Golf is a very safe sport - as long as a few basic, common-sense rules of safety are followed. When those rules are ignored, injuries can occur.

Keep Track of Those Around You
When a golf club is in your hands and you are preparing to swing, it is your responsibility to make sure your playing partners are a safe distance away from you.
Never swing a golf club when another golfer is close to you.
Also, look ahead of you, and to the left and right of the area where you are aiming your shot. Don't hit your ball until you are confident that any golfers up ahead are out of your range.
Heads Up
While it's the responsibility of every golfer to be sure it is safe for them to take their stroke, you can't always rely on every golfer to do just that. So even when it's not your turn to hit, stay aware of your surroundings.
Yell Fore, or Cover Up When You Hear It
Even if you follow the advice above, there will surely come times when you hit your drive farther than you expected, or a hook or slice comes out of nowhere and takes your ball toward an adjoining fairway.
You know what to do: Yell "Fore!" as loud as you can. That is the international word of warning in golf.
And what should you do when you hear "fore!" being yelled in your direction? For goodness sakes, do not stand up, crane your neck, and try to spot the ball! You're just making yourself a bigger target. Instead, cover up. Crouch behind your golf bag, get behind a tree, hide behind the cart, cover your head with your arms. Make yourself a smaller target, and protect your head.
Never Hit Into the Group Ahead of Yours
This should go without saying, shouldn't it? What we're talking about are those occasions when a very slow group is ahead of yours, and frustration takes over.
If you're ever tempted to do this ... don't. It's very rare, but golfers have been killed after being struck by golf balls. Injuries do occur.
Beware Lightning
Lightning is a killer, and during a thunderstorm, golfers carrying metal clubs in their hands while on exposed land are at great risk. If there is lightning anywhere around the golf course, or thunderstorms approaching, take cover.

At the very first sign of lightning, head for the clubhouse. If you are caught out on the course and unable to get to the clubhouse, do not seek cover under trees. Trees are lightning rods.
If caught out in the open and unable to find shelter, get away from your clubs, your golf cart, water and trees, and remove metal spikes if wearing them. If in a group, group members should remain at least 15 feet apart. If you feel a tingling sensation or the hair on your arms stands up, crouch in a baseball catcher's position, balancing on the balls of your feet. Fold your arms in front of your knees, keep your feet together and your head forward.

For more details see http://golf.about.com/od/fitnesshealth/a/safetyguideline.htm.