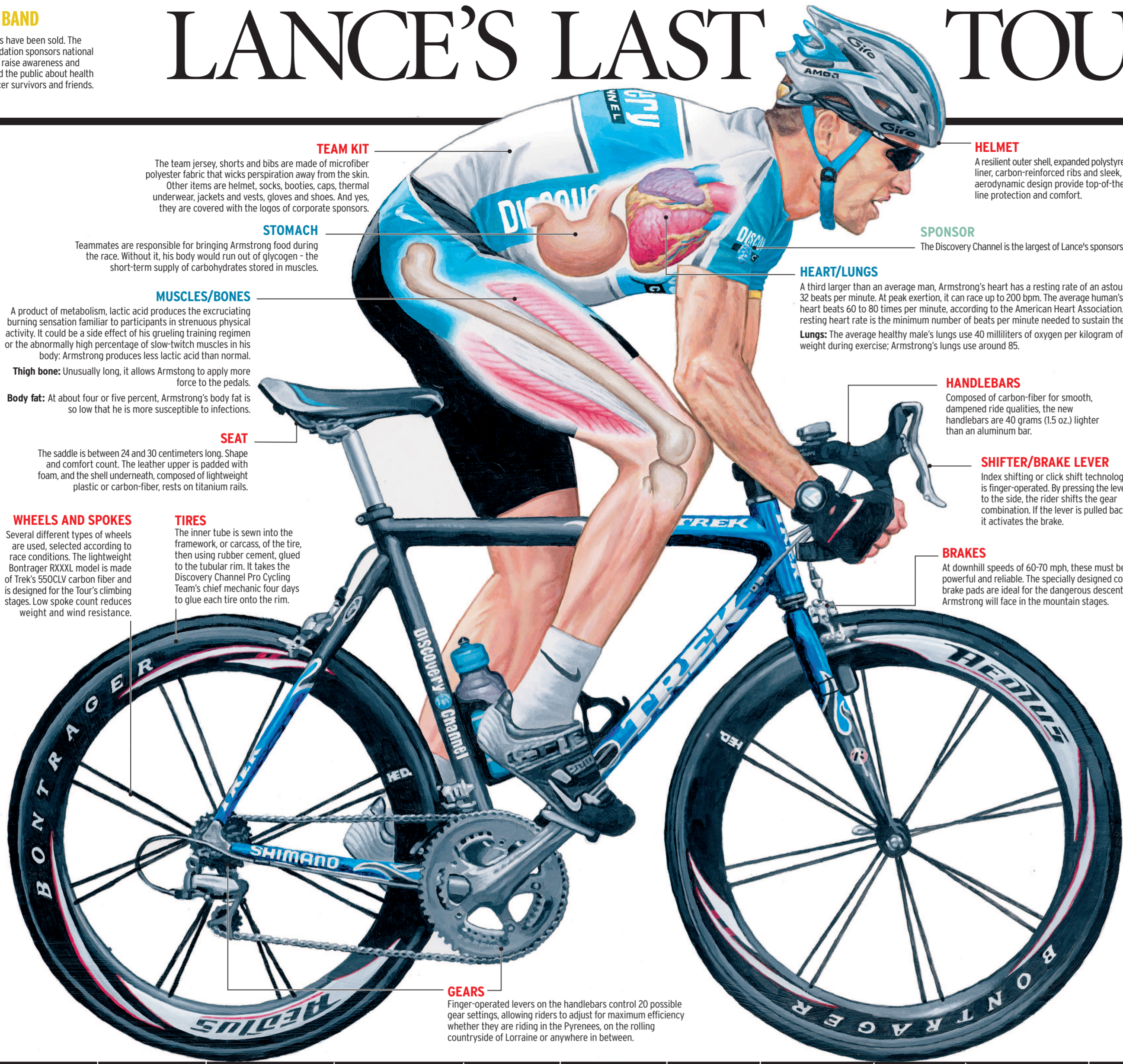
THE EQUIPMENT

Armstrong uses two specially designed Trek bikes for the Tour. One is for the individual and team time trials; the other is used in the road and mountain stages.

2006 Trek TTX (below) The bike that Armstrong and his teammates will ride in the Tour's time trials is designed to be as lightweight and aerodynamic as possible. The solid disk in the back wheel helps with stability and smoother airflow. The frame tubes, seat and front wheel are shaped like airplane wings to limit air resistance, and the handlebars have the same effect while forcing the rider into a lower, more efficient position.



LANCE'S LAST TOUR



TEAM KIT

The team jersey, shorts and bibs are made of microfiber polyester fabric that wicks perspiration away from the skin. Other items are helmet, socks, booties, caps, thermal underwear, jackets and vests, gloves and shoes. And yes, they are covered with the logos of corporate sponsors.

STOMACH

Teammates are responsible for bringing Armstrong food during the race. Without it, his body would run out of glycogen - the short-term supply of carbohydrates stored in muscles.

MUSCLES/BONES

A product of metabolism, lactic acid produces the excruciating burning sensation familiar to participants in strenuous physical activity. It could be a side effect of his grueling training regimen or the abnormally high percentage of slow-twitch muscles in his body. Armstrong produces less lactic acid than normal.

Thigh bone: Unusually long, it allows Armstrong to apply more force to the pedals.

Body fat: At about four or five percent, Armstrong's body fat is so low that he is more susceptible to infections.

SEAT

The saddle is between 24 and 30 centimeters long. Shape and comfort count. The leather upper is padded with foam, and the shell underneath, composed of lightweight plastic or carbon-fiber, rests on titanium rails.

WHEELS AND SPOKES

Several different types of wheels are used, selected according to race conditions. The lightweight Bontrager RXXL model is made of Trek's 550CLV carbon fiber and is designed for the Tour's climbing stages. Low spoke count reduces weight and wind resistance.

TIRES

The inner tube is sewn into the framework, or carcass, of the tire, then using rubber cement, glued to the tubular rim. It takes the Discovery Channel Pro Cycling Team's chief mechanic four days to glue each tire onto the rim.

HELMET

A resilient outer shell, expanded polystyrene liner, carbon-reinforced ribs and sleek, aerodynamic design provide top-of-the-line protection and comfort.

SPONSOR

The Discovery Channel is the largest of Lance's sponsors.

HEART/LUNGS

A third larger than an average man, Armstrong's heart has a resting rate of an astounding 32 beats per minute. At peak exertion, it can race up to 200 bpm. The average human's resting heart beats 60 to 80 times per minute, according to the American Heart Association. The resting heart rate is the minimum number of beats per minute needed to sustain the body.

Lungs: The average healthy male's lungs use 40 milliliters of oxygen per kilogram of body weight during exercise; Armstrong's lungs use around 85.

HANDLEBARS

Composed of carbon-fiber for smooth, dampened ride qualities, the new handlebars are 40 grams (1.5 oz.) lighter than an aluminum bar.

SHIFTER/BRAKE LEVER

Index shifting or click shift technology is finger-operated. By pressing the lever to the side, the rider shifts the gear combination. If the lever is pulled back, it activates the brake.

BRAKES

At downhill speeds of 60-70 mph, these must be powerful and reliable. The specially designed cork brake pads are ideal for the dangerous descents Armstrong will face in the mountain stages.

GEARS

Finger-operated levers on the handlebars control 20 possible gear settings, allowing riders to adjust for maximum efficiency whether they are riding in the Pyrenees, on the rolling countryside of Lorraine or anywhere in between.

THE EQUIPMENT continued

2006 Trek Madone SSLx (left) This is the bike Armstrong will use in the road and mountain stages. Adapted from last year's Madone SSL, this prototype is lighter and stiffer. At 7 kilograms (15.4), it meets International Cycling Union (UCI) regulations and is tailored to what Armstrong needs in a climbing bike: Strength, lightweight characteristics and responsiveness.

Frame weight: UCI regulations dictate that the weight of the bicycle cannot be less than 6.8 kilograms (about 15 pounds). Bikes that are underweight can be adjusted by adding heavier components, like an extra bottle cage.

Frame: Handmade in Waterloo, Wis., the frame is constructed using Trek's Optimum Compaction, Low Void (OCLV) carbon process. The 110 and 55 carbon fiber, combined with a new Boron composite material, makes the bike lightweight and responsive.

Water Bottle: When one can lose 11 pounds through dehydration while racing in a Tour de France time trial (as Armstrong did during a heat wave in 2003), the importance of this little item becomes clear.

Bottle Cages: Easy to operate, the cages keep a firm grip on the bottle on even the roughest terrain. Shoes: The upper shoe has a dimpled, golf ball effect that enables the shoe to cut through wind resistance. The "silverized" carbon fiber outsole provides stiffness, is lightweight and keeps the foot 10 millimeters above the pedal.

Sunglasses: Oakley sunglasses keep the glare out of Armstrong's eyes.

Earpiece: Armstrong, like most riders, communicates with the team manager via two-way radio.

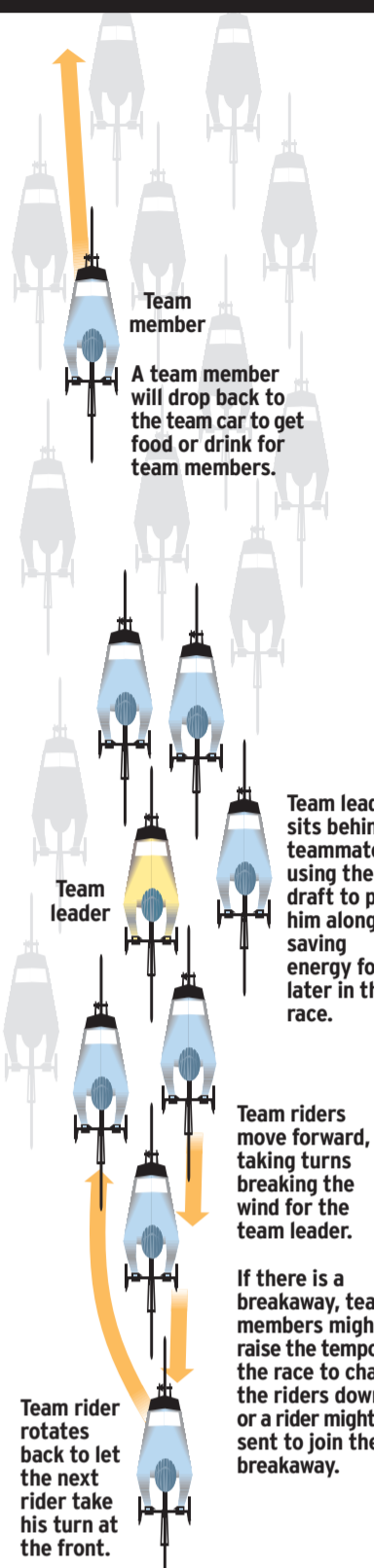
THE SPONSORS

- Discovery Channel (TV Network)
AMD (Microprocessors development technology)
24 Hour Fitness (Fitness centers)
Berry Floor (Laminated floors)
Trek (Bicycles)
Nike (Shoes and clothing)
OLN Network (TV Network)
PowerBar (Performance nutrition products)
Thomas Weisel Partners (Banking)
Bissel (Vacuum cleaners)
Subaru (Automobiles)
Shimano (Bicycle components)
CicloSport (Cyclometers and heart rate monitors)
Dasani (Water)
Giro (Helmets)
Hutchinson (Tires)
Carmichael Training (Performance training center)
Bontrager (Wheels and components)
Park Tool USA (Bike tools)
SciCon (Cycling bags)
SAPIM (Bicycle race spokes)
Maximize (Nutrition products)

*Listed in order of support

TOUR VICTORIES

- 1999
2000
2001
2002
2003
2004



THE TEAM

The job of the team is to protect the team leader - keep him at the front of the peloton (the main pack). The team surrounds him, allowing him to draft or be pulled along, saving up to 30 percent of his energy. They also provide food and drink. If there is a breakaway, team riders might be designated to pick up the tempo and bring the riders back to the peloton. If there is a mountain stage, the team leader will be led out with the help of team members who specialize in mountain stages. They will pace him up the mountain until he is challenged.

Team support vehicles

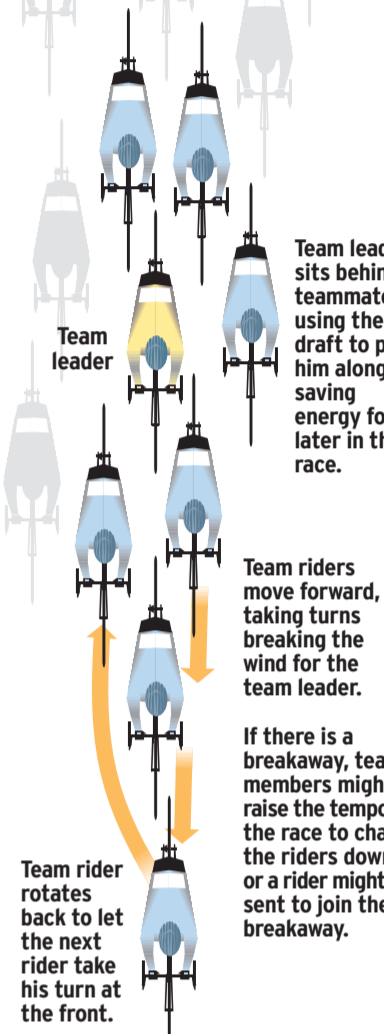
Assigned their positions according to the previous day's team leader's standing. They are followed by the news and emergency vehicles.

Peloton

Motorcycle camera units Follow the action in the peloton and transmit images to low flying helicopters that send it to production trucks at the finish line.

Motorcycles

French Republic Guard Official Tour vehicles



TEAM DISCOVERY

Johan Bruyneel - Team manager

Table with columns: Name, Age, Country, Years pro, Specialty. Lists team members like Lance Armstrong, Manuel Beltran, George Hincapié, Benjamin Noval, Pavel Padrnos, Yaroslav Popovych, Paolo Savoldelli, and José Luis Rubiera.

THE CHALLENGERS

Ivan Basso (Italy), Team CSC (Denmark) Basso, 27, showed he could stay with Lance Armstrong in the mountains last year. He has a strong, versatile supporting cast and showed heart at last month's Tour of Italy, winning two difficult stages after an illness knocked him out of overall contention.

Santiago Botero (Colombia), Phonak (Switzerland) Botero, 32, has regained his rhythm after two unproductive years with T-Mobile, winning the Tour of Romandie and finishing second at the Dauphiné Libéré. The former time trial world champion just missed the Tour podium in 2002.

Floyd Landis (U.S.), Phonak (Switzerland) Landis, 29, was promoted to team leader after Tyler Hamilton's doping suspension. His third place finish at the Tour de Georgia included a time trial win. The ex-mountain biker has been feuding with his old boss, Armstrong, but he's not easily intimidated.

Levi Leipheimer (U.S.), Gerolsteiner (Germany) The 31-year-old Montana native has been training regularly with Armstrong. Leipheimer finished second in the Tour de Georgia and third in the Dauphiné Libéré this season. He has two top-10 finishes in the last three years and is aiming for the podium.

Jan Ullrich (Germany), T-Mobile (Germany) We've heard it before, but once again, the '97 Tour winner and five-time runner-up is said to be in great shape. Ullrich's racing style has been criticized as too passive and predictable, but at 31, he's still one of the world's best climbers and time trial specialists.

Alexandre Vinokourov (Kazakhstan), T-Mobile (Germany) Ullrich's friend and aggressive, driven teammate has declared he will try to make the race as hard as he can for Armstrong. Vinokourov, 31, missed the Tour due to injury last year but announced his comeback with a victory at Liège-Bastogne-Liège this spring.

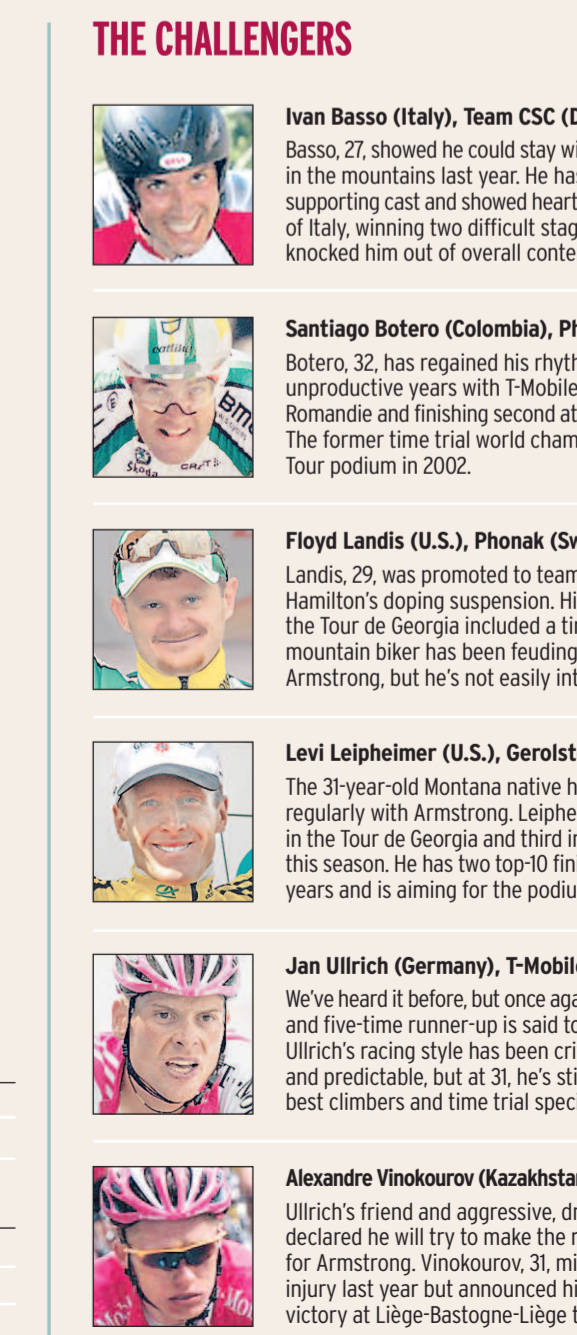
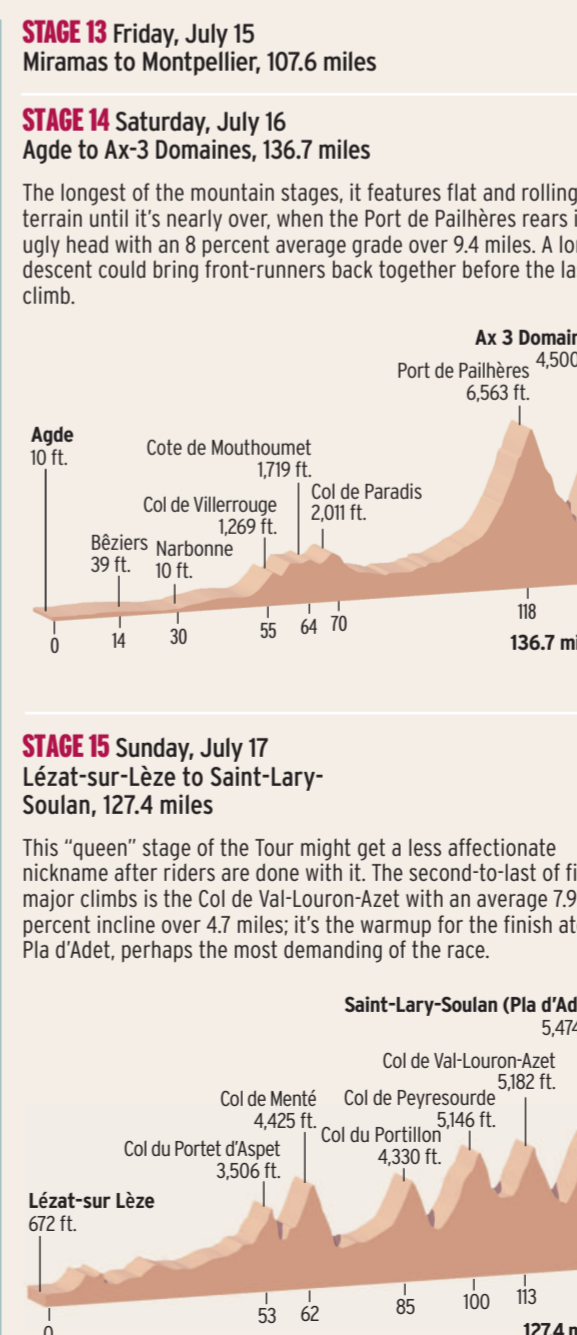
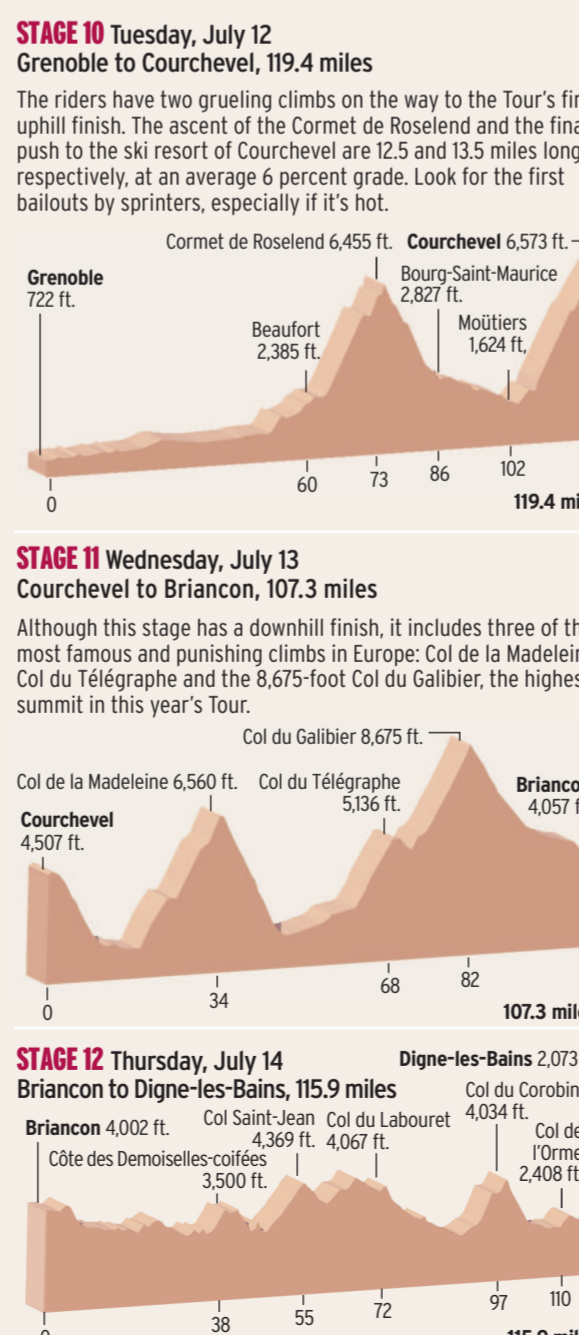


ABOUT THE TOUR DE FRANCE

The Tour de France began in 1903, with 60 riders and a six-stage race over six days. The 2004 Tour de France was 20 stages, 2,109.6 miles, winning time of 83 hours, 36 minutes and two seconds (83:36:02). Armstrong's winning margin was six minutes, 19 seconds. This year's Tour, a 21-stage bicycle race, begins Saturday, with nearly 200 riders on 21 teams of nine riders from around the world. The race includes:
- Nine flat stages.
- Two individual time trials (where the individual races against the clock)
- One team time trial (the team races against the clock with all the members of the team receiving the same time as the fifth rider to finish)
- Three medium mountain stages and six mountain stages.
It all ends July 24 on the streets of Paris along the Champs-Élysées.
After riding more than 100 miles most days, and more than 2,000 miles during the 21-stage race, the rider who has accumulated the least amount of time becomes the overall winner.

JERSEY COLORS

Yellow Jersey: General Time Classification, given to the rider with the least amount of accumulated time. Time bonuses along the stage, plus accumulated time, determine who receives this jersey.
Green Jersey: General Points Classification, or sprinter's jersey. Points are given at designated spots along stages. At the finish, the rider with the most accumulated points wears the green jersey.
Red Polka-Dotted Jersey: Best Climber Classification points are awarded during mountain stages based on the category of the climb. The rider with the most points wears this jersey.
White Jersey: The Best Young Rider jersey goes to the highest placed rider under 25. Like the yellow jersey, it is based on accumulated time.



Sources: Tour de France for Dummies; The Pacerline.com; Lance Armstrong Foundation; VeloNews; Velo Magazine; Team.discovery.com; Cyclingnews.com; Union Cyclist Internationale; Associated Press; www.letour.fr; The New Yorker; The New York Times