

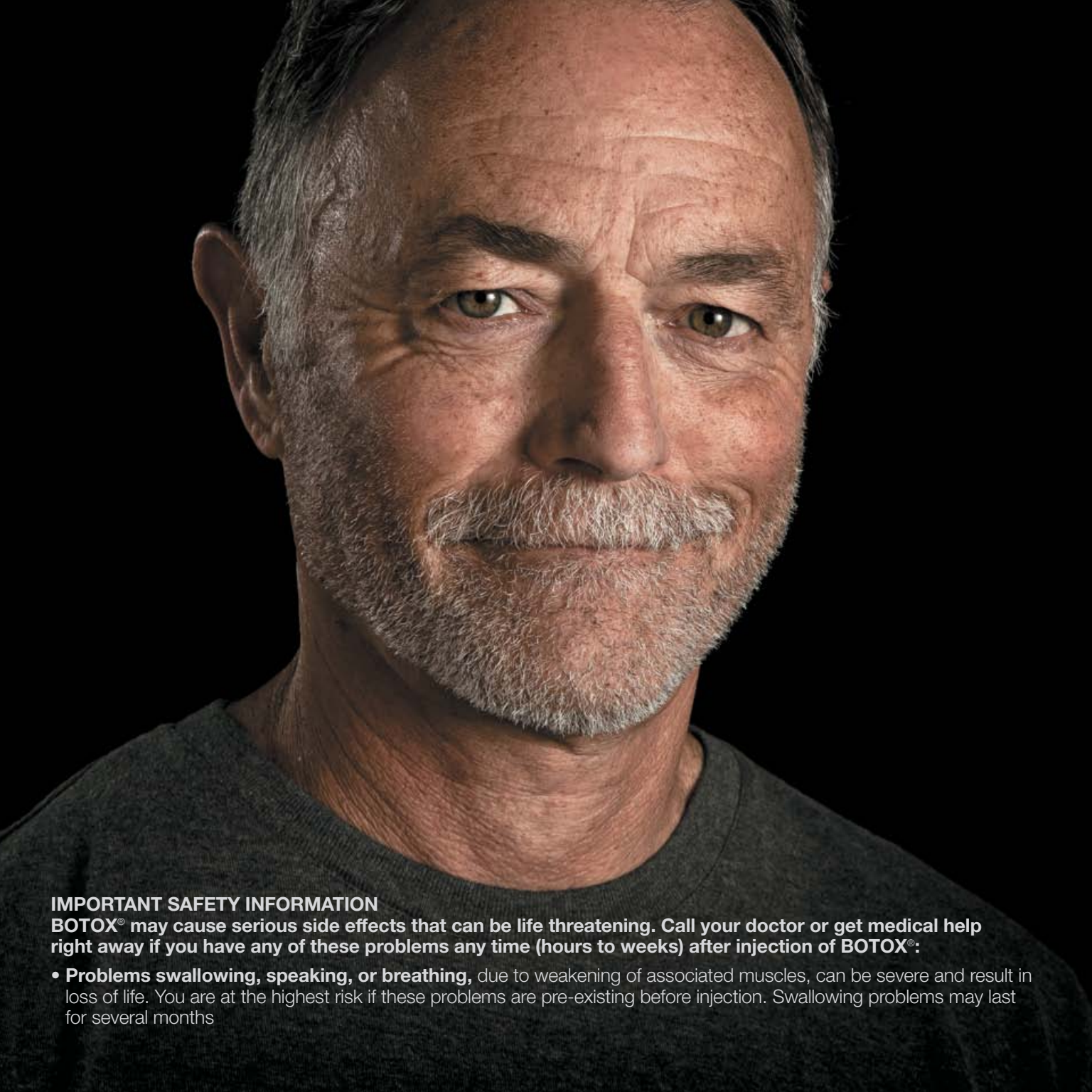
*What could a
change in score
mean to him?*



Indications

BOTOX® (onabotulinumtoxinA) is a prescription medicine that is injected into muscles and used to treat certain types of eye muscle problems (strabismus) or abnormal spasm of the eyelids (blepharospasm) in people 12 years and older.

Please see Important Safety Information, including Boxed Warning, inside.



IMPORTANT SAFETY INFORMATION

BOTOX® may cause serious side effects that can be life threatening. Call your doctor or get medical help right away if you have any of these problems any time (hours to weeks) after injection of BOTOX®:

- **Problems swallowing, speaking, or breathing**, due to weakening of associated muscles, can be severe and result in loss of life. You are at the highest risk if these problems are pre-existing before injection. Swallowing problems may last for several months

Watching the game with his eyes more open

A change in score on a clinical study
scale. Something quite different on
Roger's scale.

BOTOX® (onabotulinumtoxinA) may stop or greatly reduce the eye muscle activity that is causing a patient's blepharospasm or strabismus. In a key clinical study of patients with blepharospasm,¹ after receiving BOTOX® treatment:

- Approximately 90% of patients (25 out of 27) showed an improvement within 2 days
- Doctors noted less force was required to hold the patients' eyes open during examination (this was measured by a 2-point change on a clinical study scale)

For patients with strabismus, BOTOX® has been shown in clinical trials to help straighten their eyes.¹

Your doctor can decide if BOTOX® therapy is right for you and determine the appropriate treatment plan.

Visit
BOTOXMedical.com
for more information

IMPORTANT SAFETY INFORMATION (continued)

• **Spread of toxin effects.**

The effect of botulinum toxin may affect areas away from the injection site and cause serious symptoms including: loss of strength and all-over muscle weakness, double vision, blurred vision and drooping eyelids, hoarseness or change or loss of voice (dysphonia), trouble saying words clearly (dysarthria), loss of bladder control, trouble breathing, trouble swallowing.

If this happens, do not drive a car, operate machinery, or do other dangerous activities

There has not been a confirmed serious case of spread of toxin effect away from the injection site when BOTOX® has been used at the recommended dose to treat blepharospasm or strabismus.

Please see additional Important Safety Information on the following pages.

 **BOTOX**®
onabotulinumtoxinA

IMPORTANT SAFETY INFORMATION (continued)

Do not take BOTOX® if

you: are allergic to any of the ingredients in BOTOX® (see Medication Guide for ingredients); had an allergic reaction to any other botulinum toxin product such as *Myobloc*® (rimabotulinumtoxinB), *Dysport*® (abobotulinumtoxinA), or *Xeomin*® (incobotulinumtoxinA); have a skin infection at the planned injection site.

The dose of BOTOX® is not the same as, or comparable to, another botulinum toxin product.

FAQ: Blepharospasm

What is blepharospasm?

Blepharospasm is a muscle disorder characterized by involuntary spasm of the muscles around the eye, resulting in uncontrolled narrowing or closing of the eyelid.^{2,3} One serious consequence of blepharospasm is impairment of vision. In some patients, forced closure of the eyelid becomes so severe that doing simple things such as driving a car or using a computer becomes a challenge.



Blepharospasm

How is blepharospasm diagnosed?

Doctors diagnose blepharospasm based on key signs and symptoms. In the early stages of blepharospasm, patients may complain of irritation and discomfort of the eyelids as well as increased blinking.^{2,3}

Early symptoms of blepharospasm may include³:

- Dry eyes or watering eyes
- Light sensitivity
- Increased blinking
- Ocular pain
- Soreness

As blepharospasm progresses, blinking usually becomes more frequent, forceful, and uncontrollable. Bright light, noise, stress, polluted air, or wind can make the symptoms worse.² Without proper medical treatment, few blepharospasm patients get better on their own.³

FAQ: Strabismus

What is strabismus?

Strabismus is the name doctors give a group of disorders in which muscles tighten around the eye, resulting in pulling of the eyeball to the side. Strabismus is also known as *crossed eyes*. A common form is *esotropia*, or *convergent strabismus*, which is when one or both eyes turn toward the nose.⁴ Other symptoms include squinting, tilting the head to look at things, frequent eye movements, headache, rubbing the eyes, tearing, and double vision.

Today, strabismus is typically treated early in childhood (before 4 to 6 years of age) by orthoptic training (eye exercises), eyeglasses, and/or contact lenses.⁴ In some cases where strengthening techniques are not successful, surgery may be required to realign the eye muscles.⁴

Strabismus in adults is often diagnosed in those who were untreated or unsuccessfully treated during childhood.⁵ There are also some adults who develop strabismus due to illness or trauma, which usually results in double vision or a limitation in their depth perception or field of vision (peripheral and side).⁵

How is strabismus diagnosed?

When it occurs in children, strabismus is usually noticed first by parents or a doctor because the child's eyes appear to be positioned abnormally. An eye examination confirms the diagnosis and identifies the type of strabismus.

Strabismus should never be ignored on the assumption that a child will outgrow it.



Strabismus

IMPORTANT SAFETY INFORMATION (continued)

Serious and/or immediate allergic reactions have been reported. These reactions include itching, rash, red itchy welts, wheezing, asthma symptoms, or dizziness or feeling faint. Tell your doctor or get medical help right away if you experience any such symptoms; further injection of BOTOX® should be discontinued.

Tell your doctor about all your muscle or nerve conditions such as amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease), myasthenia gravis, or Lambert-Eaton syndrome, as you may be at increased risk of serious side effects including severe dysphagia (difficulty swallowing) and respiratory compromise (difficulty breathing) from typical doses of BOTOX®.

Please see additional Important Safety Information on the following pages.

Visit
BOTOXMedical.com
for more information

**BOTOX**®
onabotulinumtoxinA

IMPORTANT SAFETY INFORMATION (continued)

Cornea problems have been reported. Cornea (surface of the eye) problems have been reported in some people receiving BOTOX® for their blepharospasm, especially in people with certain nerve disorders. BOTOX® may cause the eyelids to blink less, which could lead to the surface of the eye being exposed to air more than is usual. Tell your doctor if you experience any problems with your eyes while receiving BOTOX®. Your doctor may treat your eyes with drops, ointments, contact lenses, or with an eye patch.

Bleeding behind the eye has been reported. Bleeding behind the eyeball has been reported in some people receiving BOTOX® for their strabismus. Tell your doctor if you notice any new visual problems while receiving BOTOX®.

Please see additional Important Safety Information on the following pages.

BOTOX® success story

"Watching TV and reading are easier because I can keep my eyes more open."

Treatments preceding blepharospasm diagnosis:

- Artificial tears
- Dark sunglasses

Presenting symptoms:

- Frequent blinking
- Eyelids sometimes closed shut
- Eye irritation
- Sensitivity to bright lights

Treatment plan:

- BOTOX® (onabotulinumtoxinA) injections



Keith, age 61

**Duration of time from
initial symptoms to
diagnosis: 2 years**

Visit
BOTOXMedical.com
for more information

Fictional patient based on real stories and clinical trial results. Individual results may vary. Ask your doctor if BOTOX® treatment is right for you.

**BOTOX®**
onabotulinumtoxinA

Is it right for you?

Talk to your doctor about BOTOX® and turn the page to learn more.

IMPORTANT SAFETY INFORMATION (continued)

Human albumin and

spread of viral diseases.

BOTOX® contains albumin, a protein component of human blood. The potential risk of spreading viral diseases (eg, Creutzfeldt-Jakob disease [CJD]) via human serum albumin is extremely rare. No cases of viral diseases or CJD have ever been reported in association with human serum albumin.

Tell your doctor about all your medical conditions, including if you have: plans to have surgery; had surgery on your face; weakness of forehead muscles, such as trouble raising your eyebrows; drooping eyelids; any other abnormal facial change; are pregnant or plan to become pregnant (it is not known if BOTOX® can harm your unborn baby); are breastfeeding or plan to breastfeed (it is not known if BOTOX® passes into breast milk).

What is BOTOX®?

BOTOX® (onabotulinumtoxinA) is a type of medicine that has been used to treat a variety of conditions after it was first approved by the US Food and Drug Administration (FDA) to treat blepharospasm and strabismus.¹

You can learn what other medical conditions BOTOX® therapy is used for by visiting BOTOXMedical.com.

How can BOTOX® benefit a blepharospasm patient like me?

BOTOX® neurotoxin has been the principal treatment for blepharospasm since FDA approval in 1989. When injected directly in the affected muscles around the eyes, the neurotoxin relieves the muscle spasm and the forceful involuntary closing of the eyelid.

How can BOTOX® benefit a strabismus patient like me?

In treating strabismus, only BOTOX® therapy is believed to have an effect on muscles. Upon being injected with BOTOX® neurotoxin, the muscles weaken and spasms are slightly reduced. This allows the untreated muscles on the other side of the eye to contract. Through this dual action, BOTOX® treatment is thought to help the eyes align, or look in the same direction.

How is BOTOX® treatment given?

BOTOX® is injected directly into the affected muscles. Your doctor will determine the amount of BOTOX® and the locations of the injections based on your individual needs. The needles used for BOTOX® injections are very fine, but you may experience some pain, swelling, and other reactions at the injection sites. It is uncommon to need pain relief, although some physicians suggest the use of a topical anesthetic cream before treatment. You may leave your doctor's office after a brief recovery period.

What kind of side effects can I expect after receiving BOTOX®?

Some side effects include dry mouth, discomfort or pain at the injection site, tiredness, headache, neck pain, and eye problems: double vision, blurred vision, decreased eyesight, drooping eyelids, swelling of your eyelids, and dry eyes.¹

BOTOX® may cause serious side effects that can be life threatening. Call your doctor or get medical help right away if you have any of these problems any time (hours to weeks) after injection of BOTOX®:

- Problems swallowing, speaking, or breathing, due to weakening of associated muscles, can be severe and result in loss of life. You are at the highest risk if

these problems are pre-existing before injection. Swallowing problems may last for several months

- Spread of toxin effects. The effect of botulinum toxin may affect areas away from the injection site and cause serious symptoms including: loss of strength and all-over muscle weakness, double vision, blurred vision and drooping eyelids, hoarseness or change or loss of voice (dysphonia), trouble saying words clearly (dysarthria), loss of bladder control, trouble breathing, trouble swallowing. If this happens, do not drive a car, operate machinery, or do other dangerous activities

This list does not cover all the possible serious side effects of BOTOX®. Please refer to the Important Safety Information included throughout this brochure and talk with your doctor.

When will I start to see results with BOTOX®?

For blepharospasm patients, you may begin seeing an improvement in your symptoms generally within the first 3 days, with maximum results at approximately 1 to 2 weeks after injection with BOTOX®.¹

Strabismus patients may begin seeing an improvement in symptoms within 1 to 2 days, and increasing in intensity during the first week of BOTOX® treatment.

You may not have to visit your doctor for another injection for up to 3 months.¹ Because blepharospasm and strabismus symptoms can change over time, the amount and duration of relief you feel may vary.

Can I get repeated injections of BOTOX®?

For blepharospasm and strabismus patients, BOTOX® treatment typically lasts for up to 3 months.¹ Your doctor may not, however, repeat your BOTOX® treatment if you have any serious allergic reactions or other side effects related to BOTOX®. Please see Important Safety Information throughout this brochure.

Visit
BOTOXMedical.com
for more information

IMPORTANT SAFETY INFORMATION (continued)

Tell your doctor about all the medicines you take, including prescription and nonprescription medicines, vitamins, and herbal products. Using BOTOX® with certain other medicines may cause serious side effects. **Do not start any new medicines until you have told your doctor that you have received BOTOX® in the past.**

Especially tell your doctor if you: have received any other botulinum toxin product in the last 4 months; have received injections of botulinum toxin such as *Myobloc*®, *Dysport*®, or *Xeomin*® in the past (be sure your doctor knows exactly which product you received); have recently received an antibiotic by injection; take muscle relaxants; take an allergy or cold medicine; take a sleep medicine.

Please see additional Important Safety Information on the following pages.

**BOTOX**
onabotulinumtoxinA

IMPORTANT SAFETY INFORMATION (continued)

Other side effects of

BOTOX® include: dry mouth, discomfort or pain at the injection site, tiredness, headache, neck pain, and eye problems: double vision, blurred vision, decreased eyesight, drooping eyelids, swelling of your eyelids, and dry eyes.

For more information refer to the Medication Guide or talk with your doctor.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Full Product Information, including Boxed Warning and Medication Guide, has been provided to your doctor.

Can I develop an immunity to BOTOX® if I get repeated injections?

There are many factors that can affect the results of BOTOX® (onabotulinumtoxinA) treatment. Although patients may experience a resistance in the effect of BOTOX® treatment over time, there are other factors such as injection-site selection, dosing, and changes in your condition over time that can have an effect on results. It's not clear why or how some patients develop antibodies to therapy, but receiving BOTOX® at more frequent intervals or at higher doses may be a factor. Your doctor will attempt to reduce the possibility of your developing antibodies by using the lowest dose to treat your symptoms and waiting the longest feasible time between injections.

Patients who develop immunity to BOTOX® may no longer get the same efficacy from BOTOX®. For all protein-based medicines, including BOTOX®, there is the possibility patients may develop immunity to the product/drug.

Who makes BOTOX®?

BOTOX® (onabotulinumtoxinA) therapy is made *only* by Allergan—a US-based specialty pharmaceutical and medical device company offering innovative products in approximately 100 countries. Allergan is committed to significant and ongoing investment in research and development, which enables us to pursue discoveries and treatments that empower individuals to live life to its fullest.

Why does my doctor give me a BOTOX® Medication Guide each time I receive a BOTOX® treatment?

A Medication Guide is one of the specific safety practices required by the US Food and Drug Administration (FDA) for certain types of drugs or biologics that present an important benefit to patients but may carry serious risks if not used properly. The BOTOX® Medication Guide helps to ensure that you receive important safety information about your therapy. It is important that you receive from your doctor and review the BOTOX® Medication Guide at every treatment, even if you've reviewed it before, because the information might be updated.

How do I know that I am receiving BOTOX® treatment and not a different product?

BOTOX® is a registered trademark of Allergan, Inc. The BOTOX® product is packaged in a glass vial with a purple or orange lid, labeled as *BOTOX®*, and that has an Allergan hologram on the side. You may want to ask your injector to see the vial to confirm that this is the product he or she is using for your treatment.

Does insurance pay for BOTOX® when used to treat blepharospasm or strabismus patients?

Many insurance plans, including Medicare and Medicaid, cover the cost of BOTOX® for certain conditions. Allergan, the maker of BOTOX®, has a service available to you and your doctor to determine if your insurance plan covers the cost of BOTOX® treatment for blepharospasm or strabismus. The program is called **BOTOX®**

Reimbursement Solutions, and our representatives are specially trained to help you and your doctor:

- Determine if your health plan covers the cost of BOTOX® treatment
- Resolve insurance issues and answer questions about reimbursement for BOTOX®
- File paperwork and claims

For more information or assistance, please visit BOTOXReimbursementSolutions.com or call 1-800-44-BOTOX, Option 4.

Does Allergan, the maker of BOTOX®, offer support to patients who need, or are receiving, BOTOX® treatment?

Allergan is committed to helping you receive timely, appropriate, and effective treatment. We offer a variety of ways to assist you:

- *BOTOX® Partnership for Access* helps qualified insured patients who need assistance with their out-of-pocket costs for BOTOX® treatment
- The BOTOX PATIENT ASSISTANCE® Program is dedicated to supporting qualified patients receive the treatment they need. (Visit BOTOXReimbursementSolutions.com or call 1-800-44-BOTOX, Option 4, for more information)
- BOTOX® patients are invited to enroll in the *BOTOX OnTrack™* Patient Program in order to track how they're feeling, get appointment reminders, participate in interactive activities, and more
- Allergan also supports many professional associations and patient support groups committed to helping patients with blepharospasm and strabismus

References: 1. BOTOX® Prescribing Information, October 2010. 2. Malinovsky V. Benign essential blepharospasm. *J Am Optom Assoc.* 1987;58(8):646-651. 3. Grandas F, Elston J, Quinn N, Marsden CD. Blepharospasm: a review of 264 patients. *J Neurol Neurosurg Psychiatry.* 1988;51(6):767-772. 4. The Merck Manuals Online Medical Library. Strabismus. The Merck Manuals Online Medical Library website. <http://www.merck.com/mmpe/print/sec19/ch293/ch293e.html>. Updated June 2007. Accessed March 31, 2011. 5. The American Association for Pediatric Ophthalmology and Strabismus. Adult strabismus general information. The American Association for Pediatric Ophthalmology and Strabismus website. http://www.aapos.org/resources_links/adult_strabismus_info. Accessed March 31, 2011.



*What could a
change in score
mean to you?*

Read more inside and talk to your doctor.



HIGHLIGHTS OF PRESCRIBING INFORMATION

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

BOTOX (onabotulinumtoxinA)

Initial U.S. Approval: 1989

WARNING: Distant Spread of Toxin Effect

See full prescribing information for complete boxed warning.

The effects of **BOTOX** and all botulinum toxin products may spread from the area of injection to produce symptoms consistent with botulinum toxin effects. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity but symptoms can also occur in adults, particularly in those patients who have underlying conditions that would predispose them to these symptoms.

RECENT MAJOR CHANGES

- Indications and Usage, Chronic Migraine (1.1) 10/2010
- Indications and Usage, Upper Limb Spasticity (1.2) 3/2010
- Dosage and Administration, Chronic Migraine (2.2) 10/2010
- Dosage and Administration, Upper Limb Spasticity (2.3) 3/2010
- Warnings and Precautions (5.3, 5.6, 5.9) 3/2010

INDICATIONS AND USAGE

BOTOX is an acetylcholine release inhibitor and a neuromuscular blocking agent indicated for:

- Prophylaxis of headaches in adult patients with chronic migraine (≥15 days per month with headache lasting 4 hours a day or longer) (1.1)
- Treatment of upper limb spasticity in adult patients (1.2)
- Treatment of cervical dystonia in adult patients, to reduce the severity of abnormal head position and neck pain (1.3)
- Treatment of severe axillary hyperhidrosis that is inadequately managed by topical agents in adult patients (1.4)
- Treatment of blepharospasm associated with dystonia in patients ≥12 years of age (1.5)
- Treatment of strabismus in patients ≥12 years of age (1.5)

Important limitations:

- Safety and effectiveness have not been established for the prophylaxis of episodic migraine (14 headache days or fewer per month).
- Safety and effectiveness of **BOTOX** have not been established for the treatment of upper limb spasticity in pediatric patients, and for the treatment of lower limb spasticity in adult and pediatric patients.
- Safety and effectiveness of **BOTOX** for hyperhidrosis in body areas other than axillary have not been established.

DOSAGE AND ADMINISTRATION

- Indication specific dosage and administration recommendations should be followed; Do not exceed a total dose of 360 Units administered every 12 to 16 weeks or at longer intervals (2)
- See Preparation and Dilution Technique for instructions on **BOTOX** reconstitution, storage, and preparation before injection (2.1)
- Chronic Migraine: Recommended total dose 155 Units, as 0.1 mL (5 Units) injections per each site divided across 7 head/neck muscles (2.2)
- Upper Limb Spasticity: Select dose based on muscles affected, severity of muscle activity, prior response to treatment, and adverse event history; Electromyographic guidance recommended (2.3)
- Cervical Dystonia: Base dosing on the patient's head and neck position, localization of pain, muscle hypertrophy, patient response, and adverse event history; use lower initial dose in botulinum toxin naïve patients (2.4)
- Axillary Hyperhidrosis: 50 Units per axilla (2.5)
- Blepharospasm: 1.25 Units-2.5 Units into each of 3 sites per affected eye (2.6)
- Strabismus: 1.25 Units-2.5 Units initially in any one muscle (2.7)

DOSAGE FORMS AND STRENGTHS

Single-use, sterile 100 Units or 200 Units vacuum-dried powder for reconstitution only with sterile, non-preserved 0.9% Sodium Chloride Injection USP prior to injection (3)

CONTRAINDICATIONS

- Hypersensitivity to any botulinum toxin preparation or to any of the components in the formulation (4.1, 5.3, 6.2)
- Infection at the proposed injection site (4.2)

WARNINGS AND PRECAUTIONS

- Potency Units of **BOTOX** not interchangeable with other preparations of botulinum toxin products (5.1, 11)
- Spread of toxin effects; swallowing and breathing difficulties can lead to death (5.2)
- Immediate medical attention may be required in cases of respiratory, speech or swallowing difficulties (5.2, 5.4)
- Concomitant neuromuscular disorder may exacerbate clinical effects of treatment (5.5)
- Use with caution in patients with compromised respiratory function (5.4, 5.6)
- Corneal exposure and ulceration (5.7)
- Retrobulbar hemorrhages and compromised retinal circulation (5.8)
- Bronchitis and upper respiratory tract infections in patients treated for upper limb spasticity (5.9)

ADVERSE REACTIONS

In controlled studies, the most commonly observed adverse reactions (≥5% and >placebo) were:

- Chronic Migraine: neck pain, headache (6.1)
- Spasticity: pain in extremity (6.1)
- Cervical Dystonia: dysphagia, upper respiratory infection, neck pain, headache, increased cough, flu syndrome, back pain, rhinitis (6.1)
- Axillary Hyperhidrosis: injection site pain and hemorrhage, non-axillary sweating, pharyngitis, flu syndrome (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Allergan at 1-800-433-8871 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

- Patients receiving concomitant treatment of **BOTOX** and aminoglycosides or other agents interfering with neuromuscular transmission (e.g., curare-like agents), or muscle relaxants, should be observed closely because the effect of **BOTOX** may be potentiated (7)

USE IN SPECIFIC POPULATIONS

- Pregnancy: Based on animal data, may cause fetal harm (8.1)
- Pediatric Use: Safety and efficacy are not established in patients under 18 years of age for the prophylaxis of headaches in chronic migraine, the treatment of upper limb spasticity and axillary hyperhidrosis, in patients under 16 years of age for the treatment of cervical dystonia, and in patients under 12 years of age for the treatment of blepharospasm and strabismus (8.4)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide
Revised: 10/2010

FULL PRESCRIBING INFORMATION: CONTENTS*

1 INDICATIONS AND USAGE

- 1.1 Chronic Migraine
- 1.2 Upper Limb Spasticity
- 1.3 Cervical Dystonia
- 1.4 Primary Axillary Hyperhidrosis
- 1.5 Blepharospasm and Strabismus

2 DOSAGE AND ADMINISTRATION

- 2.1 Preparation and Dilution Technique
- 2.2 Chronic Migraine
- 2.3 Upper Limb Spasticity
- 2.4 Cervical Dystonia
- 2.5 Primary Axillary Hyperhidrosis
- 2.6 Blepharospasm
- 2.7 Strabismus

3 DOSAGE FORMS AND STRENGTHS

4 CONTRAINDICATIONS

- 4.1 Known Hypersensitivity to Botulinum Toxin
- 4.2 Infection at the Injection Site(s)

5 WARNINGS AND PRECAUTIONS

- 5.1 Lack of Interchangeability between Botulinum Toxin Products
- 5.2 Spread of Toxin Effect
- 5.3 Hypersensitivity Reactions
- 5.4 Dysphagia and Breathing Difficulties in Treatment of Cervical Dystonia
- 5.5 Pre-Existing Neuromuscular Disorders
- 5.6 Pulmonary Effects of **BOTOX** in Patients with Compromised Respiratory Status Treated for Spasticity
- 5.7 Corneal Exposure and Ulceration in Patients Treated with **BOTOX** for Blepharospasm
- 5.8 Retrobulbar Hemorrhages in Patients Treated with **BOTOX** for Strabismus
- 5.9 Bronchitis and Upper Respiratory Tract Infections in Patients Treated for Spasticity
- 5.10 Human Albumin and Transmission of Viral Diseases

6 ADVERSE REACTIONS

- 6.1 Clinical Studies Experience
- 6.2 Post-Marketing Experience
- 6.3 Immunogenicity

7 DRUG INTERACTIONS

8 USE IN SPECIFIC POPULATIONS

- 8.1 Pregnancy
- 8.3 Nursing Mothers
- 8.4 Pediatric Use
- 8.5 Geriatric Use

10 OVERDOSAGE

11 DESCRIPTION

12 CLINICAL PHARMACOLOGY

- 12.1 Mechanism of Action
- 12.3 Pharmacokinetics

13 NONCLINICAL TOXICOLOGY

- 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

14 CLINICAL STUDIES

- 14.1 Chronic Migraine
- 14.2 Upper Limb Spasticity
- 14.3 Cervical Dystonia
- 14.4 Primary Axillary Hyperhidrosis
- 14.5 Blepharospasm
- 14.6 Strabismus

16 HOW SUPPLIED/STORAGE AND HANDLING

17 PATIENT COUNSELING INFORMATION

- 17.1 Swallowing, Speaking or Breathing Difficulties, or Other Unusual Symptoms
- 17.2 Ability to Operate Machinery or Vehicles
- 17.3 Medication Guide

*Sections or subsections omitted from the full prescribing information are not listed

FULL PRESCRIBING INFORMATION

Distant Spread of Toxin Effect

Postmarketing reports indicate that the effects of **BOTOX** and all botulinum toxin products may spread from the area of injection to produce symptoms consistent with botulinum toxin effects. These may include asthenia, generalized muscle weakness, diplopia, ptosis, dysphagia, dysphonia, dysarthria, urinary incontinence and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity but symptoms can also occur in adults treated for spasticity and other conditions, particularly in those patients who have underlying conditions that would predispose them to these symptoms. In unapproved uses, including spasticity in children, and in approved indications, cases of spread of effect have been reported at doses comparable to those used to treat cervical dystonia and at lower doses.

1 INDICATIONS AND USAGE

1.1 Chronic Migraine

BOTOX® (onabotulinumtoxinA) for injection is indicated for the prophylaxis of headaches in adult patients with chronic migraine (≥15 days per month with headache lasting 4 hours a day or longer).

Important limitations

Safety and effectiveness have not been established for the prophylaxis of episodic migraine (14 headache days or fewer per month) in seven placebo-controlled studies.

1.2 Upper Limb Spasticity

BOTOX is indicated for the treatment of upper limb spasticity in adult patients, to decrease the severity of increased muscle tone in elbow flexors (biceps), wrist flexors (flexor carpi radialis and flexor carpi ulnaris) and finger flexors (flexor digitorum profundus and flexor digitorum sublimis).

Important limitations

Safety and effectiveness of **BOTOX** have not been established for the treatment of other upper limb muscle groups, or for the treatment of lower limb spasticity. Safety and effectiveness of **BOTOX** have not been established for the treatment of spasticity in pediatric patients under age 18 years. **BOTOX** has not been shown to improve upper extremity functional abilities, or range of motion at a joint affected by a fixed contracture. Treatment with **BOTOX** is not intended to substitute for usual standard of care rehabilitation regimens.

1.3 Cervical Dystonia

BOTOX is indicated for the treatment of adults with cervical dystonia, to reduce the severity of abnormal head position and neck pain associated with cervical dystonia.

1.4 Primary Axillary Hyperhidrosis

BOTOX is indicated for the treatment of severe primary axillary hyperhidrosis that is inadequately managed with topical agents.

Important limitations

The safety and effectiveness of **BOTOX** for hyperhidrosis in other body areas have not been established. Weakness of hand muscles and blepharoptosis may occur in patients who receive **BOTOX** for palmar hyperhidrosis and facial hyperhidrosis, respectively. Patients should be evaluated for potential causes of secondary hyperhidrosis (e.g., hyperthyroidism) to avoid symptomatic treatment of hyperhidrosis without the diagnosis and/or treatment of the underlying disease.

Safety and effectiveness of **BOTOX** have not been established for the treatment of axillary hyperhidrosis in pediatric patients under age 18.

1.5 Blepharospasm and Strabismus

BOTOX is indicated for the treatment of strabismus and blepharospasm associated with dystonia, including benign essential blepharospasm or VII nerve disorders in patients 12 years of age and above.

2 DOSAGE AND ADMINISTRATION

The potency Units of **BOTOX** (onabotulinumtoxinA) for injection are specific to the preparation and assay method utilized. They are not interchangeable with other preparations of botulinum toxin products and, therefore, units of biological activity of **BOTOX** cannot be compared to nor converted into units of any other botulinum toxin products assessed with any other specific assay method [see *Warnings and Precautions* (5.1) and *Description* (11)].

Injection specific dosage and administration recommendations should be followed. In treating adult patients for one or more indications, the maximum cumulative dose should generally not exceed 360 Units, in a 3 month interval.

The safe and effective use of **BOTOX** depends upon proper storage of the product, selection of the correct dose, and proper reconstitution and administration techniques. Physicians administering **BOTOX** must understand the relevant neuromuscular and/or orbital anatomy of the area involved and any alterations to the anatomy due to prior surgical procedures. An understanding of standard electromyographic techniques is also required for treatment of strabismus and of upper limb spasticity, and may be useful for the treatment of cervical dystonia.

Use caution when **BOTOX** treatment is used in the presence of inflammation at the proposed injection site(s) or when excessive weakness or atrophy is present in the target muscle(s).

2.1 Preparation and Dilution Technique

BOTOX is supplied in single-use 100 Units and 200 Units per vial. Prior to injection, reconstitute each vacuum-dried vial of **BOTOX** with sterile, non-preserved 0.9% Sodium Chloride Injection USP. Draw up the proper amount of diluent in the appropriate size syringe (Dilution Table), and slowly inject the diluent into the vial. Discard the vial if a vacuum does not pull the diluent into the vial. Gently mix **BOTOX** with the saline by rotating the vial. Record the date and time of reconstitution on the space on the label. **BOTOX** should be administered within 24 hours after reconstitution. During this time period, reconstituted **BOTOX** should be stored in a refrigerator (2° to 8°C).

Dilution Instructions for BOTOX Vials (100 Units and 200 Units)

Diluent* Added to 100 Unit Vial	Resulting Dose Units per 0.1 mL	Diluent* Added to 200 Unit Vial	Resulting Dose Units per 0.1 mL
1 mL	10 Units	1 mL	20 Units
2 mL	5 Units	2 mL	10 Units
4 mL	2.5 Units	4 mL	5 Units
8 mL	1.25 Units	8 mL	2.5 Units
		10 mL	2 Units

*Preservative-free 0.9% Sodium Chloride Injection, USP Only

Note: These dilutions are calculated for an injection volume of 0.1 mL. A decrease or increase in the **BOTOX** dose is also possible by administering a smaller or larger injection volume - from 0.05 mL (50% decrease in dose) to 0.15 mL (50% increase in dose).

An injection of **BOTOX**® is prepared by drawing into an appropriately sized sterile syringe an amount of the properly reconstituted toxin slightly greater than the intended dose. Air bubbles in the syringe barrel are expelled and the syringe is attached to an appropriate injection needle. Patency of the needle should be confirmed. A new, sterile needle and syringe should be used to enter the vial on each occasion for removal of **BOTOX**.

Reconstituted **BOTOX** should be clear, colorless, and free of particulate matter. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration and whenever the solution and the container permit.

2.2 Chronic Migraine

The recommended dilution is 200 Units/4 mL or 100 Units/2 mL, with a final concentration of 5 Units per 0.1 mL (see Dilution Table). The recommended dose for treating chronic migraine is 155 Units administered intramuscularly (IM) using a sterile 30-gauge, 0.5 inch needle as 0.1 mL (5 Units) injections per each site. Injections should be divided across 7 specific head/neck muscle areas as specified in the diagrams and Table 1 below. A 1 inch needle may be needed in the neck region for patients with thick neck muscles. With the exception of the procerus muscle, which should be injected at 1 site (midline), all muscles should be injected bilaterally with half the number of injection sites administered to the left, and half to the right side of the head and neck. The recommended re-treatment schedule is every 12 weeks.

Recommended injection sites for chronic migraine:

A. Corrugator:
5 U each side

D. Temporalis:
20 U each side

E. Occipitalis:
15 U each side

F. Cervical paraspinal:
10 U each side

B. Procerus:
5 U (one site)

G. Trapezius:
15 U each side

C. Frontalis:
10 U each side

Table 1: BOTOX Dosing by Muscle for Chronic Migraine

Head/Neck Area	Recommended Dose (Number of Sites ^a)
Frontalis ^b	20 Units divided in 4 sites
Corrugator ^b	10 Units divided in 2 sites
Procerus	5 Units in 1 site
Occipitalis ^b	30 Units divided in 6 sites
Temporalis ^b	40 Units divided in 8 sites
Trapezius ^b	30 Units divided in 6 sites
Cervical Paraspinal Muscle Group ^b	20 Units divided in 4 sites
Total Dose:	155 Units divided in 31 sites

^a Each IM injection site = 0.1 mL = 5 Units BOTOX

^b Dose distributed bilaterally

2.3 Upper Limb Spasticity

Dosing in initial and sequential treatment sessions should be tailored to the individual based on the size, number and location of muscles involved, severity of spasticity, the presence of local muscle weakness, the patient's response to previous treatment, or adverse event history with **BOTOX**. In clinical trials, doses ranging from 75 Units to 360 Units were divided among selected muscles at a given treatment session.

Table 2: BOTOX Dosing by Muscle for Upper Limb Spasticity

Muscle	Recommended Dose Total Dosage (Number of Sites)
Biceps Brachii	100 Units-200 Units divided in 4 sites
Flexor Carpi Radialis	12.5 Units-50 Units in 1 site
Flexor Carpi Ulnaris	12.5 Units-50 Units in 1 site
Flexor Digitorum Profundus	30 Units-50 Units in 1 site
Flexor Digitorum Sublimis	30 Units-50 Units in 1 site

The recommended dilution is 200 Units/4 mL or 100 Units/2 mL with 0.9% non-preserved sterile saline (see Dilution Table). The lowest recommended starting dose should be used, and no more than 50 Units per site should generally be administered. An appropriately sized needle (e.g., 25-30 gauge) may be used for superficial muscles, and a longer 22 gauge needle may be used for deeper musculature. Localization of the involved muscles with electromyographic guidance or nerve stimulation techniques is recommended.

Repeat **BOTOX** treatment may be administered when the effect of a previous injection has diminished, but generally no sooner than 12 weeks after the previous injection. The degree and pattern of muscle spasticity at the time of re-injection may necessitate alterations in the dose of **BOTOX** and muscles to be injected.

2.4 Cervical Dystonia

The phase 3 study enrolled patients who had extended histories of receiving and tolerating **BOTOX** injections, with prior individualized adjustment of dose. The mean **BOTOX** dose administered to patients in the phase 3 study was 236 Units (25th to 75th percentile range of 198 Units to 300 Units). The **BOTOX** dose was divided among the affected muscles [see *Clinical Studies* (14.3)]. Dosing in initial and sequential treatment

sessions should be tailored to the individual patient based on the patient's head and neck position, localization of pain, muscle hypertrophy, patient response, and adverse event history. The initial dose for a patient without prior use of **BOTOX**® should be at a lower dose, with subsequent dosing adjusted based on individual response. Limiting the total dose injected into the sternocleidomastoid muscle to 100 Units or less may decrease the occurrence of dysphagia [see *Warnings and Precautions* (5.2, 5.4, 5.5)].

The recommended dilution is 200 Units/2 mL, 200 Units/4 mL, 100 Units/1 mL, or 100 Units/2 mL with 0.9% non-preserved sterile saline, depending on volume and number of injection sites desired to achieve treatment objectives (see Dilution Table). In general, no more than 50 Units per site should be administered. An appropriately sized needle (e.g., 25-30 gauge) may be used for superficial muscles, and a longer 22 gauge needle may be used for deeper musculature. Localization of the involved muscles with electromyographic guidance may be useful.

Clinical improvement generally begins within the first two weeks after injection with maximum clinical benefit at approximately six weeks post-injection. In the phase 3 study most subjects were observed to have returned to pre-treatment status by 3 months post-treatment.

2.5 Primary Axillary Hyperhidrosis

The recommended dose is 50 Units per axilla. The hyperhidrotic area to be injected should be defined using standard staining techniques, e.g., Minor's Iodine-Starch Test. The recommended dilution is 100 Units/4 mL with 0.9% preservative-free sterile saline (see Dilution Table). Using a 30 gauge needle, 50 Units of **BOTOX** (2 mL) is injected intradermally in 0.1 to 0.2 mL aliquots to each axilla evenly distributed in multiple sites (10-15) approximately 1-2 cm apart.

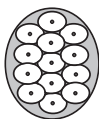
Repeat injections for hyperhidrosis should be administered when the clinical effect of a previous injection diminishes.

Instructions for the Minor's Iodine-Starch Test Procedure:

Patients should shave underarms and abstain from use of over-the-counter deodorants or antiperspirants for 24 hours prior to the test. Patient should be resting comfortably without exercise, hot drinks, etc. for approximately 30 minutes prior to the test. Dry the underarm area and then immediately paint it with iodine solution. Allow the area to dry, then lightly sprinkle the area with starch powder. Gently blow off any excess starch powder. The hyperhidrotic area will develop a deep blue-black color over approximately 10 minutes.

Each injection site has a ring of effect of up to approximately 2 cm in diameter. To minimize the area of no effect, the injection sites should be evenly spaced as shown in Figure 1:

Figure 1:



Each dose is injected to a depth of approximately 2 mm and at a 45° angle to the skin surface, with the bevel side up to minimize leakage and to ensure the injections remain intradermal. If injection sites are marked in ink, do not inject **BOTOX** directly through the ink mark to avoid a permanent tattoo effect.

2.6 Blepharospasm

For blepharospasm, reconstituted **BOTOX** is injected using a sterile, 27-30 gauge needle without electromyographic guidance. The initial recommended dose is 1.25 Units-2.5 Units (0.05 mL to 0.1 mL volume at each site) injected into the medial and lateral pre-tarsal orbicularis oculi of the upper lid and into the lateral pre-tarsal orbicularis oculi of the lower lid. Avoiding injection near the levator palpebrae superioris may reduce the complication of ptosis. Avoiding medial lower lid injections, and thereby reducing diffusion into the inferior oblique, may reduce the complication of diplopia. Ecchymosis occurs easily in the soft eyelid tissues. This can be prevented by applying pressure at the injection site immediately after the injection.

The recommended dilution to achieve 1.25 Units is 100 Units/8 mL; for 2.5 Units it is 100 Units/4 mL (see Dilution Table).

In general, the initial effect of the injections is seen within three days and reaches a peak at one to two weeks post-treatment. Each treatment lasts approximately three months, following which the procedure can be repeated. At repeat treatment sessions, the dose may be increased up to two-fold if the response from the initial treatment is considered insufficient, usually defined as an effect that does not last longer than two months. However, there appears to be little benefit obtainable from injecting more than 5 Units per site. Some tolerance may be found when **BOTOX** is used in treating blepharospasm if treatments are given any more frequently than every three months, and is rare to have the effect be permanent.

The cumulative dose of **BOTOX** treatment for blepharospasm in a 30-day period should not exceed 200 Units.

2.7 Strabismus

BOTOX is intended for injection into extraocular muscles utilizing the electrical activity recorded from the tip of the injection needle as a guide to placement within the target muscle. Injection without surgical exposure or electromyographic guidance should not be attempted. Physicians should be familiar with electromyographic technique.

To prepare the eye for **BOTOX** injection, it is recommended that several drops of a local anesthetic and an ocular decongestant be given several minutes prior to injection.

Note: The volume of **BOTOX** injected for treatment of strabismus should be between 0.05-0.15 mL per muscle.

The initial listed doses of the reconstituted **BOTOX** [see *Dosage and Administration* (2.1)] typically create paralysis of the injected muscles beginning one to two days after injection and increasing in intensity during the first week. The paralysis lasts for 2-6 weeks and gradually resolves over a similar time period. Overcorrections lasting over six months have been rare. About one half of patients will require subsequent doses because of

inadequate paralytic response of the muscle to the initial dose, or because of mechanical factors such as large deviations or restrictions, or because of the lack of binocular motor fusion to stabilize the alignment.

I. Initial doses in Units. Use the lower listed doses for treatment of small deviations. Use the larger doses only for large deviations.

- For vertical muscles, and for horizontal strabismus of less than 20 prism diopters: 1.25 Units-2.5 Units in any one muscle.
- For horizontal strabismus of 20 prism diopters to 50 prism diopters: 2.5 Units-5 Units in any one muscle.
- For persistent VI nerve palsy of one month or longer duration: 1.25 Units-2.5 Units in the medial rectus muscle.

II. Subsequent doses for residual or recurrent strabismus.

- It is recommended that patients be re-examined 7-14 days after each injection to assess the effect of that dose.
- Patients experiencing adequate paralysis of the target muscle that require subsequent injections should receive a dose comparable to the initial dose.
- Subsequent doses for patients experiencing incomplete paralysis of the target muscle may be increased up to two-fold compared to the previously administered dose.
- Subsequent injections should not be administered until the effects of the previous dose have dissipated as evidenced by substantial function in the injected and adjacent muscles.
- The maximum recommended dose as a single injection for any one muscle is 25 Units.

The recommended dilution to achieve 1.25 Units is 100 Units/8 mL; for 2.5 Units it is 100 Units/4 mL (see Dilution Table).

3 DOSAGE FORMS AND STRENGTHS

Single-use, sterile 100 Units or 200 Units vacuum-dried powder for reconstitution only with sterile, non-preserved 0.9% Sodium Chloride Injection USP prior to injection [see *Dosage and Administration* (2.1)].

4 CONTRAINDICATIONS

4.1 Known Hypersensitivity to Botulinum Toxin

BOTOX® is contraindicated in patients who are hypersensitive to any botulinum toxin preparation or to any of the components in the formulation [see *Warnings and Precautions* (5.3)].

4.2 Infection at the Injection Site(s)

BOTOX is contraindicated in the presence of infection at the proposed injection site(s).

5 WARNINGS AND PRECAUTIONS

5.1 Lack of Interchangeability between Botulinum Toxin Products

The potency Units of **BOTOX** are specific to the preparation and assay method utilized. They are not interchangeable with other preparations of botulinum toxin products and, therefore, units of biological activity of **BOTOX** cannot be compared to nor converted into units of any other botulinum toxin products assessed with any other specific assay method [see *Description* (11)].

5.2 Spread of Toxin Effect

Postmarketing safety data from **BOTOX** and other approved botulinum toxins suggest that botulinum toxin effects may, in some cases, be observed beyond the site of local injection. The symptoms are consistent with the mechanism of action of botulinum toxin and may include asthenia, generalized muscle weakness, diplopia, ptosis, dysphagia, dysphonia, dysarthria, urinary incontinence, and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death related to spread of toxin effects. The risk of the symptoms is probably greatest in children treated for spasticity but symptoms can also occur in adults treated for spasticity and other conditions, and particularly in those patients who have underlying conditions that would predispose them to these symptoms. In unapproved uses, including spasticity in children, and in approved indications, symptoms consistent with spread of toxin effect have been reported at doses comparable to or lower than doses used to treat cervical dystonia.

No definitive serious adverse event reports of distant spread of toxin effect associated with dermatologic use of **BOTOX/BOTOX Cosmetic** at the labeled dose of 20 Units (for glabellar lines) or 100 Units (for severe primary axillary hyperhidrosis) have been reported.

No definitive serious adverse event reports of distant spread of toxin effect associated with **BOTOX** for blepharospasm at the recommended dose (30 Units and below), strabismus, or for chronic migraine at the labeled doses have been reported.

5.3 Hypersensitivity Reactions

Serious and/or immediate hypersensitivity reactions have been reported. These reactions include anaphylaxis, serum sickness, urticaria, soft tissue edema, and dyspnea. If such a reaction occurs, further injection of **BOTOX** should be discontinued and appropriate medical therapy immediately instituted. One fatal case of anaphylaxis has been reported in which lidocaine was used as the diluent, and consequently the causal agent cannot be reliably determined.

5.4 Dysphagia and Breathing Difficulties in Treatment of Cervical Dystonia

Treatment with **BOTOX** and other botulinum toxin products can result in swallowing or breathing difficulties. Patients with pre-existing swallowing or breathing difficulties may be more susceptible to these complications. In most cases, this is a consequence of weakening of muscles in the area of injection that are involved in breathing or swallowing. When distant effects occur, additional respiratory muscles may be involved [see *Warnings and Precautions* (5.2)].

Deaths as a complication of severe dysphagia have been reported after treatment with botulinum toxin. Dysphagia may persist for several months, and require use of a feeding tube to maintain adequate nutrition and

hydration. Aspiration may result from severe dysphagia and is a particular risk when treating patients in whom swallowing or respiratory function is already compromised.

Treatment of cervical dystonia with botulinum toxins may weaken neck muscles that serve as accessory muscles of ventilation. This may result in a critical loss of breathing capacity in patients with respiratory disorders who may have become dependent upon these accessory muscles. There have been postmarketing reports of serious breathing difficulties, including respiratory failure, in cervical dystonia patients.

Patients with smaller neck muscle mass and patients who require bilateral injections into the sternocleidomastoid muscle have been reported to be at greater risk for dysphagia. Limiting the dose injected into the sternocleidomastoid muscle may reduce the occurrence of dysphagia. Injections into the levator scapulae may be associated with an increased risk of upper respiratory infection and dysphagia.

Patients treated with botulinum toxin may require immediate medical attention should they develop problems with swallowing, speech or respiratory disorders. These reactions can occur within hours to weeks after injection with botulinum toxin [see Warnings and Precautions (5.2) and Adverse Reactions (6.1)].

5.5 Pre-Existing Neuromuscular Disorders

Individuals with peripheral motor neuropathic diseases, amyotrophic lateral sclerosis or neuromuscular junction disorders (e.g., myasthenia gravis or Lambert-Eaton syndrome) should be monitored particularly closely when given botulinum toxin. Patients with neuromuscular disorders may be at increased risk of clinically significant effects including severe dysphagia and respiratory compromise from typical doses of BOTOX® [see Adverse Reactions (6.1)].

5.6 Pulmonary Effects of BOTOX in Patients with Compromised Respiratory Status Treated for Spasticity

Patients with compromised respiratory status treated with BOTOX for upper limb spasticity should be monitored closely. In a double-blind, placebo-controlled, parallel group study in patients with stable reduced pulmonary function (defined as FEV₁ 40-80% of predicted value and FEV₁/FVC ≤0.75), the event rate in change of Forced Vital Capacity ≥15% or ≥20% was generally greater in patients treated with BOTOX than in patients treated with placebo (see Table 3).

Table 3: Event rate per patient treatment cycle among patients with reduced lung function who experienced at least a 15% or 20% decrease in forced vital capacity from baseline at Week 1, 6, 12 post-injection with up to two treatment cycles with BOTOX or placebo

	BOTOX 360 Units		BOTOX 240 Units		Placebo	
	≥15%	≥20%	≥15%	≥20%	≥15%	≥20%
Week 1	4%	0%	3%	0%	7%	3%
Week 6	7%	4%	4%	2%	2%	2%
Week 12	10%	5%	2%	1%	4%	1%

Differences from placebo were not statistically significant

In patients with reduced lung function, upper respiratory tract infections were also reported more frequently as adverse reactions in patients treated with BOTOX [see Warnings and Precautions (5.9)].

5.7 Corneal Exposure and Ulceration in Patients Treated with BOTOX for Blepharospasm

Reduced blinking from BOTOX injection of the orbicularis muscle can lead to corneal exposure, persistent epithelial defect, and corneal ulceration, especially in patients with VII nerve disorders. Vigorous treatment of any epithelial defect should be employed. This may require protective drops, ointment, therapeutic soft contact lenses, or closure of the eye by patching or other means.

5.8 Retrobulbar Hemorrhages in Patients Treated with BOTOX for Strabismus

During the administration of BOTOX for the treatment of strabismus, retrobulbar hemorrhages sufficient to compromise retinal circulation have occurred. It is recommended that appropriate instruments to decompress the orbit be accessible.

5.9 Bronchitis and Upper Respiratory Tract Infections in Patients Treated for Spasticity

Bronchitis was reported more frequently as an adverse reaction in patients treated for upper limb spasticity with BOTOX (3% at 251 Units-360 Units total dose), compared to placebo (1%). In patients with reduced lung function treated for upper limb spasticity, upper respiratory tract infections were also reported more frequently as adverse reactions in patients treated with BOTOX (11% at 360 Units total dose; 8% at 240 Units total dose) compared to placebo (6%).

5.10 Human Albumin and Transmission of Viral Diseases

This product contains albumin, a derivative of human blood. Based on effective donor screening and product manufacturing processes, it carries an extremely remote risk for transmission of viral diseases. A theoretical risk for transmission of Creutzfeldt-Jakob disease (CJD) is also considered extremely remote. No cases of transmission of viral diseases or CJD have ever been reported for albumin.

6 ADVERSE REACTIONS

The following adverse reactions to BOTOX (onabotulinumtoxinA) for injection are discussed in greater detail in other sections of the labeling:

- Spread of Toxin Effects [see Warnings and Precautions (5.2)]
- Hypersensitivity [see Contraindications (4.1) and Warnings and Precautions (5.3)]
- Dysphagia and Breathing Difficulties in Treatment of Cervical Dystonia [see Warnings and Precautions (5.4)]
- Bronchitis and Upper Respiratory Tract Infections in Patients Treated for Spasticity [see Warnings and Precautions (5.9)]

6.1 Clinical Studies Experience

Because clinical trials are conducted under widely varying conditions, the adverse reaction rates observed cannot be directly compared to rates in other trials and may not reflect the rates observed in clinical practice.

BOTOX® and BOTOX® Cosmetic contain the same active ingredient in the same formulation, but with different labeled Indications and Usage. Therefore, adverse events observed with the use of BOTOX Cosmetic also have the potential to be observed with the use of BOTOX and vice-versa.

In general, adverse events occur within the first week following injection of BOTOX and while generally transient, may have a duration of several months or longer. Localized pain, infection, inflammation, tenderness, swelling, erythema, and/or bleeding/bruising may be associated with the injection. Needle-related pain and/or anxiety may result in vasovagal responses (including e.g., syncope, hypotension), which may require appropriate medical therapy.

Local weakness of the injected muscle(s) represents the expected pharmacological action of botulinum toxin. However, weakness of nearby muscles may also occur due to spread of toxin [see Warnings and Precautions (5.2)].

Chronic Migraine

In double-blind placebo controlled chronic migraine pivotal efficacy trials (Study 1 and Study 2), the discontinuation rate was 12% in the BOTOX treated group and 10% in the placebo-treated group. Discontinuations due to an adverse event were 4% in the BOTOX group and 1% in the placebo group. The most frequent adverse events leading to discontinuation in the BOTOX group were neck pain, headache, worsening migraine, muscular weakness and eyelid ptosis.

The most frequently reported adverse reactions following injection of BOTOX for chronic migraine appear in Table 4.

Table 4: Adverse Reactions Reported by ≥2% of BOTOX treated Patients and More Frequent than in Placebo-treated Patients in Two Chronic Migraine Double-blind, Placebo-controlled Clinical Trials

Adverse Reactions by Body System	BOTOX 155 Units-195 Units (N=687)	Placebo (N=692)
Nervous system disorders		
Headache	32 (5%)	22 (3%)
Migraine	26 (4%)	18 (3%)
Facial paresis	15 (2%)	0 (0%)
Eye disorders		
Eyelid ptosis	25 (4%)	2 (<1%)
Infections and Infestations		
Bronchitis	17 (3%)	11 (2%)
Musculoskeletal and connective tissue disorders		
Neck pain	60 (9%)	19 (3%)
Musculoskeletal stiffness	25 (4%)	6 (1%)
Muscular weakness	24 (4%)	2 (<1%)
Myalgia	21 (3%)	6 (1%)
Musculoskeletal pain	18 (3%)	10 (1%)
Muscle spasms	13 (2%)	6 (1%)
General disorders and administration site conditions		
Injection site pain	23 (3%)	14 (2%)
Vascular Disorders		
Hypertension	11 (2%)	7 (1%)

Other adverse events that occurred more frequently in the BOTOX group compared to the placebo group at a frequency less than 1% and potentially BOTOX related include: vertigo, dry eye, eyelid edema, dysphagia, eye infection, and jaw pain. Severe worsening of migraine requiring hospitalization occurred in approximately 1% of BOTOX treated patients in Study 1 and Study 2, usually within the first week after treatment, compared to 0.3% of placebo-treated patients.

Upper Limb Spasticity

The most frequently reported adverse reactions following injection of BOTOX for adult spasticity appear in Table 5.

Table 5: Adverse Reactions Reported by ≥2% of BOTOX treated Patients and More Frequent than in Placebo-treated Patients in Adult Spasticity Double-blind, Placebo-controlled Clinical Trials

Adverse Reactions by Body System	BOTOX 251 Units- 360 Units (N=115)	BOTOX 150 Units- 250 Units (N=188)	BOTOX <150 Units (N=54)	Placebo (N=182)
Gastrointestinal disorder				
Nausea	3 (3%)	3 (2%)	1 (2%)	1 (1%)
General disorders and administration site conditions				
Fatigue	4 (3%)	4 (2%)	1 (2%)	0
Infections and infestations				
Bronchitis	4 (3%)	4 (2%)	0	2 (1%)
Musculoskeletal and connective tissue disorders				
Pain in extremity	7 (6%)	10 (5%)	5 (9%)	8 (4%)
Muscular weakness	0	7 (4%)	1 (2%)	2 (1%)

Cervical Dystonia

In cervical dystonia patients evaluated for safety in double-blind and open-label studies following injection of **BOTOX**, the most frequently reported adverse reactions were dysphagia (19%), upper respiratory infection (12%), neck pain (11%), and headache (11%).

Other events reported in 2-10% of patients in any one study in decreasing order of incidence include: increased cough, flu syndrome, back pain, rhinitis, dizziness, hypertonia, soreness at injection site, asthenia, oral dryness, speech disorder, fever, nausea, and drowsiness. Stiffness, numbness, diplopia, ptosis, and dyspnea have been reported.

Dysphagia and symptomatic general weakness may be attributable to an extension of the pharmacology of **BOTOX** resulting from the spread of the toxin outside the injected muscles [see *Warnings and Precautions* (5.2, 5.4)].

The most common severe adverse event associated with the use of **BOTOX** injection in patients with cervical dystonia is dysphagia with about 20% of these cases also reporting dyspnea [see *Warnings and Precautions* (5.2, 5.4)]. Most dysphagia is reported as mild or moderate in severity. However, it may be associated with more severe signs and symptoms [see *Warnings and Precautions* (5.4)].

Additionally, reports in the literature include a case of a female patient who developed brachial plexopathy two days after injection of 120 Units of **BOTOX** for the treatment of cervical dystonia, and reports of dysphonia in patients who have been treated for cervical dystonia.

Primary Axillary Hyperhidrosis

The most frequently reported adverse events (3-10% of adult patients) following injection of **BOTOX** in double-blind studies included injection site pain and hemorrhage, non-axillary sweating, infection, pharyngitis, flu syndrome, headache, fever, neck or back pain, pruritus, and anxiety.

The data reflect 346 patients exposed to **BOTOX** 50 Units and 110 patients exposed to **BOTOX** 75 Units in each axilla.

Blepharospasm

In a study of blepharospasm patients who received an average dose per eye of 33 Units (injected at 3 to 5 sites) of the currently manufactured **BOTOX**, the most frequently reported treatment-related adverse reactions were ptosis (21%), superficial punctate keratitis (6%), and eye dryness (6%).

Other events reported in prior clinical studies in decreasing order of incidence include: irritation, tearing, lagophthalmos, photophobia, ectropion, keratitis, diplopia, entropion, diffuse skin rash, and local swelling of the eyelid skin lasting for several days following eyelid injection.

In two cases of VII nerve disorder, reduced blinking from **BOTOX** injection of the orbicularis muscle led to serious corneal exposure, persistent epithelial defect, corneal ulceration and a case of corneal perforation. Focal facial paralysis, syncope, and exacerbation of myasthenia gravis have also been reported after treatment of blepharospasm.

Strabismus

Extraocular muscles adjacent to the injection site can be affected, causing vertical deviation, especially with higher doses of **BOTOX**. The incidence rates of these adverse effects in 2058 adults who received a total of 3650 injections for horizontal strabismus was 17%.

The incidence of ptosis has been reported to be dependent on the location of the injected muscles, 1% after inferior rectus injections, 16% after horizontal rectus injections and 38% after superior rectus injections.

In a series of 5587 injections, retrobulbar hemorrhage occurred in 0.3% of cases.

6.2 Post-Marketing Experience

There have been spontaneous reports of death, sometimes associated with dysphagia, pneumonia, and/or other significant debility or anaphylaxis, after treatment with botulinum toxin [see *Warnings and Precautions* (5.3, 5.4)].

There have also been reports of adverse events involving the cardiovascular system, including arrhythmia and myocardial infarction, some with fatal outcomes. Some of these patients had risk factors including cardiovascular disease. The exact relationship of these events to the botulinum toxin injection has not been established.

New onset or recurrent seizures have also been reported, typically in patients who are predisposed to experiencing these events. The exact relationship of these events to the botulinum toxin injection has not been established.

The following events, not already addressed elsewhere in the package insert, have been reported since the drug has been marketed: abdominal pain; anorexia; brachial plexopathy; diarrhea; facial palsy; facial paresis; hyperhidrosis; hypoacusis; hypoesthesia; localized numbness; malaise; myalgia; paresthesia; pyrexia; radiculopathy; skin rash (including erythema multiforme, and psoriasiform eruption); tinnitus; vertigo; visual disturbances; and vomiting.

Because these events are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to botulinum toxin.

6.3 Immunogenicity

As with all therapeutic proteins, there is a potential for immunogenicity. Formation of neutralizing antibodies to botulinum toxin type A may reduce the effectiveness of **BOTOX** treatment by inactivating the biological activity of the toxin.

In a long term, open-label study evaluating 326 cervical dystonia patients treated for an average of 9 treatment sessions with the current formulation of **BOTOX**, 4 (1.2%) patients had positive antibody tests. All 4 of these patients responded to **BOTOX** therapy at the time of the positive antibody test. However, 3 of these patients developed clinical resistance after subsequent treatment, while the fourth patient continued to respond to **BOTOX** therapy for the remainder of the study.

One patient among the 445 hyperhidrosis patients (0.2%), two patients among the 380 adult upper limb spasticity patients (0.5%), and no patients

among 406 migraine patients with analyzed specimens showed the presence of neutralizing antibodies.

The data reflect the patients whose test results were considered positive or negative for neutralizing activity to **BOTOX** in a mouse protection assay. The results of these tests are highly dependent on the sensitivity and specificity of the assay. For these reasons, comparison of the incidence of neutralizing activity to **BOTOX** with the incidence reported to other products may be misleading.

The critical factors for neutralizing antibody formation have not been well characterized. The results from some studies suggest that **BOTOX** injections at more frequent intervals or at higher doses may lead to greater incidence of antibody formation. The potential for antibody formation may be minimized by injecting with the lowest effective dose given at the longest feasible intervals between injections.

7 DRUG INTERACTIONS

No formal drug interaction studies have been conducted with **BOTOX** (onabotulinumtoxinA) for injection.

Co-administration of **BOTOX** and aminoglycosides or other agents interfering with neuromuscular transmission (e.g., curare-like compounds) should only be performed with caution as the effect of the toxin may be potentiated.

Use of anticholinergic drugs after administration of **BOTOX** may potentiate systemic anticholinergic effects.

The effect of administering different botulinum neurotoxin products at the same time or within several months of each other is unknown. Excessive neuromuscular weakness may be exacerbated by administration of another botulinum toxin prior to the resolution of the effects of a previously administered botulinum toxin.

Excessive weakness may also be exaggerated by administration of a muscle relaxant before or after administration of **BOTOX**.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Pregnancy Category C.

There are no adequate and well-controlled studies in pregnant women. **BOTOX** should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

When **BOTOX** (4, 8, or 16 Units/kg) was administered intramuscularly to pregnant mice or rats two times during the period of organogenesis (on gestation days 5 and 13), reductions in fetal body weight and decreased fetal skeletal ossification were observed at the two highest doses. The no-effect dose for developmental toxicity in these studies (4 Units/kg) is approximately 1½ times the average high human dose for upper limb spasticity of 360 Units on a body weight basis (Units/kg).

When **BOTOX** was administered intramuscularly to pregnant rats (0.125, 0.25, 0.5, 1, 4, or 8 Units/kg) or rabbits (0.063, 0.125, 0.25, or 0.5 Units/kg) daily during the period of organogenesis (total of 12 doses in rats, 13 doses in rabbits), reduced fetal body weights and decreased fetal skeletal ossification were observed at the two highest doses in rats and at the highest dose in rabbits. These doses were also associated with significant maternal toxicity, including abortions, early deliveries, and maternal death. The developmental no-effect doses in these studies of 1 Unit/kg in rats and 0.25 Units/kg in rabbits are less than the average high human dose based on Units/kg.

When pregnant rats received single intramuscular injections (1, 4, or 16 Units/kg) at three different periods of development (prior to implantation, implantation, or organogenesis), no adverse effects on fetal development were observed. The developmental no-effect level for a single maternal dose in rats (16 Units/kg) is approximately 3 times the average high human dose based on Units/kg.

8.3 Nursing Mothers

It is not known whether **BOTOX** is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when **BOTOX** is administered to a nursing woman.

8.4 Pediatric Use

Prophylaxis of Headaches in Chronic Migraine

Safety and effectiveness in patients below the age of 18 years have not been established.

Spasticity

Safety and effectiveness in patients below the age of 18 years have not been established.

Cervical Dystonia

Safety and effectiveness in pediatric patients below the age of 16 years have not been established.

Blepharospasm and Strabismus

Safety and effectiveness in pediatric patients below the age of 12 years have not been established.

Axillary Hyperhidrosis

Safety and effectiveness in patients below the age of 18 years have not been established.

8.5 Geriatric Use

Clinical studies of **BOTOX** did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients. There were too few patients over the age of 75 to enable any comparisons. In general, dose selection for an elderly patient should be cautious, usually starting at the low end of the dosing range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

10 OVERDOSAGE

Excessive doses of **BOTOX** (onabotulinumtoxinA) for injection may be expected to produce neuromuscular weakness with a variety of symptoms.

Respiratory support may be required where excessive doses cause paralysis of respiratory muscles. In the event of overdose, the patient should be medically monitored for symptoms of excessive muscle weakness or muscle paralysis [see Boxed Warning and Warnings and Precautions (5.2, 5.4)]. Symptomatic treatment may be necessary.

Symptoms of overdose are likely not to be present immediately following injection. Should accidental injection or oral ingestion occur, the person should be medically supervised for several weeks for signs and symptoms of excessive muscle weakness or paralysis.

In the event of overdose, antitoxin raised against botulinum toxin is available from the Centers for Disease Control and Prevention (CDC) in Atlanta, GA. However, the antitoxin will not reverse any botulinum toxin-induced effects already apparent by the time of antitoxin administration. In the event of suspected or actual cases of botulinum toxin poisoning, please contact your local or state Health Department to process a request for antitoxin through the CDC. If you do not receive a response within 30 minutes, please contact the CDC directly at 1-770-488-7100. More information can be obtained at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5232a8.htm>.

11 DESCRIPTION

BOTOX® (onabotulinumtoxinA) for injection is a sterile, vacuum-dried purified botulinum toxin type A, produced from fermentation of Hall strain Clostridium botulinum type A, and intended for intramuscular and intradermal use. It is purified from the culture solution by dialysis and a series of acid precipitations to a complex consisting of the neurotoxin, and several accessory proteins. The complex is dissolved in sterile sodium chloride solution containing Albumin Human and is sterile filtered (0.2 microns) prior to filling and vacuum-drying.

One Unit of **BOTOX** corresponds to the calculated median intraperitoneal lethal dose (LD₅₀) in mice. The method utilized for performing the assay is specific to Allergan's product, **BOTOX**. Due to specific details of this assay such as the vehicle, dilution scheme, and laboratory protocols for the various mouse LD₅₀ assays, Units of biological activity of **BOTOX** cannot be compared to nor converted into Units of any other botulinum toxin or any toxin assessed with any other specific assay method. Therefore, differences in species sensitivities to different botulinum neurotoxin serotypes preclude extrapolation of animal-dose activity relationships to human dose estimates. The specific activity of **BOTOX** is approximately 20 Units/nanogram of neurotoxin protein complex.

Each vial of **BOTOX** contains either 100 Units of Clostridium botulinum type A neurotoxin complex, 0.5 mg of Albumin Human, and 0.9 mg of sodium chloride; or 200 Units of Clostridium botulinum type A neurotoxin complex, 1 mg of Albumin Human, and 1.8 mg of sodium chloride in a sterile, vacuum-dried form without a preservative.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

BOTOX blocks neuromuscular transmission by binding to acceptor sites on motor or sympathetic nerve terminals, entering the nerve terminals, and inhibiting the release of acetylcholine. This inhibition occurs as the neurotoxin cleaves SNAP-25, a protein integral to the successful docking and release of acetylcholine from vesicles situated within nerve endings. When injected intramuscularly at therapeutic doses, **BOTOX** produces partial chemical denervation of the muscle resulting in a localized reduction in muscle activity. In addition, the muscle may atrophy, axonal sprouting may occur, and extrajunctional acetylcholine receptors may develop. There is evidence that reinnervation of the muscle may occur, thus slowly reversing muscle denervation produced by **BOTOX**.

When injected intradermally, **BOTOX** produces temporary chemical denervation of the sweat gland resulting in local reduction in sweating.

12.3 Pharmacokinetics

Using currently available analytical technology, it is not possible to detect **BOTOX** in the peripheral blood following intramuscular injection at the recommended doses.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenesis
Long term studies in animals have not been performed to evaluate the carcinogenic potential of **BOTOX**.

Mutagenesis

BOTOX was negative in a battery of in vitro (microbial reverse mutation assay, mammalian cell mutation assay, and chromosomal aberration assay) and in vivo (micronucleus assay) genetic toxicologic assays.

Impairment of Fertility

In fertility studies of **BOTOX** (4, 8, or 16 Units/kg) in which either male or female rats were injected intramuscularly prior to mating and on the day of mating (3 doses, 2 weeks apart for males, 2 doses, 2 weeks apart for females) to untreated animals, reduced fertility was observed in males at the intermediate and high doses and in females at the high dose. The no-effect doses for reproductive toxicity (4 Units/kg in males, 8 Units/kg in females) are approximately equal to the average high human dose for upper limb spasticity of 360 Units on a body weight basis (Units/kg).

14 CLINICAL STUDIES

14.1 Chronic Migraine

BOTOX was evaluated in two randomized, multi-center, 24-week, 2 injection cycle, placebo-controlled double-blind studies. Study 1 and Study 2 included chronic migraine adults who were not using any concurrent headache prophylaxis, and during a 28-day baseline period had ≥15 headache days lasting 4 hours or more, with ≥50% being migraine/probable migraine. In both studies, patients were randomized to receive placebo or 155 Units to 195 Units **BOTOX** injections every 12 weeks for the 2-cycle, double-blind phase. Patients were allowed to use acute headache treatments during the study. **BOTOX** treatment demonstrated statistically significant and clinically meaningful improvements from baseline compared to placebo for key efficacy variables (see Table 6).

Table 6: Week 24 Key Efficacy Variables for Study 1 and Study 2

Efficacy per 28 days	Study 1		Study 2	
	BOTOX® (N=341)	Placebo (N=338)	BOTOX® (N=347)	Placebo (N=358)
Change from baseline in frequency of headache days	-7.8*	-6.4	-9.2*	-6.9
Change from baseline in total cumulative hours of headache on headache days	-107*	-70	-134*	-95

* Significantly different from placebo (p≤0.05)

Patients treated with **BOTOX** had a significantly greater mean decrease from baseline in the frequency of headache days at most timepoints from Week 4 to Week 24 in Study 1 (Figure 2), and all timepoints from Week 4 to Week 24 in Study 2 (Figure 3), compared to placebo-treated patients.

Figure 2: Mean Change from Baseline in Number of Headache Days for Study 1

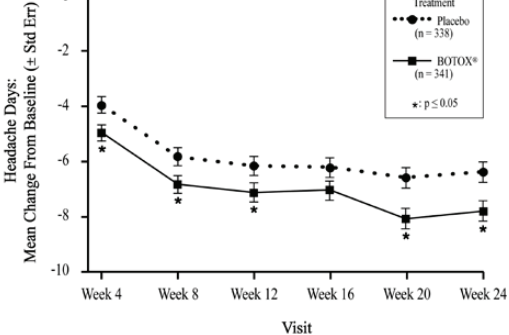
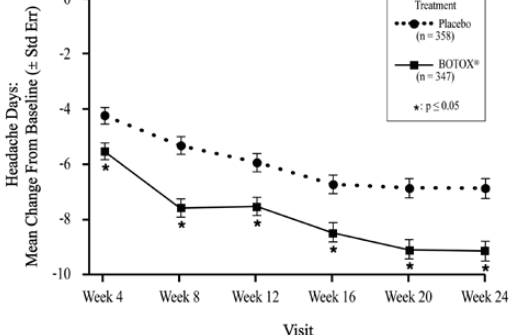


Figure 3: Mean Change from Baseline in Number of Headache Days for Study 2



14.2 Upper Limb Spasticity

The efficacy and safety of **BOTOX** for the treatment of upper limb spasticity were evaluated in three randomized, multi-center, double-blind, placebo-controlled studies.

Study 1 included 126 patients (64 **BOTOX** and 62 placebo) with upper limb spasticity (Ashworth score of at least 3 for wrist flexor tone and at least 2 for finger flexor tone) who were at least 6 months post-stroke. **BOTOX** (a total dose of 200 Units to 240 Units) and placebo were injected intramuscularly (IM) into the flexor digitorum profundus, flexor digitorum sublimis, flexor carpi radialis, flexor carpi ulnaris, and if necessary into the adductor pollicis and flexor pollicis longus (see Table 7). Use of an EMG/nerve stimulator was recommended to assist in proper muscle localization for injection. Patients were followed for 12 weeks.

Table 7: Study Medication Dose and Injection Sites in Study 1

Muscles Injected	Volume (mL)	BOTOX (Units)	Number of Injection Sites
Wrist			
Flexor Carpi Radialis	1	50	1
Flexor Carpi Ulnaris	1	50	1
Finger			
Flexor Digitorum Profundus	1	50	1
Flexor Digitorum Sublimis	1	50	1
Thumb			
Adductor Pollicis ^a	0.4	20	1
Flexor Pollicis Longus ^a	0.4	20	1

^a injected only if spasticity is present in this muscle

The primary efficacy variable was wrist flexors muscle tone at week 6, as measured by the Ashworth score. The Ashworth Scale is a clinical measure of the force required to move an extremity around a joint, with a reduction in score clinically representing a reduction in the force needed to move a joint (i.e., improvement in spasticity).

Possible scores range from 0 to 4:

- 0 = No increase in muscle tone (none)
- 1 = Slight increase in muscle tone, giving a 'catch' when the limb was moved in flexion or extension (mild)
- 2 = More marked increase in muscle tone but affected limb is easily flexed (moderate)
- 3 = Considerable increase in muscle tone - passive movement difficult (severe)
- 4 = Limb rigid in flexion or extension (very severe).

Key secondary endpoints included Physician Global Assessment, finger flexors muscle tone, and thumb flexors tone at Week 6. The Physician Global Assessment evaluated the response to treatment in terms of how the patient was doing in his/her life using a scale from -4 = very marked worsening to +4 = very marked improvement. Study 1 results on the primary endpoint and the key secondary endpoints are shown in Table 8.

Table 8: Primary and Key Secondary Endpoints by Muscle Group at Week 6 in Study 1

	BOTOX® (N=64)	Placebo (N=62)
Median Change from Baseline in Wrist Flexor Muscle Tone on the Ashworth Scale ^{†a}	-2.0*	0.0
Median Change from Baseline in Finger Flexor Muscle Tone on the Ashworth Scale ^{†b}	-1.0*	0.0
Median Change from Baseline in Thumb Flexor Muscle Tone on the Ashworth Scale ^{†c}	-1.0	-1.0
Median Physician Global Assessment of Response to Treatment ^{††}	2.0*	0.0

† Primary endpoint at Week 6
†† Secondary endpoints at Week 6
* Significantly different from placebo (p≤0.05)
^a BOTOX injected into both the flexor carpi radialis and ulnaris muscles
^b BOTOX injected into the flexor digitorum profundus and flexor digitorum sublimis muscles
^c BOTOX injected into the adductor pollicis and flexor pollicis longus muscles

Study 2 compared 3 doses of BOTOX with placebo and included 91 patients [BOTOX 360 Units (N=21), BOTOX 180 Units (N=23), BOTOX 90 Units (N=21), and placebo (N=26)] with upper limb spasticity (expanded Ashworth score of at least 2 for elbow flexor tone and at least 3 for wrist flexor tone) who were at least 6 weeks post-stroke. BOTOX and placebo were injected with EMG guidance into the flexor digitorum profundus, flexor digitorum sublimis, flexor carpi radialis, flexor carpi ulnaris, and biceps brachii (see Table 9).

Table 9: Study Medication Dose and Injection Sites in Study 2 and Study 3

	Total Dose				
Muscles Injected	BOTOX low dose (90 Units)	BOTOX mid dose (180 Units)	BOTOX high dose (360 Units)	Volume (mL) per site	Injection Sites (n)
Wrist Flexor Carpi Ulnaris	10 Units	20 Units	40 Units	0.4	1
Flexor Carpi Radialis	15 Units	30 Units	60 Units	0.6	1
Finger Flexor Digitorum Profundus	7.5 Units	15 Units	30 Units	0.3	1
Flexor Digitorum Sublimis	7.5 Units	15 Units	30 Units	0.3	1
Elbow Biceps Brachii	50 Units	100 Units	200 Units	0.5	4

The primary efficacy variable in Study 2 was the wrist flexor tone at Week 6 as measured by the expanded Ashworth Scale. The expanded Ashworth Scale uses the same scoring system as the Ashworth Scale, but allows for half-point increments.

Key secondary endpoints in Study 2 included Physician Global Assessment, finger flexors muscle tone, and elbow flexors muscle tone at Week 6. Study 2 results on the primary endpoint and the key secondary endpoints at Week 6 are shown in Table 10.

Table 10: Primary and Key Secondary Endpoints by Muscle Group and BOTOX® Dose at Week 6 in Study 2

	BOTOX low dose (90 Units) (N=21)	BOTOX mid dose (180 Units) (N=23)	BOTOX high dose (360 Units) (N=21)	Placebo (N=26)
Median Change from Baseline in Wrist Flexor Muscle Tone on the Ashworth Scale ^{†b}	-1.5*	-1.0*	-1.5*	-1.0
Median Change from Baseline in Finger Flexor Muscle Tone on the Ashworth Scale ^{††c}	-0.5	-0.5	-1.0	-0.5
Median Change from Baseline in Elbow Flexor Muscle Tone on the Ashworth Scale ^{†d}	-0.5	-1.0*	-0.5 ^a	-0.5
Median Physician Global Assessment of Response to Treatment	1.0*	1.0*	1.0*	0.0

† Primary endpoint at Week 6
†† Secondary endpoints at Week 6
* Significantly different from placebo (p≤0.05)
^a p=0.053
^b Total dose of BOTOX injected into both the flexor carpi radialis and ulnaris muscles
^c Total dose of BOTOX injected into the flexor digitorum profundus and flexor digitorum sublimis muscles
^d Dose of BOTOX injected into biceps brachii muscle

Study 3 compared 3 doses of BOTOX with placebo and enrolled 88 patients [BOTOX 360 Units (N=23), BOTOX 180 Units (N=23), BOTOX 90 Units (N=23), and placebo (N=19)] with upper limb spasticity (expanded Ashworth score of at least 2 for elbow flexor tone and at least 3 for wrist flexor tone and/or finger flexor tone) who were at least 6 weeks post-stroke. BOTOX and placebo were injected with EMG guidance into the flexor digitorum profundus, flexor digitorum sublimis, flexor carpi radialis, flexor carpi ulnaris, and biceps brachii (see Table 9).

The primary efficacy variable in Study 3 was wrist and elbow flexor tone as measured by the expanded Ashworth score. A key secondary endpoint was assessment of finger flexors muscle tone. Study 3 results on the primary endpoint at Week 4 are shown in Table 11.

Table 11: Primary and Key Secondary Endpoints by Muscle Group and BOTOX Dose at Week 4 in Study 3

	BOTOX low dose (90 Units) (N=23)	BOTOX mid dose (180 Units) (N=21)	BOTOX high dose (360 Units) (N=22)	Placebo (N=19)
Median Change from Baseline in Wrist Flexor Muscle Tone on the Ashworth Scale ^{†b}	-1.0	-1.0	-1.5*	-0.5
Median Change from Baseline in Finger Flexor Muscle Tone on the Ashworth Scale ^{††c}	-1.0	-1.0	-1.0*	-0.5
Median Change from Baseline in Elbow Flexor Muscle Tone on the Ashworth Scale ^{†d}	-0.5	-0.5	-1.0*	-0.5

† Primary endpoint at Week 4
†† Secondary endpoints at Week 4
* Significantly different from placebo (p≤0.05)
^b Total dose of BOTOX injected into both the flexor carpi radialis and ulnaris muscles
^c Total dose of BOTOX injected into the flexor digitorum profundus and flexor digitorum sublimis muscles
^d Dose of BOTOX injected into biceps brachii muscle

14.3 Cervical Dystonia

A phase 3 randomized, multi-center, double-blind, placebo-controlled study of the treatment of cervical dystonia was conducted. This study enrolled adult patients with cervical dystonia and a history of having received BOTOX in an open label manner with perceived good response and tolerable side effects. Patients were excluded if they had previously received surgical or other denervation treatment for their symptoms or had a known history of neuromuscular disorder. Subjects participated in an open label enrichment period where they received their previously employed dose of BOTOX. Only patients who were again perceived as showing a response were advanced to the randomized evaluation period. The muscles in which the blinded study agent injections were to be administered were determined on an individual patient basis.

There were 214 subjects evaluated for the open label period, of which 170 progressed into the randomized, blinded treatment period (88 in the

BOTOX® group, 82 in the placebo group). Patient evaluations continued for at least 10 weeks post-injection. The primary outcome for the study was a dual endpoint, requiring evidence of both a change in the Cervical Dystonia Severity Scale (CDSS) and an increase in the percentage of patients showing any improvement on the Physician Global Assessment Scale at 6 weeks after the injection session. The CDSS quantifies the severity of abnormal head positioning and was newly devised for this study. CDSS allots 1 point for each 5 degrees (or part thereof) of head deviation in each of the three planes of head movement (range of scores up to theoretical maximum of 54). The Physician Global Assessment Scale is a 9 category scale scoring the physician's evaluation of the patients' status compared to baseline, ranging from -4 to +4 (very marked worsening to complete improvement), with 0 indicating no change from baseline and +1 slight improvement. Pain is also an important symptom of cervical dystonia and was evaluated by separate assessments of pain frequency and severity on scales of 0 (no pain) to 4 (constant in frequency or extremely severe in intensity). Study results on the primary endpoints and the pain-related secondary endpoints are shown in Table 12.

Table 12: Efficacy Outcomes of the Phase 3 Cervical Dystonia Study (Group Means)

	Placebo (N=82)	BOTOX (N=88)	95% CI on Difference
Baseline CDSS	9.3	9.2	
Change in CDSS at Week 6	-0.3	-1.3	(-2.3, 0.3) ^[a,b]
% Patients with Any Improvement on Physician Global Assessment	31%	51%	(5%, 34%) ^[a]
Pain Intensity Baseline	1.8	1.8	
Change in Pain Intensity at Week 6	-0.1	-0.4	(-0.7, -0.2) ^[c]
Pain Frequency Baseline	1.9	1.8	
Change in Pain Frequency at Week 6	-0.0	-0.3	(-0.5, -0.0) ^[c]

^[a] Confidence intervals are constructed from the analysis of covariance table with treatment and investigational site as main effects, and baseline CDSS as a covariate.

^[b] These values represent the prospectively planned method for missing data imputation and statistical test. Sensitivity analyses indicated that the 95% confidence interval excluded the value of no difference between groups and the p-value was less than 0.05. These analyses included several alternative missing data imputation methods and non-parametric statistical tests.

^[c] Confidence intervals are based on the t-distribution.

Exploratory analyses of this study suggested that the majority of patients who had shown a beneficial response by week 6 had returned to their baseline status by 3 months after treatment. Exploratory analyses of subsets by patient sex and age suggest that both sexes receive benefit, although female patients may receive somewhat greater amounts than male patients. There is a consistent treatment-associated effect between subsets greater than and less than age 65. There were too few non-Caucasian patients enrolled to draw any conclusions regarding relative efficacy in racial subsets.

There were several randomized studies conducted prior to the phase 3 study, which were supportive but not adequately designed to assess or quantitatively estimate the efficacy of **BOTOX**.

In the phase 3 study the median total **BOTOX** dose in patients randomized to receive **BOTOX** (N=88) was 236 Units, with 25th to 75th percentile ranges of 198 Units to 300 Units. Of these 88 patients, most received injections to 3 or 4 muscles; 38 received injections to 3 muscles, 28 to 4 muscles, 5 to 5 muscles, and 5 to 2 muscles. The dose was divided amongst the affected muscles in quantities shown in Table 13. The total dose and muscles selected were tailored to meet individual patient needs.

Table 13: Number of Patients Treated per Muscle and Fraction of Total Dose Injected into Involved Muscles

Muscle	Number of Patients Treated in this Muscle (N=88)	Mean % Dose per Muscle	Mid-Range of % Dose per Muscle*
Splenius capitis/cervicis	83	38	25-50
Sternocleidomastoid	77	25	17-31
Levator scapulae	52	20	16-25
Trapezius	49	29	18-33
Semispinalis	16	21	13-25
Scalene	15	15	6-21
Longissimus	8	29	17-41

*The mid-range of dose is calculated as the 25th to 75th percentiles.

14.4 Primary Axillary Hyperhidrosis

The efficacy and safety of **BOTOX®** for the treatment of primary axillary hyperhidrosis were evaluated in two randomized, multi-center, double-blind, placebo-controlled studies. Study 1 included adult patients with persistent primary axillary hyperhidrosis who scored 3 or 4 on a Hyperhidrosis Disease Severity Scale (HDSS) and who produced at least 50 mg of sweat in each axilla at rest over 5 minutes. HDSS is a 4-point scale with 1 = “underarm sweating is never noticeable and never interferes with my daily activities”; to 4 = “underarm sweating is intolerable and always interferes with my daily activities”. A total of 322 patients were randomized in a 1:1:1 ratio to treatment in both axillae with either 50 Units of **BOTOX**, 75 Units of **BOTOX**, or placebo. Patients were evaluated at 4-week intervals. Patients who responded to the first injection were re-injected when they reported a re-increase in HDSS score to 3 or 4 and produced at least 50 mg sweat in each axilla by gravimetric measurement, but no sooner than 8 weeks after the initial injection.

Study responders were defined as patients who showed at least a 2-grade improvement from baseline value on the HDSS 4 weeks after both of the first two treatment sessions or had a sustained response after their first treatment session and did not receive re-treatment during the study. Spontaneous resting axillary sweat production was assessed by weighing a filter paper held in the axilla over a period of 5 minutes (gravimetric measurement). Sweat production responders were those patients who demonstrated a reduction in axillary sweating from baseline of at least 50% at week 4.

In the three study groups the percentage of patients with baseline HDSS score of 3 ranged from 50% to 54% and from 46% to 50% for a score of 4. The median amount of sweat production (averaged for each axilla) was 102 mg, 123 mg, and 114 mg for the placebo, 50 Units and 75 Units groups respectively.

The percentage of responders based on at least a 2-grade decrease from baseline in HDSS or based on a >50% decrease from baseline in axillary sweat production was greater in both **BOTOX** groups than in the placebo group (p<0.001), but was not significantly different between the two **BOTOX** doses (see Table 14).

Duration of response was calculated as the number of days between injection and the date of the first visit at which patients returned to 3 or 4 on the HDSS scale. The median duration of response following the first treatment in **BOTOX** treated patients with either dose was 201 days. Among those who received a second **BOTOX** injection, the median duration of response was similar to that observed after the first treatment.

In study 2, 320 adults with bilateral axillary primary hyperhidrosis were randomized to receive either 50 Units of **BOTOX** (n=242) or placebo (n=78). Treatment responders were defined as subjects showing at least a 50% reduction from baseline in axillary sweating measured by gravimetric measurement at 4 weeks. At week 4 post-injection, the percentages of responders were 91% (219/242) in the **BOTOX** group and 36% (28/78) in the placebo group, p<0.001. The difference in percentage of responders between **BOTOX** and placebo was 55% (95% CI=43.3, 65.9).

Table 14: Study 1 - Study Outcomes

Treatment Response	BOTOX 50 Units (N=104)	BOTOX 75 Units (N=110)	Placebo (N=108)	BOTOX 50-placebo (95% CI)	BOTOX 75-placebo (95% CI)
HDSS Score change ≥2 (n) ^a	55% (57)	49% (54)	6% (6)	49.3% (38.8, 59.7)	43% (33.2, 53.8)
>50% decrease in axillary sweat production % (n)	81% (84)	86% (94)	41% (44)	40% (28.1, 52.0)	45% (33.3, 56.1)

^a Patients who showed at least a 2-grade improvement from baseline value on the HDSS 4 weeks after both of the first two treatment sessions or had a sustained response after their first treatment session and did not receive re-treatment during the study.

14.5 Blepharospasm

Botulinum toxin has been investigated for use in patients with blepharospasm in several studies. In an open label, historically controlled study, 27 patients with essential blepharospasm were injected with 2 Units of **BOTOX** at each of six sites on each side. Twenty-five of the 27 patients treated with botulinum toxin reported improvement within 48 hours. One patient was controlled with a higher dosage at 13 weeks post initial injection and one patient reported mild improvement but remained functionally impaired.

In another study, 12 patients with blepharospasm were evaluated in a double-blind, placebo-controlled study. Patients receiving botulinum toxin (n=8) improved compared with the placebo group (n=4). The effects of the treatment lasted a mean of 12 weeks.

One thousand six hundred eighty-four patients with blepharospasm who were evaluated in an open label trial showed clinical improvement as evaluated by measured eyelid force and clinically observed intensity of lid spasm, lasting an average of 12 weeks prior to the need for re-treatment.

14.6 Strabismus

Six hundred seventy-seven patients with strabismus treated with one or more injections of **BOTOX** were evaluated in an open label trial. Fifty-five percent of these patients improved to an alignment of 10 prism diopters or less when evaluated six months or more following injection.

16 HOW SUPPLIED/STORAGE AND HANDLING

BOTOX is supplied in a single-use vial in the following sizes:
100 Units NDC 0023-1145-01
200 Units NDC 0023-3921-02

Vials of **BOTOX**® have a holographic film on the vial label that contains the name "Allergan" within horizontal lines of rainbow color. In order to see the hologram, rotate the vial back and forth between your fingers under a desk lamp or fluorescent light source. (Note: the holographic film on the label is absent in the date/lot area.) If you do not see the lines of rainbow color or the name "Allergan," do not use the product and contact Allergan for additional information at 1-800-890-4345 from 7:00 AM to 3:00 PM Pacific Time.

Storage

Unopened vials of **BOTOX** should be stored in a refrigerator (2° to 8°C) for up to 36 months for the 100 Units vial or up to 24 months for the 200 Units vial. Do not use after the expiration date on the vial. Administer **BOTOX** within 24 hours of reconstitution; during this period reconstituted **BOTOX** should be stored in a refrigerator (2° to 8°C). Reconstituted **BOTOX** should be clear, colorless, and free of particulate matter.

All vials, including expired vials, or equipment used with the drug should be disposed of carefully, as is done with all medical waste.

Rx Only

17 PATIENT COUNSELING INFORMATION

Provide a copy of the Medication Guide and review the contents with the patient.

17.1 Swallowing, Speaking or Breathing Difficulties, or Other Unusual Symptoms

Patients should be advised to inform their doctor or pharmacist if they develop any unusual symptoms (including difficulty with swallowing, speaking, or breathing), or if any existing symptom worsens [see *Boxed Warning and Warnings and Precautions* (5.2, 5.4)].

17.2 Ability to Operate Machinery or Vehicles

Patients should be counseled that if loss of strength, muscle weakness, blurred vision, or drooping eyelids occur, they should avoid driving a car or engaging in other potentially hazardous activities.

17.3 Medication Guide

MEDICATION GUIDE

BOTOX®

BOTOX® Cosmetic

(Boe-tox)

(onabotulinumtoxinA)

for Injection

Read the Medication Guide that comes with **BOTOX** or **BOTOX Cosmetic** before you start using it and each time it is given to you. There may be new information. This information does not take the place of talking with your doctor about your medical condition or your treatment. You should share this information with your family members and caregivers.

What is the most important information I should know about BOTOX and BOTOX Cosmetic?

BOTOX and BOTOX Cosmetic may cause serious side effects that can be life threatening. Call your doctor or get medical help right away if you have any of these problems after treatment with BOTOX or BOTOX Cosmetic:

- **Problems swallowing, speaking, or breathing.** These problems can happen hours to weeks after an injection of **BOTOX** or **BOTOX Cosmetic** usually because the muscles that you use to breathe and swallow can become weak after the injection. Death can happen as a complication if you have severe problems with swallowing or breathing after treatment with **BOTOX** or **BOTOX Cosmetic**.
- People with certain breathing problems may need to use muscles in their neck to help them breathe. These patients may be at greater risk for serious breathing problems with **BOTOX** or **BOTOX Cosmetic**.
- Swallowing problems may last for several months. People who cannot swallow well may need a feeding tube to receive food and water. If swallowing problems are severe, food or liquids may go into your lungs. People who already have swallowing or breathing problems before receiving **BOTOX** or **BOTOX Cosmetic** have the highest risk of getting these problems.
- **Spread of toxin effects.** In some cases, the effect of botulinum toxin may affect areas of the body away from the injection site and cause symptoms of a serious condition called botulism. The symptoms of botulism include:
 - loss of strength and muscle weakness all over the body
 - double vision
 - blurred vision and drooping eyelids

- hoarseness or change or loss of voice (dysphonia)
- trouble saying words clearly (dysarthria)
- loss of bladder control
- trouble breathing
- trouble swallowing

These symptoms can happen hours to weeks after you receive an injection of **BOTOX**® or **BOTOX**® Cosmetic.

These problems could make it unsafe for you to drive a car or do other dangerous activities. See "What should I avoid while receiving **BOTOX** or **BOTOX Cosmetic**?"

There has not been a confirmed serious case of spread of toxin effect away from the injection site when **BOTOX** has been used at the recommended dose to treat chronic migraine, severe underarm sweating, blepharospasm, or strabismus, or when **BOTOX Cosmetic** has been used at the recommended dose to treat frown lines.

What are BOTOX and BOTOX Cosmetic?

BOTOX is a prescription medicine that is injected into muscles and used:

- to prevent headaches in adults with chronic migraine who have 15 or more days each month with headache lasting 4 or more hours each day.
- to treat increased muscle stiffness in elbow, wrist, and finger muscles in adults with upper limb spasticity.
- to treat the abnormal head position and neck pain that happens with cervical dystonia (CD) in adults.
- to treat certain types of eye muscle problems (strabismus) or abnormal spasm of the eyelids (blepharospasm) in people 12 years and older.

BOTOX is also injected into the skin to treat the symptoms of severe underarm sweating (severe primary axillary hyperhidrosis) when medicines used on the skin (topical) do not work well enough.

BOTOX Cosmetic is a prescription medicine that is injected into muscles and used to improve the look of moderate to severe frown lines between the eyebrows (glabellar lines) in adults younger than 65 years of age for a short period of time (temporary).

It is not known whether **BOTOX** is safe or effective in patients younger than:

- 18 years of age for treatment of chronic migraine
- 18 years of age for treatment of spasticity
- 16 years of age for treatment of cervical dystonia
- 18 years of age for treatment of hyperhidrosis
- 12 years of age for treatment of strabismus or blepharospasm

BOTOX Cosmetic is not recommended for use in children younger than 18 years of age.

It is not known whether **BOTOX** and **BOTOX Cosmetic** are safe or effective to prevent headaches in patients with migraine who have 14 or fewer headache days each month (episodic migraine).

It is not known whether **BOTOX** and **BOTOX Cosmetic** are safe or effective for other types of muscle spasms or for severe sweating anywhere other than your armpits.

Who should not take BOTOX or BOTOX Cosmetic?

Do not take **BOTOX** or **BOTOX Cosmetic** if you:

- are allergic to any of the ingredients in **BOTOX** or **BOTOX Cosmetic**. See the end of this Medication Guide for a list of ingredients in **BOTOX** and **BOTOX Cosmetic**.
- had an allergic reaction to any other botulinum toxin product such as *Myobloc*®, *Dysport*®, or *Xeomin*®
- have a skin infection at the planned injection site

What should I tell my doctor before taking BOTOX or BOTOX Cosmetic?

Tell your doctor about all your medical conditions, including if you have:

- a disease that affects your muscles and nerves (such as amyotrophic lateral sclerosis [ALS or Lou Gehrig's disease], myasthenia gravis or Lambert-Eaton syndrome). See "What is the most important information I should know about **BOTOX**® and **BOTOX**® Cosmetic?"
- allergies to any botulinum toxin product
- had any side effect from any botulinum toxin product in the past
- a breathing problem, such as asthma or emphysema
- swallowing problems
- bleeding problems
- plans to have surgery
- had surgery on your face
- weakness of your forehead muscles, such as trouble raising your eyebrows
- drooping eyelids
- any other change in the way your face normally looks
- are pregnant or plan to become pregnant. It is not known if **BOTOX** or **BOTOX** Cosmetic can harm your unborn baby.
- are breast-feeding or plan to breastfeed. It is not known if **BOTOX** or **BOTOX** Cosmetic passes into breast milk.

Tell your doctor about all the medicines you take, including prescription and nonprescription medicines, vitamins and herbal products. Using **BOTOX** or **BOTOX** Cosmetic with certain other medicines may cause serious side effects. **Do not start any new medicines until you have told your doctor that you have received BOTOX or BOTOX Cosmetic in the past.**

Especially tell your doctor if you:

- have received any other botulinum toxin product in the last four months
- have received injections of botulinum toxin, such as *Myobloc*® (rimabotulinumtoxinB), *Dysport*® (abobotulinumtoxinA), or *Xeomin*® (incobotulinumtoxinA) in the past. Be sure your doctor knows exactly which product you received.
- have recently received an antibiotic by injection
- take muscle relaxants
- take an allergy or cold medicine
- take a sleep medicine

Ask your doctor if you are not sure if your medicine is one that is listed above.

Know the medicines you take. Keep a list of your medicines with you to show your doctor and pharmacist each time you get a new medicine.

How should I take BOTOX or BOTOX Cosmetic?

- **BOTOX** or **BOTOX** Cosmetic is an injection that your doctor will give you.
- **BOTOX** is injected into your affected muscles or skin.
- **BOTOX** Cosmetic is injected into your affected muscles.
- Your doctor may change your dose of **BOTOX** or **BOTOX** Cosmetic, until you and your doctor find the best dose for you.
- Your doctor will tell you how often you will receive your dose of **BOTOX** or **BOTOX** Cosmetic injections.

What should I avoid while taking BOTOX or BOTOX Cosmetic?

BOTOX and **BOTOX** Cosmetic may cause loss of strength or general muscle weakness, or vision problems within hours to weeks of taking **BOTOX** or **BOTOX** Cosmetic. **If this happens, do not drive a car, operate machinery, or do other dangerous activities.** See "What is the most important information I should know about **BOTOX** and **BOTOX** Cosmetic?"

What are the possible side effects of BOTOX and BOTOX Cosmetic?

BOTOX and BOTOX Cosmetic can cause serious side effects. See "What is the most important information I should

know about **BOTOX**® and **BOTOX**® Cosmetic?"

Other side effects of BOTOX and BOTOX Cosmetic include:

- dry mouth
- discomfort or pain at the injection site
- tiredness
- headache
- neck pain
- eye problems: double vision, blurred vision, decreased eyesight, drooping eyelids, swelling of your eyelids, and dry eyes.
- allergic reactions. Symptoms of an allergic reaction to **BOTOX** or **BOTOX** Cosmetic may include: itching, rash, red itchy welts, wheezing, asthma symptoms, or dizziness or feeling faint. Tell your doctor or get medical help right away if you are wheezing or have asthma symptoms, or if you become dizzy or faint.

Tell your doctor if you have any side effect that bothers you or that does not go away.

These are not all the possible side effects of **BOTOX** and **BOTOX** Cosmetic. For more information, ask your doctor or pharmacist.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about BOTOX and BOTOX Cosmetic:

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide.

This Medication Guide summarizes the most important information about **BOTOX** and **BOTOX** Cosmetic. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about **BOTOX** and **BOTOX** Cosmetic that is written for healthcare professionals. For more information about **BOTOX** and **BOTOX** Cosmetic call Allergan at 1-800-433-8871 or go to www.botox.com.

What are the ingredients in BOTOX and BOTOX Cosmetic?

Active ingredient: botulinum toxin type A

Inactive ingredients: human albumin and sodium chloride

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