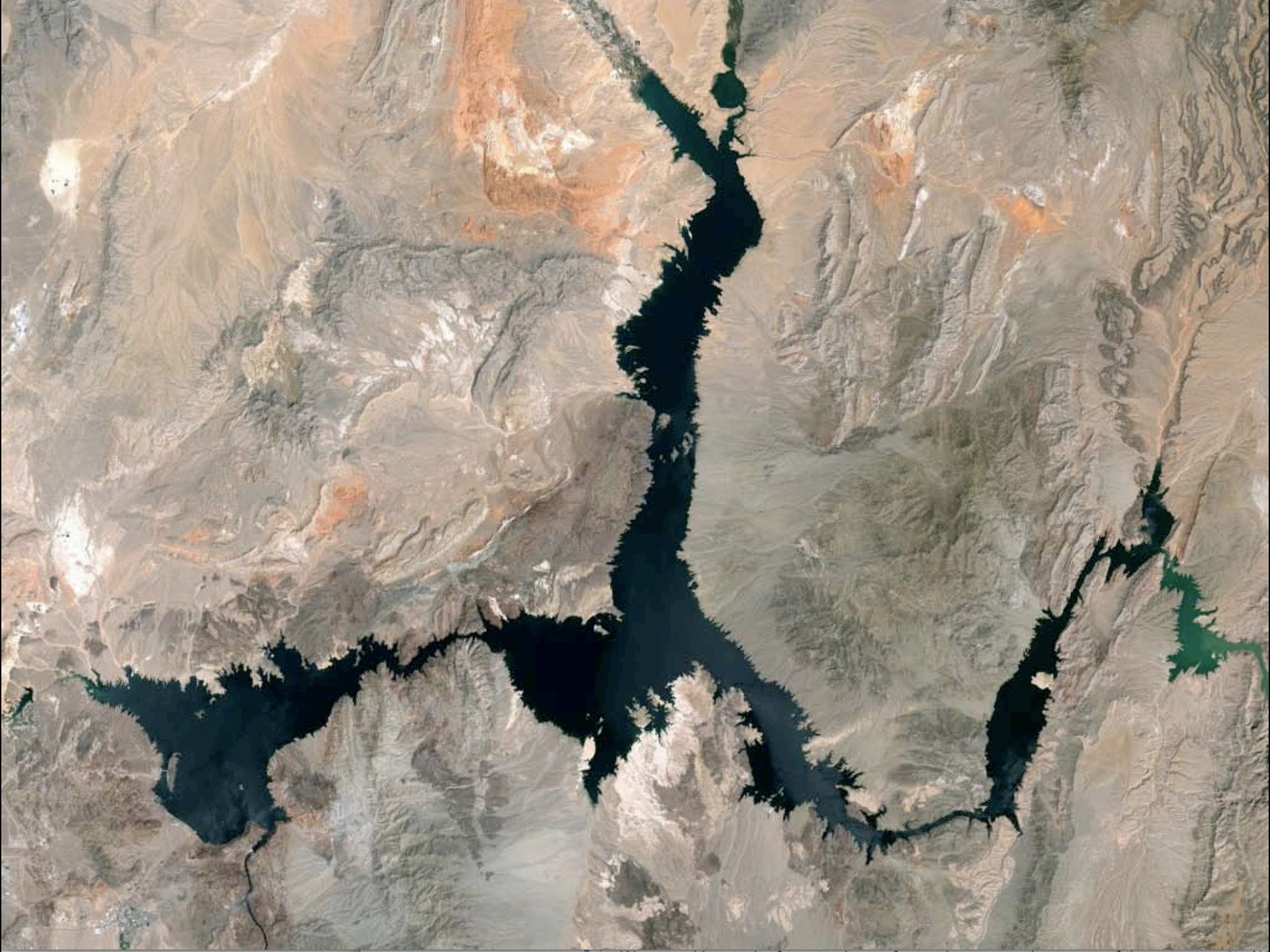
Connections to Other Platforms

LuAnn Dahlman
NOAA Climate Program Office
Communications and Education Team

2009 Science on a Sphere Users Collaborative Network workshop



Ned Gardiner, NOAA's Climate Program Office and David McConville, The Eluminati

NOAA CLIMATE SERVICES

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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Featured Articles

An Upwelling Crisis: Ocean Acidification

Featured Article, Thu, Oct 15th, 2009
by Caitlyn Kennedy
In the summer of 2007, as oyster growers and hatchery managers in Washington state were experiencing yet another failed oyster harvest, Dr. Richard Feely set off on an research cruise to find out if the seawater itself was the culprit...
Read Full Article »

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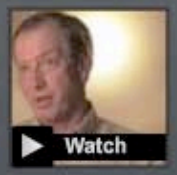
New ClimateWatch Video series, up close conversations with NOAA Scientists



What Is Causing Global Climate Change?

What Scientists Know Today About Climate

Roles and Responsibilities of NOAA's Climate Scientists

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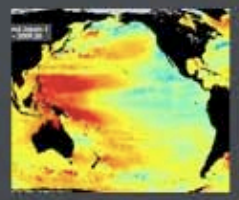

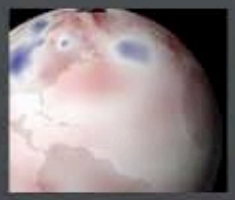
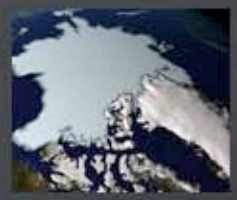

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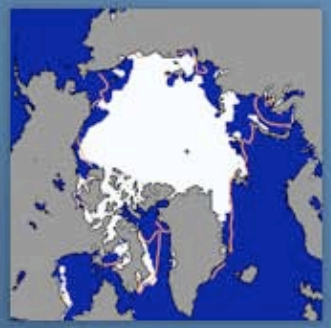
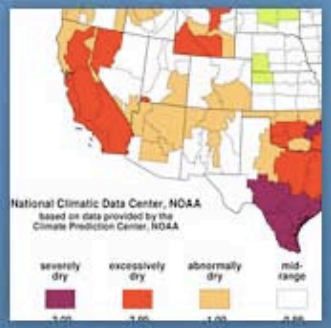
Past & Present Climate ▸



Climate at a Glance

Read and explore summaries and digests of recent climate-related phenomena from NOAA's distributed climate service community.

Outlooks ▸



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Discover explorations short-term evaluations of how climate phenomena are likely to unfold in coming days, weeks, and months.

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Explore NOAA by Region

Explore the climate services and products NOAA experts prepare for specific regions of our nation and the world.

Serving Society ▸

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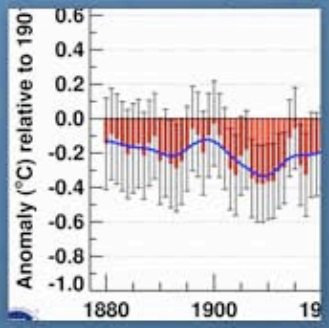
Data Library ▸



Visualizing & Explore

NOAA is a leading provider of access to data from research projects, stations, and satellites to the nation and the world.

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White House releases landmark climate change report on June 16, 2009.

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Featured

Understanding Sea Level Using Real Data

Researchers believe that sea level is rising worldwide. But how are water levels monitored and measured?

Learn More: http://www.dataintheclassroom.org/
Download: (PDF) Sea Level Teacher Guide

Education Sections

- Teaching Resources
- Professional Development
- Multimedia

Incredible Shrinking Habitat (Grades 4-7)

(PDF)

NSTA Webinars Global Climate Change Impacts in the Western US

Visit Site

Heating Up the Ocean (Visual)

Watch Video

Education Purpose

"To protect fragile ecosystems and to build sustainable communities that are resilient to climate change - including extreme weather and climate events - a climate-literate citizenry is essential."

- Climate Literacy, 2009 **(PDF)**

Can We Blame El Niño?

Introduction

What is El Niño?

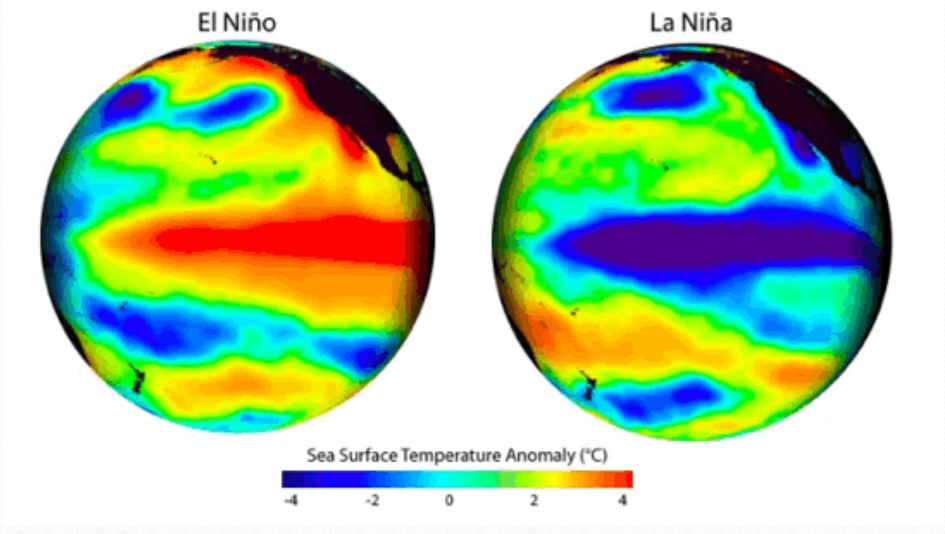
Misconceptions about El Niño

November 17, 2009

What is El Niño?

El Niño refers to conditions when the sea's surface in an area along the equator in the central and eastern Pacific Ocean gets warmer than usual. The average water temperature in that area is typically just one to three degrees Celsius warmer than normal, but it has the effect of adding huge amounts of heat and moisture to the atmosphere, ultimately affecting patterns of air pressure and rainfall across the Pacific and beyond.

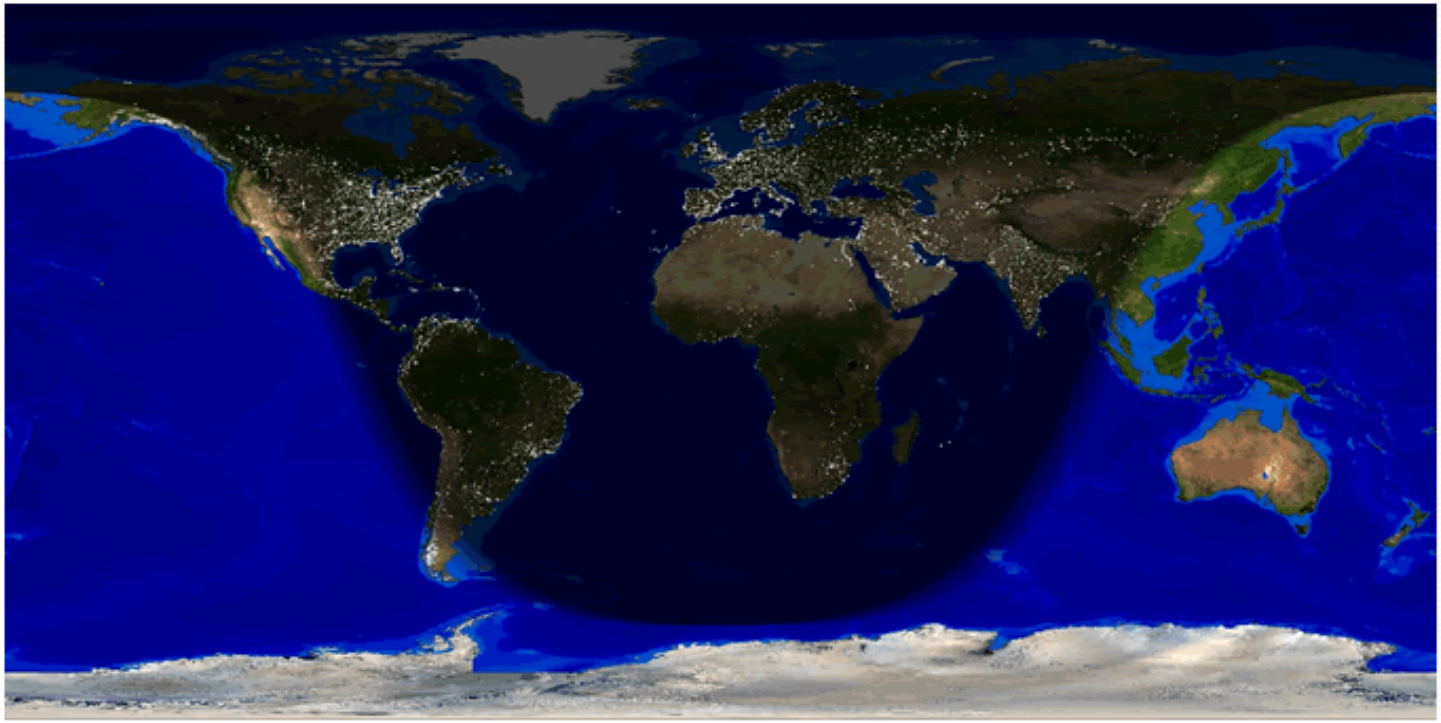
La Niña is the climatological counterpart to El Niño—a yin to its yang, so to speak. La Niña refers to periods when sea-surface temperatures in the equatorial central and eastern Pacific are cooler than normal. The lower surface temperatures suppress transfer of heat and moisture to the atmosphere, again affecting air pressure and precipitation patterns across a large region.



These visualizations show patterns of sea surface temperature in the Pacific Ocean during El Niño and La Niña episodes. The colors along the equator show areas that are warmer or cooler than the long-term average. Images courtesy of Steve Albers, NOAA.

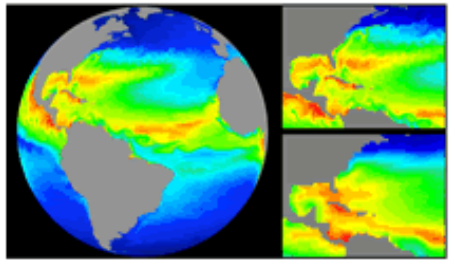
Shift in Seasons

Posted December 21, 2009



Winter solstice, also known as mid-winter, or the shortest day of the year in the Northern Hemisphere, occurs each year on or about December 21. This image, produced for NOAA's Science on a Sphere, shows the areas of daylight and dark on that date.

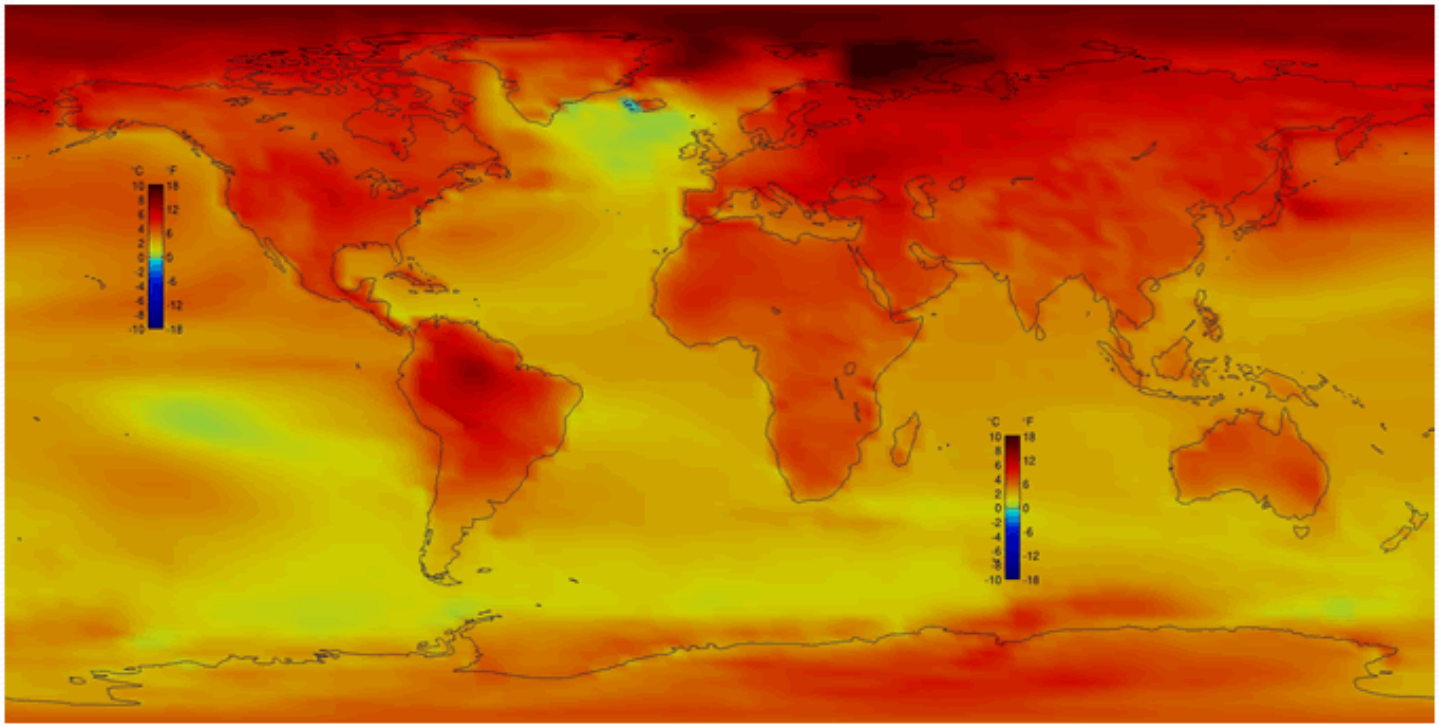
The Earth-Moon-Sun relationships and dates of solstices and equinoxes have been stable for several millenia. Longer growing seasons observed in both hemispheres over the past century are the result of changes in the climate system rather than changes in how much sunlight locations receive through a year.



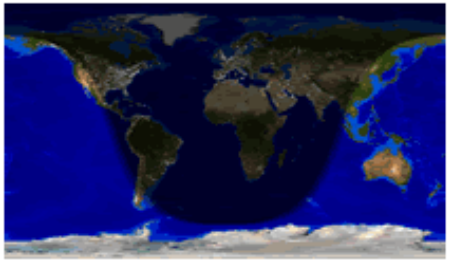
Previous Image:
Modeling Sea Surface Temperature

Projected Temperature Change

Posted December 21, 2009

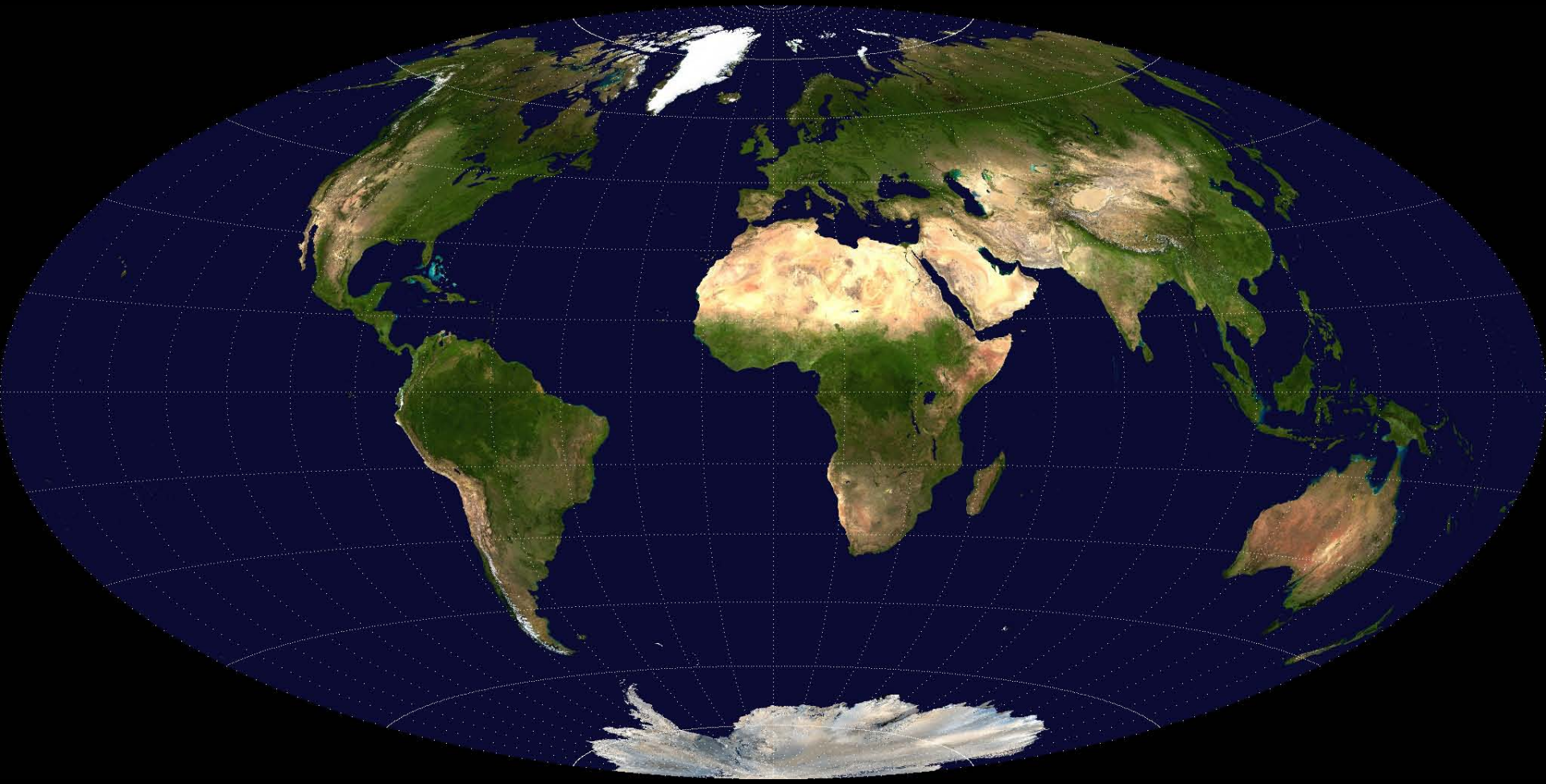


The Intergovernmental Panel on Climate change releases assessment reports on the current state of the atmosphere and what the future could hold. Models from various atmospheric and oceanic organizations are included in these reports in order to establish a broad understanding of the science. Data from three of the IPCC models following temperature change from 1870 - 2199 have been formatted for Science On a Sphere® .



Previous Image:
Shift in Seasons

A Web-friendly option:
The Hammer-Aitoff Projection



This equal-area projection displays the world on an ellipse. The continent shapes are all recognizable and the polar regions aren't over-emphasized.

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use LIPITOR safely and effectively. See full prescribing information for LIPITOR.

LIPITOR® (atorvastatin calcium) Tablets for oral administration

Initial U.S. Approval: 1996

INDICATIONS AND USAGE

LIPITOR is an inhibitor of HMG-CoA reductase (statin) indicated as an adjunct therapy to diet to:

- Reduce the risk of MI, stroke, revascularization procedures, and angina in patients without CHD, but with multiple risk factors (1.1).
- Reduce the risk of MI and stroke in patients with type 2 diabetes without CHD, but with multiple risk factors (1.1).
- Reduce the risk of non-fatal MI, fatal and non-fatal stroke, revascularization procedures, hospitalization for CHF, and angina in patients with CHD (1.1).
- Reduce elevated total-C, LDL-C, apo B, and TG levels and increase HDL-C in adult patients with primary hyperlipidemia (heterozygous familial and non-familial) and mixed dyslipidemia (1.2).
- Reduce elevated TG in patients with hypertriglyceridemia and primary dysbetalipoproteinemia (1.2).
- Reduce total-C and LDL-C in patients with homozygous familial hypercholesterolemia (HoFH) (1.2).
- Reduce elevated total-C, LDL-C, and apo B levels in boys and postmenarchal girls, 10 to 17 years of age, with heterozygous familial hypercholesterolemia after failing an adequate trial of diet therapy (1.2).

Limitations of Use
LIPITOR has not been studied in *Fredrickson* Types I and V dyslipidemias.

DOSAGE AND ADMINISTRATION

Dose range: 10 to 80 mg once daily (2.1).
Recommended start dose: 10 or 20 mg once daily (2.1).
Patients requiring large LDL-C reduction (>45%) may start at 40 mg once daily (2.1).
Pediatric starting dose: 10 mg once daily; maximum recommended dose: 20 mg once daily (2.2).

DOSAGE FORMS AND STRENGTHS

10, 20, 40, and 80 mg tablets (3).

CONTRAINDICATIONS

Active liver disease, which may include unexplained persistent elevations in hepatic transaminase levels (4.1).
Women who are pregnant or may become pregnant (4.3).
Nursing mothers (4.4).
Hypersensitivity to any component of this medication (4.2).

WARNINGS AND PRECAUTIONS

Skeletal muscle effects (e.g., myopathy and rhabdomyolysis): Risks increase when higher doses are used concomitantly with cyclosporine, fibrates, and strong CYP3A4 inhibitors (e.g., clarithromycin, itraconazole, HIV protease inhibitors). Predisposing factors include advanced age (> 65), uncontrolled hypothyroidism, and renal impairment. Rare cases of rhabdomyolysis with acute renal failure secondary to myoglobinuria have been reported. In cases of myopathy or rhabdomyolysis, therapy should be temporarily withheld or discontinued (5.1).

Liver enzyme abnormalities and monitoring: Persistent elevations in hepatic transaminases can occur. Monitor liver enzymes before and during treatment (5.2).

A higher incidence of hemorrhagic stroke was seen in patients without CHD but with stroke or TIA within the previous 6 months in the LIPITOR 80 mg group vs. placebo (5.5).

ADVERSE REACTIONS

The most commonly reported adverse reactions (incidence ≥ 2%) in patients treated with LIPITOR in placebo-controlled trials regardless of causality were: nasopharyngitis, arthralgia, diarrhea, pain in extremity, and urinary tract infection (6.1).

To report SUSPECTED ADVERSE REACTIONS, contact Pfizer at (1-800-438-1985 and www.pfizer.com) or FDA at 1-800-FDA-1088 or *www.fda.gov/medwatch*.

DRUG INTERACTIONS

Drug Interactions Associated with Increased Risk of Myopathy/Rhabdomyolysis (2.6, 5.1, 7, 12.3)

Interacting Agents	Prescribing Recommendations
Cyclosporine	Do not exceed 10 mg atorvastatin daily
Clarithromycin, itraconazole, HIV protease inhibitors (ritonavir plus saquinavir or lopinavir plus ritonavir)	Caution when exceeding doses > 20 mg atorvastatin daily. The lowest dose necessary should be used.

- Digoxin: Patients should be monitored appropriately (7.5).
- Oral Contraceptives: Values for norethindrone and ethinyl estradiol may be increased (7.6).
- Rifampin should be simultaneously co-administered with LIPITOR (7.4).

USE IN SPECIFIC POPULATIONS

- Hepatic impairment: Plasma concentrations markedly increased in patients with chronic alcoholic liver disease (12.3).

See 17 for PATIENT COUNSELING INFORMATION

Revised: [6/2009]

High Cholesterol and Heart Disease

What Is High Cholesterol?

Heart Disease Risk Factors

Cholesterol Treatment Options

About LIPITOR

How LIPITOR Compares

What LIPITOR Users Should Know About Generics

Benefits of LIPITOR

How LIPITOR Works to Treat High Cholesterol

LIPITOR Side Effects

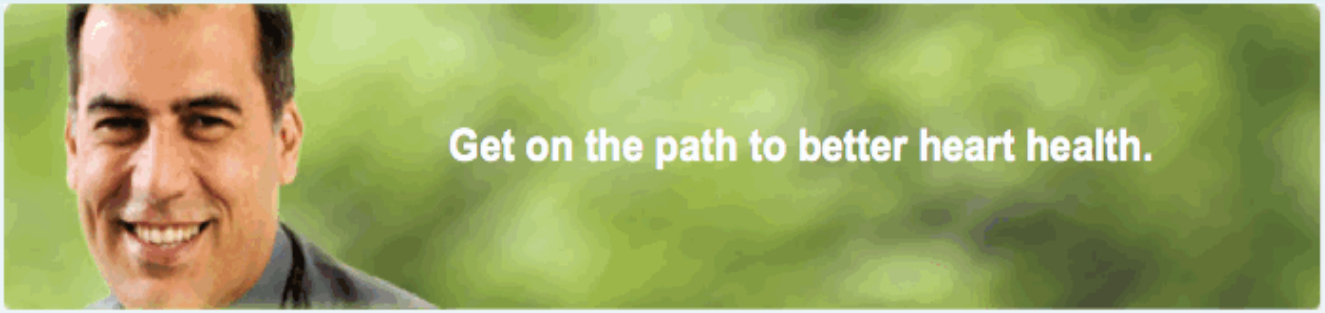
Research on LIPITOR

Staying on LIPITOR

LIPITOR Patient Experiences

Tell Your Story

***My HeartWise*™ Patient Program**



Benefits of LIPITOR

LIPITOR Lowers Cholesterol

Along with diet and exercise, LIPITOR is proven to*:

- Lower LDL ("bad" cholesterol) by 39%-60%
- Lower triglycerides (a type of fat found in the blood) by 19%-37%
- Raise HDL ("good" cholesterol) by 5%-9%

*Average effects depending on dose.

LIPITOR may start working within 2 weeks. At your next doctor's visit, your blood tests may show lower cholesterol numbers. When you begin to see these results, you'll feel more motivated. Motivation is key to making lifestyle changes. This should include exercising and eating healthier. All these changes put you on the path to better heart health.

LIPITOR Helps Protect the Heart

LIPITOR is clinically proven to reduce the risk of heart attack, stroke, certain kinds of heart surgeries, and chest pain in patients with several common risk factors for heart disease. Risk factors include family history of early heart disease, high blood pressure, age, low HDL ("good" cholesterol), or smoking.

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