

**ANNEX I**

**SUMMARY OF PRODUCT CHARACTERISTICS**

## **1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 70 mg solution for injection in pre-filled syringe  
Aimovig 140 mg solution for injection in pre-filled syringe  
Aimovig 70 mg solution for injection in pre-filled pen  
Aimovig 140 mg solution for injection in pre-filled pen

## **2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

### Aimovig 70 mg solution for injection in pre-filled syringe

Each pre-filled syringe contains 70 mg erenumab.

### Aimovig 140 mg solution for injection in pre-filled syringe

Each pre-filled syringe contains 140 mg erenumab.

### Aimovig 70 mg solution for injection in pre-filled pen

Each pre-filled pen contains 70 mg erenumab.

### Aimovig 140 mg solution for injection in pre-filled pen

Each pre-filled pen contains 140 mg erenumab.

Erenumab is a fully human IgG2 monoclonal antibody produced using recombinant DNA technology in Chinese hamster ovary (CHO) cells.

For the full list of excipients, see section 6.1.

## **3. PHARMACEUTICAL FORM**

Solution for injection (injection)

The solution is clear to opalescent, colourless to light yellow.

## **4. CLINICAL PARTICULARS**

### **4.1 Therapeutic indications**

Aimovig is indicated for prophylaxis of migraine in adults who have at least 4 migraine days per month.

### **4.2 Posology and method of administration**

Treatment should be initiated by physicians experienced in the diagnosis and treatment of migraine.

#### Posology

Treatment is intended for patients with at least 4 migraine days per month when initiating treatment with erenumab.

The recommended dose is 70 mg erenumab every 4 weeks. Some patients may benefit from a dose of 140 mg every 4 weeks (see section 5.1).

Each 140 mg dose is given either as one subcutaneous injection of 140 mg or as two subcutaneous injections of 70 mg.

Clinical studies have demonstrated that the majority of patients responding to therapy showed clinical benefit within 3 months. Consideration should be given to discontinuing treatment in patients who have shown no response after 3 months of treatment. Evaluation of the need to continue treatment is recommended regularly thereafter.

#### Special populations

##### *Elderly (aged 65 years and over)*

Aimovig has not been studied in elderly patients. No dose adjustment is required as the pharmacokinetics of erenumab are not affected by age.

##### *Renal impairment / hepatic impairment*

No dose adjustment is necessary in patients with mild to moderate renal impairment or hepatic impairment (see section 5.2).

##### *Paediatric population*

The safety and efficacy of Aimovig in children below the age of 18 years have not yet been established. No data are available.

#### Method of administration

Aimovig is for subcutaneous use.

Aimovig is intended for patient self-administration after proper training. The injections can also be given by another individual who has been appropriately instructed. The injection can be administered into the abdomen, thigh or into the outer area of the upper arm (the arm should be used only if the injection is being given by a person other than the patient; see section 5.2). Injection sites should be rotated and injections should not be given into areas where the skin is tender, bruised, red or hard.

##### Pre-filled syringe

The entire contents of the Aimovig pre-filled syringe should be injected. Each pre-filled syringe is for single use only and designed to deliver the entire contents with no residual content remaining.

Comprehensive instructions for administration are given in the instructions for use in the package leaflet.

##### Pre-filled pen

The entire contents of the Aimovig pre-filled pen should be injected. Each pre-filled pen is for single use only and designed to deliver the entire contents with no residual content remaining.

Comprehensive instructions for administration are given in the instructions for use in the package leaflet.

### **4.3 Contraindications**

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

### **4.4 Special warnings and precautions for use**

#### Traceability

In order to improve the traceability of biological medicinal products, the name and the batch number of the administered product should be clearly recorded.

### Cardiovascular effect

Patients with certain major cardiovascular diseases were excluded from clinical studies (see section 5.1). No safety data are available in these patients.

### Hypersensitivity reactions

Serious hypersensitivity reactions, including rash, angioedema, and anaphylactic reactions, have been reported with erenumab in post-marketing experience. These reactions may occur within minutes, although some may occur more than one week after treatment. In that context, patients should be warned about the symptoms associated with hypersensitivity reactions. If a serious or severe hypersensitivity reaction occurs, appropriate therapy should be initiated and treatment with erenumab should be discontinued (see section 4.3).

### Constipation

Constipation is a common adverse reaction of erenumab and is usually mild or moderate in intensity. In a majority of the cases, the onset was reported after the first dose of erenumab; however patients have also experienced constipation later on in the treatment. In most cases constipation resolved within three months. In the post-marketing setting, constipation with serious complications has been reported with erenumab. In some of these cases hospitalisation was required, including cases where surgery was necessary. History of constipation or the concurrent use of medicinal products associated with decreased gastrointestinal motility may increase the risk for more severe constipation and the potential for constipation-related complications. Patients should be warned about the risk of constipation and advised to seek medical attention in case constipation does not resolve or worsens. Patients should seek medical attention immediately if they develop severe constipation. Constipation should be managed promptly as clinically appropriate. For severe constipation, discontinuation of treatment should be considered.

### Latex-sensitive individuals

The removable cap of this medicinal product contains latex rubber. May cause severe allergic reactions.

### Sodium content

This medicinal product contains less than 1 mmol sodium (23 mg) per dose, that is to say essentially “sodium-free”.

## **4.5 Interaction with other medicinal products and other forms of interaction**

No effect on exposure of co-administered medicinal products is expected based on the metabolic pathways of monoclonal antibodies. No interaction with oral contraceptives (ethinyl estradiol/norgestimate) or sumatriptan was observed in studies with healthy volunteers.

## **4.6 Fertility, pregnancy and lactation**

### Pregnancy

There are a limited amount of data from the use of erenumab in pregnant women. Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity (see section 5.3). As a precautionary measure, it is preferable to avoid the use of Aimovig during pregnancy.

### Breast-feeding

It is unknown whether erenumab is excreted in human milk. Human IgGs are known to be excreted in breast milk during the first few days after birth, which is decreasing to low concentrations soon afterwards; consequently, a risk to the breast-fed infant cannot be excluded during this short period. Afterwards, use of Aimovig could be considered during breast-feeding only if clinically needed.

### Fertility

Animal studies showed no impact on female and male fertility (see section 5.3).

## **4.7 Effects on ability to drive and use machines**

Aimovig is expected to have no or negligible influence on the ability to drive and use machines.

## **4.8 Undesirable effects**

### Summary of the safety profile

A total of over 2 500 patients (more than 2 600 patient years) have been treated with Aimovig in registration studies. Of these, more than 1 300 patients were exposed for at least 12 months and 218 patients were exposed for 5 years. The overall safety profile of Aimovig remained consistent for 5 years of long-term open-label treatment.

The reported adverse drug reactions for 70 mg and 140 mg were injection site reactions (5.6%/4.5%), constipation (1.3%/3.2%), muscle spasms (0.1%/2.0%) and pruritus (0.7%/1.8%). Most of the reactions were mild or moderate in severity. Less than 2% of patients in these studies discontinued due to adverse reactions.

### Tabulated list of adverse reactions

Table 1 lists all adverse drug reactions that occurred in Aimovig-treated patients during the 12-week placebo-controlled periods of the studies, as well as in the post-marketing setting. Within each system organ class, the ADRs are ranked by frequency, with the most frequent reactions first. Within each frequency grouping, adverse drug reactions are presented in order of decreasing seriousness. In addition, the corresponding frequency category for each adverse drug reaction is based on the following convention: very common ( $\geq 1/10$ ); common ( $\geq 1/100$  to  $< 1/10$ ); uncommon ( $\geq 1/1\ 000$  to  $< 1/100$ ); rare ( $\geq 1/10\ 000$  to  $< 1/1\ 000$ ); very rare ( $< 1/10\ 000$ ); not known (cannot be estimated from the available data).

**Table 1 List of adverse reactions**

System Organ Class	Adverse reaction	Frequency category
Immune system disorders	Hypersensitivity reactions <sup>a</sup> including anaphylaxis, angioedema, rash, swelling/oedema and urticaria	Common
Gastrointestinal disorders	Constipation	Common
	Oral sores <sup>b</sup>	Not known
Skin and subcutaneous tissue disorders	Pruritus <sup>c</sup>	Common
	Alopecia Rash <sup>d</sup>	Not known
Musculoskeletal and connective tissue disorders	Muscle spasms	Common
General disorders and administration site conditions	Injection site reactions <sup>a</sup>	Common
<sup>a</sup>	See section “Description of selected adverse reactions”	
<sup>b</sup>	Oral sores includes preferred terms of stomatitis, mouth ulceration, oral mucosal blistering.	
<sup>c</sup>	Pruritus includes preferred terms of generalised pruritus, pruritus and pruritic rash.	
<sup>d</sup>	Rash includes preferred terms of rash papular, exfoliative rash, rash erythematous, urticaria, blister.	

Description of selected adverse reactionsInjection site reactions

In the integrated 12-week placebo-controlled phase of the studies, injection site reactions were mild and mostly transient. There was one case of discontinuation in a patient receiving the 70 mg dose due to injection site rash. The most frequent injection site reactions were localised pain, erythema and pruritus. Injection site pain typically subsided within 1 hour after administration.

Cutaneous and hypersensitivity reactions

In the integrated 12-week placebo-controlled phase of the studies, non-serious cases of rash, pruritus and swelling/oedema were observed, which in the majority of cases were mild and did not lead to treatment discontinuation.

In the post-marketing setting, cases of anaphylaxis and angiodoema were observed.

Immunogenicity

During the double-blind treatment phase of the clinical studies, the incidence of anti-erenumab antibody development was 6.3% (56/884) among subjects receiving a 70 mg dose of erenumab (3 of whom had *in vitro* neutralising activity) and 2.6% (13/504) among subjects receiving the 140 mg dose of erenumab (none of whom had *in vitro* neutralising activity). In an open-label study with up to 256 weeks of treatment, the incidence of anti-erenumab antibody development was 11.0% (25/225) among patients who only received 70 mg or 140 mg of Aimovig throughout the entire study (2 of whom had *in vitro* neutralising activity). There was no impact of anti-erenumab antibody development on the efficacy or safety of erenumab.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system listed in [Appendix V](#).

## **4.9 Overdose**

No cases of overdose have been reported in clinical studies.

Doses up to 280 mg have been administered subcutaneously in clinical studies with no evidence of dose-limiting toxicity.

In the event of an overdose, the patient should be treated symptomatically and supportive measures instituted as required.

## **5. PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Analgesics, antimigraine preparations, ATC code: N02CD01

#### Mechanism of action

Erenumab is a human monoclonal antibody that binds to the calcitonin gene-related peptide (CGRP) receptor. The CGRP receptor is located at sites that are relevant to migraine pathophysiology, such as the trigeminal ganglion. Erenumab potently and specifically competes with the binding of CGRP and inhibits its function at the CGRP receptor, and has no significant activity against other calcitonin family of receptors.

CGRP is a neuropeptide that modulates nociceptive signalling and a vasodilator that has been associated with migraine pathophysiology. In contrast with other neuropeptides, CGRP levels have been shown to increase significantly during migraine and return to normal with headache relief. Intravenous infusion of CGRP induces migraine-like headache in patients.

Inhibition of the effects of CGRP could theoretically attenuate compensatory vasodilation in ischaemic-related conditions. A study evaluated the effect of a single intravenous dose of 140 mg Aimovig in subjects with stable angina under controlled exercise conditions. Aimovig showed similar exercise duration compared to placebo and did not aggravate myocardial ischaemia in these patients.

#### Clinical efficacy and safety

Erenumab was evaluated for prophylaxis of migraine in two pivotal studies across the migraine spectrum in chronic and episodic migraine. In both studies, the patients enrolled had at least a 12-month history of migraine (with or without aura) according to the International Classification of Headache Disorders (ICHD-III) diagnostic criteria. Elderly patients (>65 years), patients with opioid overuse in study in chronic migraine, patients with medication overuse in study in episodic migraine, and also patients with pre-existing myocardial infarction, stroke, transient ischaemic attacks, unstable angina, coronary artery bypass surgery or other re-vascularisation procedures within 12 months prior to screening were excluded. Patients with poorly controlled hypertension or BMI >40 were excluded from Study 1.

## Chronic migraine

### Study 1

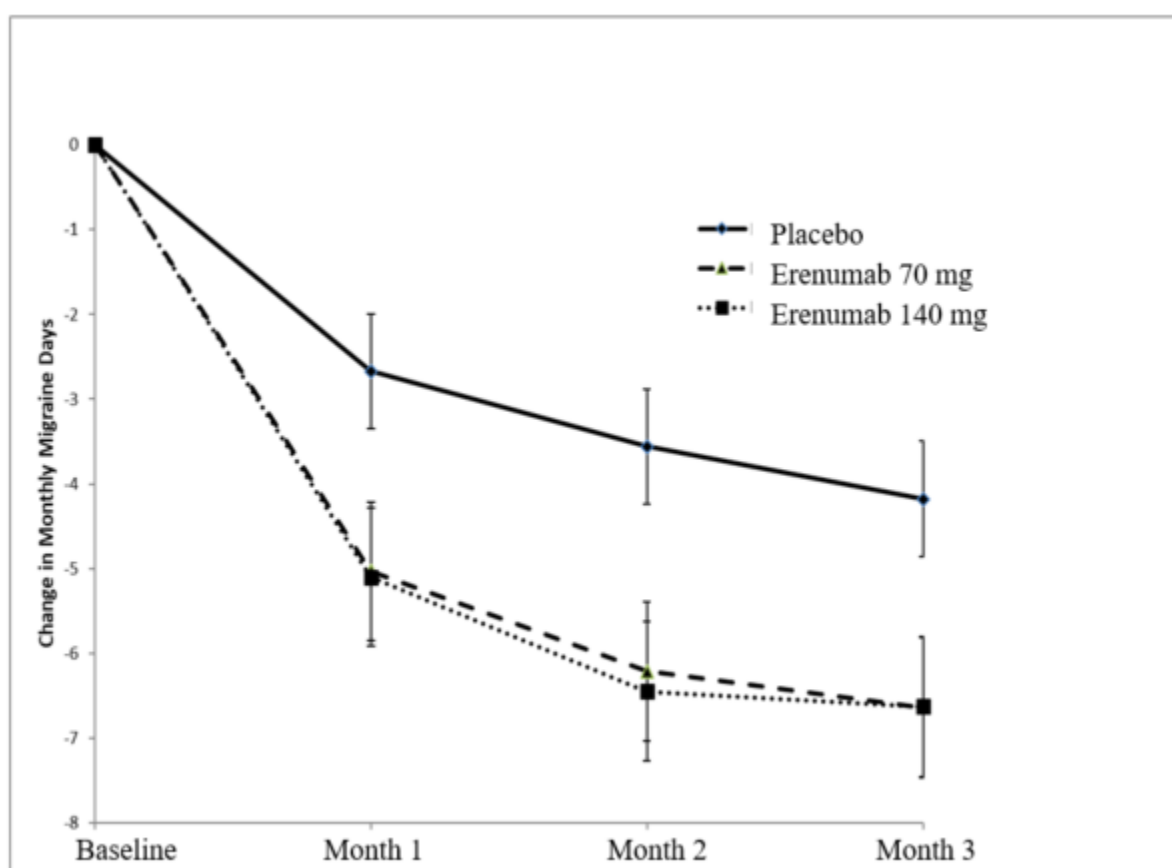
Erenumab was evaluated as monotherapy for prophylaxis of chronic migraine in a randomised, multicentre, 12-week, placebo-controlled, double-blind study in patients suffering from migraine with or without aura ( $\geq 15$  headache days per month with  $\geq 8$  migraine days per month).

667 patients were randomised in a 3:2:2 ratio to receive placebo ( $n = 286$ ) or 70 mg ( $n = 191$ ) or 140 mg ( $n = 190$ ) erenumab, stratified by the presence of acute medication overuse (present in 41% of overall patients). Patients were allowed to use acute headache treatments during the study.

Demographics and baseline disease characteristics were balanced and comparable between study arms. Patients had a median age of 43 years, 83% were female and 94% were white. The mean migraine frequency at baseline was approximately 18 migraine days per month. Overall, 68% had failed one or more previous prophylactic pharmacotherapies due to lack of efficacy or poor tolerability, and 49% had failed two or more previous prophylactic pharmacotherapies due to lack of efficacy or poor tolerability. A total of 366 (96%) patients in the erenumab arms and 265 (93%) patients in the placebo arm completed the study (i.e. completed Week 12 assessment).

Reduction in mean monthly migraine days from placebo was observed in a monthly analysis from Month 1 and in a follow-up weekly analysis an onset of erenumab effect was seen from the first week of administration.

**Figure 1** Change from baseline in monthly migraine days over time in Study 1 (including primary endpoint at Month 3)





**Table 2      Change from baseline in efficacy and patient-reported outcomes at Week 12 in Study 1**

	<b>Aimovig (erenumab) 140 mg (n = 187)</b>	<b>Aimovig (erenumab) 70 mg (n = 188)</b>	<b>Placebo (n = 281)</b>	<b>Treatment difference (95% CI)</b>	<b>p-value</b>
<b><u>Efficacy outcomes</u></b>					
<b>MMD</b>					
Mean change (95% CI)	-6.6 (-7.5, -5.8)	-6.6 (-7.5; -5.8)	-4.2 (-4.9, -3.5)	Both -2.5 (-3.5, -1.4)	Both <0.001
Baseline (SD)	17.8 (4.7)	17.9 (4.4)	18.2 (4.7)		
<b>≥50% MMD responders</b>					
Percentage [%]	41.2%	39.9%	23.5%	n/a	Both <0.001 <sup>a,d</sup>
<b>≥75% MMD responders</b>					
Percentage [%]	20.9%	17.0%	7.8%	n/a	n/a <sup>b</sup>
<b>Monthly acute migraine-specific medication days</b>					
Mean change (95% CI)	-4.1 (-4.7, -3.6)	-3.5 (-4.0, -2.9)	-1.6 (-2.1, -1.1)	70 mg: -1.9 (-2.6, -1.1) 140 mg: -2.6 (-3.3, -1.8)	Both <0.001 <sup>a</sup>
Baseline (SD)	9.7 (7.0)	8.8 (7.2)	9.5 (7.6)		
<b><u>Patient-reported outcome measures</u></b>					
<b>HIT-6</b>					
Mean change <sup>c</sup> (95% CI)	-5.6 (-6.5, -4.6)	-5.6 (-6.5, -4.6)	-3.1 (-3.9, -2.3)	70 mg: -2.5 (-3.7, -1.2) 140 mg: -2.5 (-3.7, -1.2)	n/a <sup>b</sup>
<b>MIDAS total</b>					
Mean change <sup>c</sup> (95% CI)	-19.8 (-25.6, -14.0)	-19.4 (-25.2, -13.6)	-7.5 (-12.4, -2.7)	70 mg: -11.9 (-19.3, -4.4) 140 mg: -12.2 (-19.7, -4.8)	n/a <sup>b</sup>
CI = confidence interval; MMD = monthly migraine days; HIT-6 = Headache Impact Test; MIDAS = Migraine Disability Assessment; n/a = not applicable.					
<sup>a</sup> For secondary endpoints, all p-values are reported as unadjusted p-values and are statistically significant after adjustment for multiple comparisons.					
<sup>b</sup> For exploratory endpoints, no p-value is presented.					
<sup>c</sup> For HIT-6: Change and reduction from baseline were evaluated in the last 4 weeks of the 12-week double-blind treatment phase. For MIDAS: Change and reduction from baseline were evaluated over 12 weeks. For data collection a recall period of 3 months has been used.					
<sup>d</sup> p value was calculated based on the odds ratios.					

In patients failing one or more prophylactic pharmacotherapies the treatment difference for the reduction of monthly migraine days (MMD) observed between erenumab 140 mg and placebo was -3.3 days (95% CI: -4.6, -2.1) and between erenumab 70 mg and placebo -2.5 days (95% CI: -3.8, -1.2). In patients failing two or more prophylactic pharmacotherapies the treatment difference was -4.3 days (95% CI: -5.8; -2.8) between 140 mg and placebo and -2.7 days (95% CI: -4.2, -1.2) between 70 mg and placebo. There was also a higher proportion of subjects treated with erenumab who achieved at least 50% reduction of MMD compared to placebo in the patients failing one or more prophylactic pharmacotherapies (40.8% for 140 mg, 34.7% for 70 mg versus 17.3% for placebo), with an odds ratio of 3.3 (95% CI: 2.0, 5.5) for 140 mg and 2.6 (95% CI: 1.6, 4.5) for 70 mg. In patients failing two or more prophylactic pharmacotherapies the proportion was 41.3% for 140 mg and 35.6% for 70 mg versus 14.2% for placebo with an odds ratio of 4.2 (95% CI: 2.2, 7.9) and 3.5 (95% CI: 1.8, 6.6), respectively.

Approximately 41% of patients in the study had medication overuse. The treatment difference observed between erenumab 140 mg and placebo and between erenumab 70 mg and placebo for the reduction of MMD in these patients was -3.1 days (95% CI: -4.8, -1.4) in both cases, and for the reduction of acute migraine-specific medication days was -2.8 (95% CI: -4.2, -1.4) for 140 mg and -3.3 (95% CI: -4.7, -1.9) for 70 mg. There was a higher proportion of patients in the erenumab group who achieved at least a 50% reduction of MMD compared to placebo (34.6% for 140 mg, 36.4% for 70 mg versus 17.7% for placebo), with an odds ratio of 2.5 (95% CI: 1.3, 4.9) and 2.7 (95% CI: 1.4, 5.2), respectively.

Efficacy was sustained for up to 1 year in the open-label extension of Study 1 in which patients received 70 mg and/or 140 mg erenumab. 74.1% of patients completed the 52-week extension. Pooled across the two doses, a reduction of -9.3 MMD was observed after 52 weeks relative to core study baseline. 59% of patients completing the study achieved a 50% response in the last month of the study.

## Episodic migraine

### *Study 2*

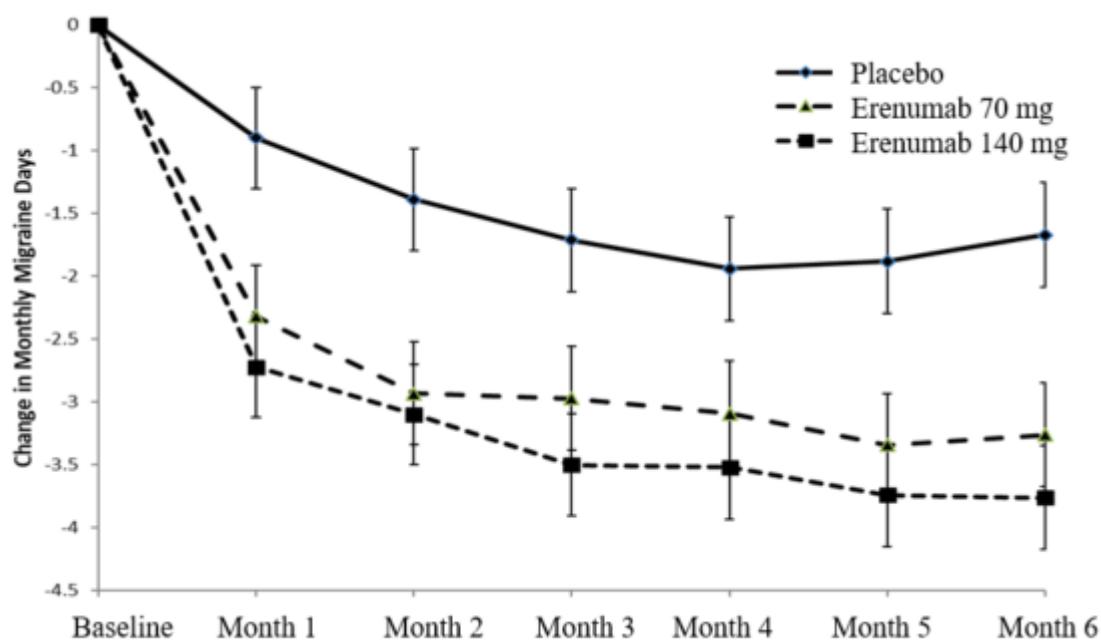
Erenumab was evaluated for prophylaxis of episodic migraine in a randomised, multicentre, 24-week, placebo-controlled, double-blind study in patients suffering from migraine with or without aura (4-14 migraine days per month).

955 patients were randomised in a 1:1:1 ratio to receive 140 mg (n = 319) or 70 mg (n = 317) erenumab or placebo (n = 319). Patients were allowed to use acute headache treatments during the study.

Demographics and baseline disease characteristics were balanced and comparable between study arms. Patients had a median age of 42 years, 85% were female and 89% were white. The mean migraine frequency at baseline was approximately 8 migraine days per month. Overall, 39% had failed one or more previous prophylactic pharmacotherapies due to lack of efficacy or poor tolerability. A total of 294 patients (92%) for 140 mg, 287 (91%) patients for 70 mg and 284 patients (89%) in the placebo arm completed the double-blind phase.

Patients treated with erenumab had a clinically relevant and statistically significant reduction from baseline in the frequency of migraine days from Months 4 to 6 (Figure 2) compared to patients receiving placebo. Differences from placebo were observed from Month 1 onwards.

**Figure 2** Change from baseline in monthly migraine days over time in Study 2 (including primary endpoint over Months 4, 5 and 6)



**Table 3 Change from baseline in efficacy and patient-reported outcomes at Weeks 13-24 in Study 2**

	<b>Aimovig (erenumab) 140 mg (n = 318)</b>	<b>Aimovig (erenumab) 70 mg (n = 312)</b>	<b>Placebo (n = 316)</b>	<b>Treatment difference (95% CI)</b>	<b>p-value</b>
<b><u>Efficacy outcomes</u></b>					
<b>MMD</b>					
Mean change	-3.7	-3.2	-1.8	70 mg: -1.4 (-1.9, -0.9)	Both
(95% CI)	(-4.0, -3.3)	(-3.6, -2.9)	(-2.2, -1.5)	140 mg: -1.9 (-2.3, -1.4)	<0.001 <sup>a</sup>
Baseline (SD)	8.3 (2.5)	8.3 (2.5)	8.2 (2.5)		
<b>≥50% MMD responders</b>					
Percentage [%]	50.0%	43.3%	26.6%	n/a	Both <0.001 <sup>a,d</sup>
<b>≥75% MMD responders</b>					
Percentage [%]	22.0%	20.8%	7.9%	n/a	n/a <sup>b</sup>
<b>Monthly acute migraine-specific medication days</b>					
Mean change	-1.6	-1.1	-0.2	70 mg: -0.9(-1.2, -0.6)	Both
(95% CI)	(-1.8, -1.4)	(-1.3, -0.9)	(-0.4, 0.0)	140 mg: -1.4 (-1.7, -1.1)	<0.001 <sup>a</sup>
Baseline (SD)	3.4 (3.5)	3.2 (3.4)	3.4 (3.4)		
<b><u>Patient-reported outcome measures</u></b>					
<b>HIT-6</b>					
Mean change <sup>c</sup>	-6.9	-6.7	-4.6	70 mg: -2.1 (-3.0, -1.1)	n/a <sup>b</sup>
(95% CI)	(-7.6, -6.3)	(-7.4, -6.0)	(-5.3, -4.0)	140 mg: -2.3 (-3.2, -1.3)	
<b>MIDAS (modified) total</b>					
Mean change <sup>c</sup>	-7.5	-6.7	-4.6	70 mg: -2.1 (-3.3, -0.9)	n/a <sup>b</sup>
(95% CI)	(-8.3, -6.6)	(-7.6, -5.9)	(-5.5, -3.8)	140 mg: -2.8 (-4.0, -1.7)	
CI = confidence interval; MMD = monthly migraine days; HIT-6 = Headache Impact Test; MIDAS = Migraine Disability Assessment; n/a = not applicable.					
<sup>a</sup> For the secondary endpoints, all p-values are reported as unadjusted p-values and are statistically significant after adjustment for multiple comparisons.					
<sup>b</sup> For exploratory endpoints, no p-value was presented.					
<sup>c</sup> For HIT-6: Change and reduction from baseline were evaluated in the last 4 weeks of the 12-week double-blind treatment phase. For MIDAS: Change and reduction from baseline were evaluated over 24 weeks. For data collection a recall period of 1 month has been used.					
<sup>d</sup> p value is calculated based on the odds ratios.					

In patients failing one or more prophylactic pharmacotherapies the treatment difference for the reduction of MMD observed between erenumab 140 mg and placebo was -2.5 (95% CI: -3.4, -1.7) and between erenumab 70 mg and placebo -2.0 (95% CI: -2.8, -1.2). There was also a higher proportion of subjects treated with erenumab who achieved at least 50% reduction of MMD compared to placebo (39.7% for 140 mg and 38.6% for 70 mg, with an odds ratio of 3.1 [95% CI: 1.7, 5.5] and 2.9 [95% CI: 1.6, 5.3], respectively).

Efficacy was sustained up to 1 year in the active re-randomisation part of Study 2. Patients were re-randomised in the active treatment phase (ATP) to 70 mg or 140 mg erenumab. 79.8% completed the entire study out to 52 weeks. The reduction in monthly migraine days from baseline to Week 52 was -4.22 in the 70 mg ATP group and -4.64 days in the 140 mg ATP group. At Week 52, the proportion of subjects who achieved a ≥50% reduction in MMD from baseline was 61.0% in the 70 mg ATP and 64.9% in the 140 mg ATP group.

### *Long-term follow-up study*

Following a placebo-controlled study, 383 patients continued in an open-label treatment phase over 5 years initially receiving erenumab 70 mg (median exposure: 2.0 years), of which 250 patients increased their dose to 140 mg (median exposure: 2.7 years). 214 completed the open-label treatment phase of 5 years. Of the 383 patients, 168 (43.9%) discontinued with the most common reasons being patient request (84 patients; 21.9%), adverse events (19 patients; 5.0%), lost to follow-up (14 patients; 3.7%) and lack of efficacy (12 patients; 3.1%). The results indicate that efficacy was sustained for up to 5 years in the open-label treatment phase of the study.

### Study 3: Study in patients with previous failure or non-suitability of 2 to 4 migraine prophylactic pharmacotherapies

246 adult patients with episodic migraine were randomised in a 1:1 ratio to receive either erenumab 140 mg (n = 121) or placebo (n = 125) for 12 weeks. Three patients (erenumab: 2, placebo: 1) were excluded from the primary analysis due to not having received study treatment. During the last 4 weeks of the double-blind treatment, 30.3% (36/119) of patients in the erenumab group achieved at least a 50% reduction from baseline in MMD compared to 13.7% (17/124) in the placebo group (p = 0.002).

### Study 4: Study to assess tolerability (primary endpoint) and efficacy versus topiramate

777 adult patients with episodic or chronic migraine were randomised in a 1:1 ratio to receive either erenumab (70 mg or 140 mg, n = 389) or topiramate 50 to 100 mg (n=388) for 24 weeks (double-blind treatment phase). Safety and efficacy data were pooled for patients receiving the erenumab 70 mg and 140 mg doses and compared with that for patients receiving topiramate.

Erenumab demonstrated superior tolerability versus topiramate based on the rate of discontinuation of treatment due to adverse events (erenumab: 10.5%, topiramate: 38.9%; p <0.001; primary endpoint). Additionally, 55.4% of patients in the erenumab group achieved at least a 50% reduction from baseline in MMD during the last 3 months of the study, compared with 31.2% in the topiramate group (p <0.001).

### Paediatric population

The European Medicines Agency has deferred the obligation to submit the results of studies with Aimovig in prevention of migraine headaches in one or more subsets of the paediatric population (see section 4.2 for information on paediatric use).

## **5.2 Pharmacokinetic properties**

Erenumab exhibits non-linear kinetics as a result of binding to the CGRP-R receptor. However, at therapeutically relevant doses, the pharmacokinetics of erenumab following subcutaneous dosing every 4 weeks are predominantly linear due to saturation of binding to CGRP-R. Subcutaneous administration of a 140 mg once monthly dose and a 70 mg once monthly dose in healthy volunteers resulted in a C<sub>max</sub> mean (standard deviation [SD]) of 15.8 (4.8) µg/ml and 6.1 (2.1) µg/ml, respectively, and AUC<sub>last</sub> mean (SD) of 505 (139) day\*µg/ml and 159 (58) day\*µg/ml, respectively.

Less than 2-fold accumulation was observed in trough serum concentrations following 140 mg doses administered subcutaneously every 4 weeks and serum trough concentrations approached steady state by 12 weeks of dosing.

### Absorption

Following a single subcutaneous dose of 140 mg or 70 mg erenumab administered to healthy adults, median peak serum concentrations were attained in 4 to 6 days, and estimated absolute bioavailability was 82%.

## Distribution

Following a single 140 mg intravenous dose, the mean (SD) volume of distribution during the terminal phase ( $V_z$ ) was estimated to be 3.86 (0.77) l.

## Biotransformation / Elimination

Two elimination phases were observed for erenumab. At low concentrations, the elimination is predominately through saturable binding to target (CGRP-R), while at higher concentrations the elimination of erenumab is largely through a non-specific proteolytic pathway. Throughout the dosing period erenumab is predominantly eliminated via a non-specific proteolytic pathway with the effective half-life of 28 days.

## Special populations

### *Patients with renal impairment*

Patients with severe renal impairment (eGFR <30 ml/min/1.73 m<sup>2</sup>) have not been studied. Population pharmacokinetic analysis of integrated data from the Aimovig clinical studies did not reveal a difference in the pharmacokinetics of erenumab in patients with mild or moderate renal impairment relative to those with normal renal function (see section 4.2).

### *Patients with hepatic impairment*

No studies have been performed in patients with hepatic impairment. Erenumab, as a human monoclonal antibody, is not metabolised by cytochrome P450 enzymes and hepatic clearance is not a major clearance pathway for erenumab (see section 4.2).

## **5.3 Preclinical safety data**

Non-clinical data reveal no special hazard for humans based on conventional studies of safety pharmacology, repeated-dose toxicity, toxicity to reproduction and development.

Carcinogenicity studies have not been conducted with erenumab. Erenumab is not pharmacologically active in rodents. It has biological activity in cynomolgus monkeys, but this species is not an appropriate model for evaluation of tumorigenic risk. The mutagenic potential of erenumab has not been evaluated; however, monoclonal antibodies are not expected to alter DNA or chromosomes.

In repeated-dose toxicology studies there were no adverse effects in sexually mature monkeys dosed up to 150 mg/kg subcutaneously twice weekly for up to 6 months at systemic exposures up to 123-fold and 246-fold higher than the clinical dose of 140 mg and 70 mg, respectively, every 4 weeks, based on serum AUC. There were also no adverse effects on surrogate markers of fertility (anatomical pathology or histopathology changes in reproductive organs) in these studies.

In a reproduction study in cynomolgus monkeys there were no effects on pregnancy, embryo-foetal or post-natal development (up to 6 months of age) when erenumab was dosed throughout pregnancy at exposure levels approximately 17-fold and 34-fold higher than those achieved in patients receiving erenumab 140 mg and 70 mg, respectively, every 4 weeks dosing regimen based on AUC. Measurable erenumab serum concentrations were observed in the infant monkeys at birth, confirming that erenumab, like other IgG antibodies, crosses the placental barrier.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Sucrose  
Polysorbate 80  
Sodium hydroxide (for pH adjustment)  
Glacial acetic acid  
Water for injections

### **6.2 Incompatibilities**

In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

### **6.3 Shelf life**

3 years

### **6.4 Special precautions for storage**

#### Pre-filled syringe

Store in a refrigerator (2°C - 8°C). Do not freeze.

Keep the pre-filled syringe in the outer carton in order to protect from light.

After removal from the refrigerator, Aimovig must be used within 7 days when stored at room temperature (up to 25°C), or discarded. If it is stored at a higher temperature or for a longer period it must be discarded.

#### Pre-filled pen

Store in a refrigerator (2°C - 8°C). Do not freeze.

Keep the pre-filled pen in the outer carton in order to protect from light.

After removal from the refrigerator, Aimovig must be used within 7 days when stored at room temperature (up to 25°C), or discarded. If it is stored at a higher temperature or for a longer period it must be discarded.

### **6.5 Nature and contents of container**

#### Pre-filled syringe

Aimovig is supplied in a pre-filled syringe (1 ml, Type 1 glass) with a stainless steel needle and a needle cover (rubber containing latex).

Aimovig is available in packs containing 1 pre-filled syringe.

#### Pre-filled pen

Aimovig is supplied in a pre-filled pen (1 ml, Type 1 glass) with a stainless steel needle and a needle cover (rubber containing latex).

Aimovig is available in packs containing 1 pre-filled pen and in multipacks containing 3 (3x1) pre-filled pens.

Not all pack sizes may be marketed.

## **6.6 Special precautions for disposal and other handling**

Before administration, the solution should be inspected visually. The solution should not be injected if it is cloudy, distinctly yellow or contains flakes or particles.

### Pre-filled syringe

To avoid discomfort at the site of injection, the pre-filled syringe(s) should be left to stand at room temperature (up to 25°C) for at least 30 minutes before injecting. It should also be protected from direct sunlight. The entire contents of the pre-filled syringe(s) must be injected. The syringe(s) must not be warmed by using a heat source such as hot water or microwave and must not be shaken.

### Pre-filled pen

To avoid discomfort at the site of injection, the pre-filled pen(s) should be left to stand at room temperature (up to 25°C) for at least 30 minutes before injecting. It should also be protected from direct sunlight. The entire contents of the pre-filled pen(s) must be injected. The pen(s) must not be warmed by using a heat source such as hot water or microwave and must not be shaken.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

## **7. MARKETING AUTHORISATION HOLDER**

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

## **8. MARKETING AUTHORISATION NUMBER(S)**

EU/1/18/1293/001-006

## **9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 26 July 2018  
Date of latest renewal: 20 February 2023

## **10. DATE OF REVISION OF THE TEXT**

Detailed information on this medicinal product is available on the website of the European Medicines Agency <http://www.ema.europa.eu>.



## **ANNEX II**

- A. MANUFACTURER(S) OF THE BIOLOGICAL ACTIVE SUBSTANCE(S) AND MANUFACTURER(S) RESPONSIBLE FOR BATCH RELEASE**
- B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE**
- C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION**
- D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT**

**A. MANUFACTURER(S) OF THE BIOLOGICAL ACTIVE SUBSTANCE(S) AND  
MANUFACTURER(S) RESPONSIBLE FOR BATCH RELEASE**

Name and address of the manufacturer(s) of the biological active substance(s)

Amgen, Inc.  
One Amgen Center Drive  
Thousand Oaks  
CA  
91320  
United States

Amgen Singapore Manufacturing Pte. Ltd.  
1 Tuas View Drive  
Singapore 637026  
Singapore

Name and address of the manufacturer(s) responsible for batch release

Aimovig 70 mg, 140 mg solution for injection in pre-filled syringe:

Novartis Manufacturing NV  
Rijksweg 14  
2870 Puurs-Sint-Amands  
Belgium

Novartis Pharma GmbH  
Roonstrasse 25  
D-90429 Nuremberg  
Germany

Novartis Pharma GmbH  
Sophie-Germain-Strasse 10  
90443 Nuremberg  
Germany

Aimovig 70 mg, 140 mg solution for injection in pre-filled pen:

Sandoz GmbH  
Biochemiestrasse 10  
6336 Langkampfen  
Austria

Novartis Pharma GmbH  
Roonstrasse 25  
D-90429 Nuremberg  
Germany

Novartis Pharmaceutical Manufacturing GmbH  
Biochemiestrasse 10  
6336 Langkampfen  
Austria

Novartis Pharma GmbH  
Sophie-Germain-Strasse 10  
90443 Nuremberg  
Germany

The printed package leaflet of the medicinal product must state the name and address of the manufacturer responsible for the release of the concerned batch.

## **B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE**

Medicinal product subject to restricted medical prescription (see Annex I: Summary of Product Characteristics, section 4.2).

## **C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION**

- **Periodic safety update reports (PSURs)**

The requirements for submission of PSURs for this medicinal product are set out in the list of Union reference dates (EURD list) provided for under Article 107c(7) of Directive 2001/83/EC and any subsequent updates published on the European medicines web-portal.

## **D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT**

- **Risk management plan (RMP)**

The marketing authorisation holder (MAH) shall perform the required pharmacovigilance activities and interventions detailed in the agreed RMP presented in Module 1.8.2 of the marketing authorisation and any agreed subsequent updates of the RMP.

An updated RMP should be submitted:

- At the request of the European Medicines Agency;
- Whenever the risk management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit/risk profile or as the result of an important (pharmacovigilance or risk minimisation) milestone being reached.

**ANNEX III**

**LABELLING AND PACKAGE LEAFLET**

## **A. LABELLING**

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING****CARTON OF UNIT PACK – pre-filled syringe****1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 70 mg solution for injection in pre-filled syringe  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled syringe contains 70 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

1 pre-filled syringe

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY****8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.  
Keep the pre-filled syringe in the outer carton in order to protect from light.

<b>10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE</b>
--------------------------------------------------------------------------------------------------------------------------------------------------

<b>11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER</b>
-------------------------------------------------------------------

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

<b>12. MARKETING AUTHORISATION NUMBER(S)</b>
----------------------------------------------

EU/1/18/1293/003

Pack containing 1 pre-filled syringe

<b>13. BATCH NUMBER</b>
-------------------------

Lot

<b>14. GENERAL CLASSIFICATION FOR SUPPLY</b>
----------------------------------------------

<b>15. INSTRUCTIONS ON USE</b>
--------------------------------

<b>16. INFORMATION IN BRAILLE</b>
-----------------------------------

Aimovig 70 mg

<b>17. UNIQUE IDENTIFIER – 2D BARCODE</b>
-------------------------------------------

2D barcode carrying the unique identifier included.

<b>18. UNIQUE IDENTIFIER - HUMAN READABLE DATA</b>
----------------------------------------------------

PC  
SN  
NN

<b>MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS</b> <b>SYRINGE LABEL</b>
-------------------------------------------------------------------------------------------------

<b>1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION</b>
------------------------------------------------------------------------

Aimovig 70 mg injection  
erenumab  
SC

<b>2. METHOD OF ADMINISTRATION</b>
------------------------------------

<b>3. EXPIRY DATE</b>
-----------------------

EXP

<b>4. BATCH NUMBER</b>
------------------------

Lot

<b>5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT</b>
----------------------------------------------------

<b>6. OTHER</b>
-----------------



**PARTICULARS TO APPEAR ON THE OUTER PACKAGING****CARTON OF UNIT PACK – pre-filled syringe****1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 140 mg solution for injection in pre-filled syringe  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled syringe contains 140 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

1 pre-filled syringe

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY****8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.  
Keep the pre-filled syringe in the outer carton in order to protect from light.

<b>10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE</b>
--------------------------------------------------------------------------------------------------------------------------------------------------

<b>11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER</b>
-------------------------------------------------------------------

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

<b>12. MARKETING AUTHORISATION NUMBER(S)</b>
----------------------------------------------

EU/1/18/1293/006

Pack containing 1 pre-filled syringe

<b>13. BATCH NUMBER</b>
-------------------------

Lot

<b>14. GENERAL CLASSIFICATION FOR SUPPLY</b>
----------------------------------------------

<b>15. INSTRUCTIONS ON USE</b>
--------------------------------

<b>16. INFORMATION IN BRAILLE</b>
-----------------------------------

Aimovig 140 mg

<b>17. UNIQUE IDENTIFIER – 2D BARCODE</b>
-------------------------------------------

2D barcode carrying the unique identifier included.

<b>18. UNIQUE IDENTIFIER - HUMAN READABLE DATA</b>
----------------------------------------------------

PC  
SN  
NN

<b>MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS</b> <b>SYRINGE LABEL</b>
-------------------------------------------------------------------------------------------------

<b>1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION</b>
------------------------------------------------------------------------

Aimovig 140 mg injection  
erenumab  
SC

<b>2. METHOD OF ADMINISTRATION</b>
------------------------------------

<b>3. EXPIRY DATE</b>
-----------------------

EXP

<b>4. BATCH NUMBER</b>
------------------------

Lot

<b>5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT</b>
----------------------------------------------------

<b>6. OTHER</b>
-----------------

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING****CARTON OF UNIT PACK – pre-filled pen****1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 70 mg solution for injection in pre-filled pen  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled pen contains 70 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

1 pre-filled pen

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY****8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.  
Keep the pre-filled pen in the outer carton in order to protect from light.

<b>10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE</b>
--------------------------------------------------------------------------------------------------------------------------------------------------

<b>11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER</b>
-------------------------------------------------------------------

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

<b>12. MARKETING AUTHORISATION NUMBER(S)</b>
----------------------------------------------

EU/1/18/1293/001

Pack containing 1 pre-filled pen

<b>13. BATCH NUMBER</b>
-------------------------

Lot

<b>14. GENERAL CLASSIFICATION FOR SUPPLY</b>
----------------------------------------------

<b>15. INSTRUCTIONS ON USE</b>
--------------------------------

<b>16. INFORMATION IN BRAILLE</b>
-----------------------------------

Aimovig 70 mg

<b>17. UNIQUE IDENTIFIER – 2D BARCODE</b>
-------------------------------------------

2D barcode carrying the unique identifier included.

<b>18. UNIQUE IDENTIFIER - HUMAN READABLE DATA</b>
----------------------------------------------------

PC  
SN  
NN

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING**

**OUTER CARTON OF MULTIPACK (INCLUDING BLUE BOX) – pre-filled pen**

**1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 70 mg solution for injection in pre-filled pen  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled pen contains 70 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

Multipack: 3 (3 packs of 1) pre-filled pens

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY**

**8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.  
Keep the pre-filled pens in the outer carton in order to protect from light.

<b>10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE</b>
--------------------------------------------------------------------------------------------------------------------------------------------------

<b>11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER</b>
-------------------------------------------------------------------

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

<b>12. MARKETING AUTHORISATION NUMBER(S)</b>
----------------------------------------------

EU/1/18/1293/002

Multipack containing 3 (3x 1) pre-filled pens

<b>13. BATCH NUMBER</b>
-------------------------

Lot

<b>14. GENERAL CLASSIFICATION FOR SUPPLY</b>
----------------------------------------------

<b>15. INSTRUCTIONS ON USE</b>
--------------------------------

<b>16. INFORMATION IN BRAILLE</b>
-----------------------------------

Aimovig 70 mg

<b>17. UNIQUE IDENTIFIER – 2D BARCODE</b>
-------------------------------------------

2D barcode carrying the unique identifier included.

<b>18. UNIQUE IDENTIFIER - HUMAN READABLE DATA</b>
----------------------------------------------------

PC  
SN  
NN

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING**

**INTERMEDIATE CARTON OF MULTIPACK (WITHOUT BLUE BOX) – pre-filled pen**

**1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 70 mg solution for injection in pre-filled pen  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled pen contains 70 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

1 pre-filled pen  
Component of a multipack. Not to be sold separately.

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY**

**8. EXPIRY DATE**

EXP



**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.

Keep the pre-filled pen in the outer carton in order to protect from light.

**10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE****11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

**12. MARKETING AUTHORISATION NUMBER(S)**

EU/1/18/1293/002

Multipack containing 3 (3x 1) pre-filled pens

**13. BATCH NUMBER**

Lot

**14. GENERAL CLASSIFICATION FOR SUPPLY****15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Aimovig 70 mg

**17. UNIQUE IDENTIFIER – 2D BARCODE****18. UNIQUE IDENTIFIER - HUMAN READABLE DATA**

<b>MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS</b> <b>PEN LABEL</b>
---------------------------------------------------------------------------------------------

<b>1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION</b>
------------------------------------------------------------------------

Aimovig 70 mg injection  
erenumab  
SC

<b>2. METHOD OF ADMINISTRATION</b>
------------------------------------

<b>3. EXPIRY DATE</b>
-----------------------

EXP

<b>4. BATCH NUMBER</b>
------------------------

Lot

<b>5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT</b>
----------------------------------------------------

<b>6. OTHER</b>
-----------------

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING****CARTON OF UNIT PACK – pre-filled pen****1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 140 mg solution for injection in pre-filled pen  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled pen contains 140 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

1 pre-filled pen

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY****8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.  
Keep the pre-filled pen in the outer carton in order to protect from light.

<b>10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE</b>
--------------------------------------------------------------------------------------------------------------------------------------------------

<b>11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER</b>
-------------------------------------------------------------------

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

<b>12. MARKETING AUTHORISATION NUMBER(S)</b>
----------------------------------------------

EU/1/18/1293/004

Pack containing 1 pre-filled pen

<b>13. BATCH NUMBER</b>
-------------------------

Lot

<b>14. GENERAL CLASSIFICATION FOR SUPPLY</b>
----------------------------------------------

<b>15. INSTRUCTIONS ON USE</b>
--------------------------------

<b>16. INFORMATION IN BRAILLE</b>
-----------------------------------

Aimovig 140 mg

<b>17. UNIQUE IDENTIFIER – 2D BARCODE</b>
-------------------------------------------

2D barcode carrying the unique identifier included.

<b>18. UNIQUE IDENTIFIER - HUMAN READABLE DATA</b>
----------------------------------------------------

PC  
SN  
NN

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING**

**OUTER CARTON OF MULTIPACK (INCLUDING BLUE BOX) – pre-filled pen**

**1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 140 mg solution for injection in pre-filled pen  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled pen contains 140 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

Multipack: 3 (3 packs of 1) pre-filled pens

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY**

**8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.  
Keep the pre-filled pens in the outer carton in order to protect from light.

<b>10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE</b>
--------------------------------------------------------------------------------------------------------------------------------------------------

<b>11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER</b>
-------------------------------------------------------------------

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

<b>12. MARKETING AUTHORISATION NUMBER(S)</b>
----------------------------------------------

EU/1/18/1293/005

Multipack containing 3 (3x 1) pre-filled pens

<b>13. BATCH NUMBER</b>
-------------------------

Lot

<b>14. GENERAL CLASSIFICATION FOR SUPPLY</b>
----------------------------------------------

<b>15. INSTRUCTIONS ON USE</b>
--------------------------------

<b>16. INFORMATION IN BRAILLE</b>
-----------------------------------

Aimovig 140 mg

<b>17. UNIQUE IDENTIFIER – 2D BARCODE</b>
-------------------------------------------

2D barcode carrying the unique identifier included.

<b>18. UNIQUE IDENTIFIER - HUMAN READABLE DATA</b>
----------------------------------------------------

PC  
SN  
NN

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING**

**INTERMEDIATE CARTON OF MULTIPACK (WITHOUT BLUE BOX) – pre-filled pen**

**1. NAME OF THE MEDICINAL PRODUCT**

Aimovig 140 mg solution for injection in pre-filled pen  
erenumab

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

One pre-filled pen contains 140 mg erenumab.

**3. LIST OF EXCIPIENTS**

Also contains: sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.  
Needle cap contains latex.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Solution for injection

1 pre-filled pen  
Component of a multipack. Not to be sold separately.

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.  
Subcutaneous use  
Single use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN**

Keep out of the sight and reach of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY**

**8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Store in a refrigerator. Do not freeze.

Keep the pre-filled pen in the outer carton in order to protect from light.

**10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE****11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Novartis Europharm Limited  
Vista Building  
Elm Park, Merrion Road  
Dublin 4  
Ireland

**12. MARKETING AUTHORISATION NUMBER(S)**

EU/1/18/1293/005

Multipack containing 3 (3x 1) pre-filled pens

**13. BATCH NUMBER**

Lot

**14. GENERAL CLASSIFICATION FOR SUPPLY****15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Aimovig 140 mg

**17. UNIQUE IDENTIFIER – 2D BARCODE****18. UNIQUE IDENTIFIER - HUMAN READABLE DATA**



<b>MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS</b> <b>PEN LABEL</b>
---------------------------------------------------------------------------------------------

<b>1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION</b>
------------------------------------------------------------------------

Aimovig 140 mg injection  
erenumab  
SC

<b>2. METHOD OF ADMINISTRATION</b>
------------------------------------

<b>3. EXPIRY DATE</b>
-----------------------

EXP

<b>4. BATCH NUMBER</b>
------------------------

Lot

<b>5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT</b>
----------------------------------------------------

<b>6. OTHER</b>
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## **B. PACKAGE LEAFLET**

## **Package leaflet: Information for the user**

### **Aimovig 70 mg solution for injection in pre-filled syringe Aimovig 140 mg solution for injection in pre-filled syringe erenumab**

**Read all of this leaflet carefully before you start using this medicine because it contains important information for you.**

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

#### **What is in this leaflet**

1. What Aimovig is and what it is used for
2. What you need to know before you use Aimovig
3. How to use Aimovig
4. Possible side effects
5. How to store Aimovig
6. Contents of the pack and other information

#### **1. What Aimovig is and what it is used for**

Aimovig contains the active substance erenumab. It belongs to a group of medicines called monoclonal antibodies.

Aimovig works by blocking the activity of the CGRP molecule, which has been linked to migraine (CGRP stands for calcitonin gene-related peptide).

Aimovig is used to prevent migraine in adults who have at least 4 migraine days per month when starting treatment with Aimovig.

#### **2. What you need to know before you use Aimovig**

##### **Do not use Aimovig**

- if you are allergic to erenumab or any of the other ingredients of this medicine (listed in section 6).

##### **Warnings and precautions**

Talk to your doctor before using Aimovig:

- if you have ever had an allergic reaction to rubber latex. The container of this medicinal product contains latex rubber within the cap.
- if you suffer from a cardiovascular disease. Aimovig has not been studied in patients with certain cardiovascular diseases.

Talk to your doctor or get emergency medical help immediately:

- if you get any symptoms of a serious allergic reaction, such as rash or swelling usually of the face, mouth, tongue, or throat; or difficulty breathing. Serious allergic reactions can happen within minutes, but some may happen more than one week after using Aimovig.
- Contact a doctor if you get constipation and seek medical help immediately if you develop constipation with severe or constant belly (abdominal) pain and vomiting, swelling of abdomen or bloating. Constipation can occur when treated with Aimovig. It is usually mild or moderate in intensity. However, some patients using Aimovig have had constipation with serious complications and have been hospitalised. Some cases have required surgery.

### **Children and adolescents**

Do not give this medicine to children or adolescents (under 18 years old) because the use of Aimovig has not been studied in this age group.

### **Other medicines and Aimovig**

Tell your doctor or pharmacist if you are using, have recently used or might use any other medicines.

### **Pregnancy and breast-feeding**

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor for advice before using this medicine.

#### Pregnancy

Your doctor will decide whether you should stop using Aimovig during pregnancy.

#### Breast-feeding

Monoclonal antibodies like Aimovig are known to pass into breast milk during the first few days after birth, but after this first period Aimovig can be used. Talk to your doctor about using Aimovig while breast-feeding in order to help you decide whether you should stop breast-feeding or stop using Aimovig.

### **Driving and using machines**

Aimovig is unlikely to affect your ability to drive and use machines.

### **Aimovig contains sodium**

Aimovig contains less than 1 mmol sodium (23 mg) per dose, that is to say essentially “sodium-free”.

## **3. How to use Aimovig**

Always use this medicine exactly as your doctor has told you. Check with your doctor if you are not sure.

If your doctor prescribes the 70 mg dose you should have one injection once every 4 weeks. If your doctor prescribes the 140 mg dose you should have either one injection of Aimovig 140 mg or two injections of Aimovig 70 mg once every 4 weeks. If you are having two injections of Aimovig 70 mg, the second injection must be given immediately after the first one at a different injection site. Make sure that you inject the entire contents of both syringes.

Aimovig is given as an injection under your skin (known as a subcutaneous injection). You or your caregiver can give the injection into your abdomen or your thigh. The outer area of your upper arm can also be used as an injection site, but only if someone else is giving you the injection. If you need 2 injections, they should be given in different sites to avoid hardening of the skin and should not be given into areas where the skin is tender, bruised, red or hard.

Your doctor or nurse will give you or your caregiver training in the right way to prepare and inject Aimovig. Do not try to inject Aimovig until this training has been given.

If you have not noticed any treatment effect after 3 months, tell your doctor who will decide whether you should continue treatment.

Aimovig syringes are for single use only.

For detailed instructions on how to inject Aimovig, see “Instructions for use of Aimovig pre-filled syringe” at the end of this leaflet.

**If you use more Aimovig than you should**

If you have received more Aimovig than you should or if the dose has been given earlier than it should have been, tell your doctor.

**If you forget to use Aimovig**

- If you forget an Aimovig dose, take it as soon as possible after you realise.
- Then contact your doctor, who will tell you when you should schedule your next dose. Follow the new schedule exactly as your doctor has told you.

**If you stop using Aimovig**

Do not stop using Aimovig without talking to your doctor first. Your symptoms may return if you stop the treatment.

If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

#### **4. Possible side effects**

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Possible side effects are listed below. Most of these side effects are mild to moderate.

**Common: may affect up to 1 in 10 people**

- allergic reactions such as rash, swelling, hives or difficulty breathing (see section 2)
- constipation
- itching
- muscle spasms
- injection site reactions, such as pain, redness and swelling where the injection is given.

**Not known (frequency cannot be estimated from the available data)**

- skin reactions such as rash, itching, hair loss or mouth/lip sores.

**Reporting of side effects**

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via [the national reporting system listed in Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

#### **5. How to store Aimovig**

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the label and carton after EXP. The expiry date refers to the last day of that month.

Keep the syringe(s) in the outer carton in order to protect from light. Store in a refrigerator (2°C – 8°C). Do not freeze.

After Aimovig has been taken out of the refrigerator, it must be kept at room temperature (up to 25°C) in the outer carton and must be used within 7 days, or else discarded. Do not put Aimovig back in the refrigerator once it has been removed.

Do not use this medicine if you notice that the solution contains particles, is cloudy or is distinctly yellow.

Do not throw away any medicines via wastewater. Ask your pharmacist how to throw away medicines you no longer use. There may be local regulations for disposal. These measures will help protect the environment.

## **6. Contents of the pack and other information**

### **What Aimovig contains**

- The active substance is erenumab.
- Aimovig 70 mg solution for injection in pre-filled syringe contains 70 mg erenumab.
- Aimovig 140 mg solution for injection in pre-filled syringe contains 140 mg erenumab.
- The other ingredients are sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.

### **What Aimovig looks like and contents of the pack**

Aimovig solution for injection is clear to opalescent, colourless to light yellow, and practically free from particles.

Each pack contains one single-use pre-filled syringe.

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**This leaflet was last revised in**

**Other sources of information**

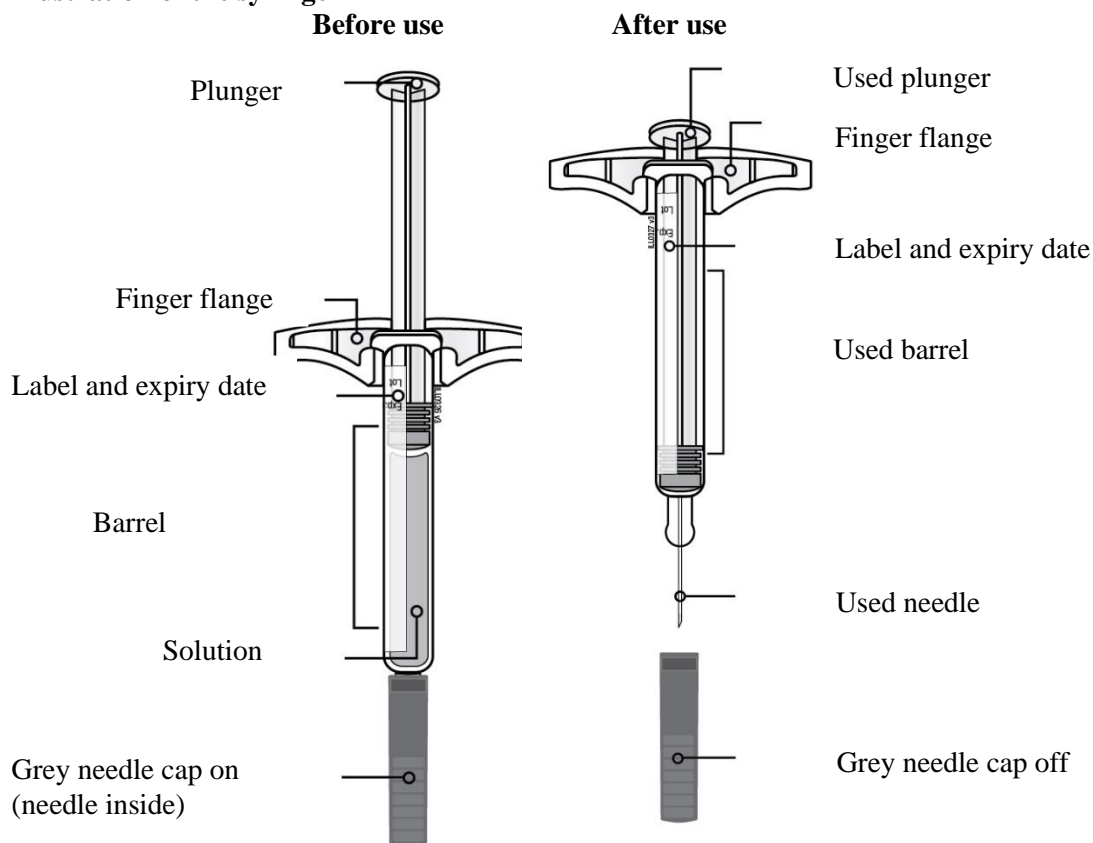
Detailed information on this medicine is available on the European Medicines Agency web site:

<http://www.ema.europa.eu>



## Instructions for use of Aimovig pre-filled syringe

### Illustration of the syringe



Note: Needle is inside the grey needle cap.

### General

**Before you use the Aimovig pre-filled syringe, read this important information:**



### Step 1: Prepare

Note: The prescribed dose of Aimovig is either 70 mg or 140 mg. This means that for the 70 mg dose you must inject the contents of one 70 mg single-use syringe. For the 140 mg dose you must inject the contents of either one 140 mg single-use syringe or two 70 mg single-use syringes, one after the other.

#### (A)

Remove Aimovig pre-filled syringe(s) from the carton by holding it/them at the barrel. You may need to use either one or two syringes based on your prescribed dose. Do not shake.

To avoid discomfort at the site of injection, leave the syringe(s) at room temperature for at least 30 minutes before injecting.

Note: Do not try to warm the syringe(s) by using a heat source such as hot water or microwave.

**(B)**

Inspect the syringe(s). Make sure the solution you see in the syringe is clear and colourless to light yellow.

Note:

- Do not use the syringe if any part of it appears cracked or broken.
- Do not use the syringe if it has been dropped.
- Do not use the syringe if the needle cap is missing or is not securely attached.

In all cases described above, use a new syringe, and if you are unsure contact your doctor or pharmacist.

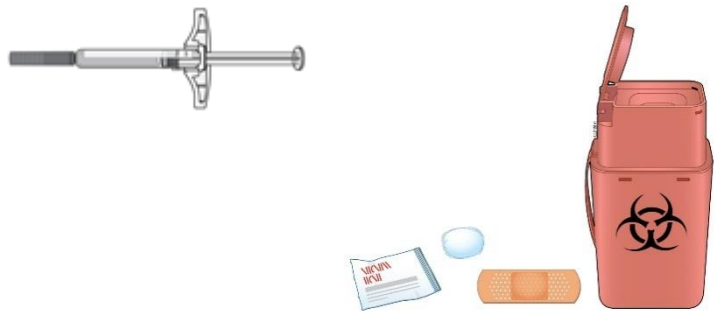
**(C)**

Gather all materials needed for the injections:

Wash your hands thoroughly with soap and water.

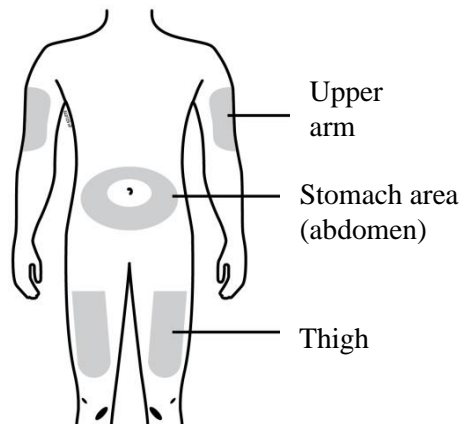
On a clean, well-lit work surface, place the:

- New syringe(s)
- Alcohol wipes
- Cotton balls or gauze pads
- Adhesive plasters
- Sharps disposal container



**(D)**

Prepare and clean the injection site(s).



**Only use the following injection sites:**

- Thigh
- Stomach area (abdomen) (except for a 5 cm area around the navel)
- Outer area of upper arm (only if someone else is giving you the injection)

Clean the injection site with an alcohol wipe and let the skin dry.

Choose a different site each time you give yourself an injection. If you need to use the same injection site, just make sure it is not the same spot on that site you used last time.

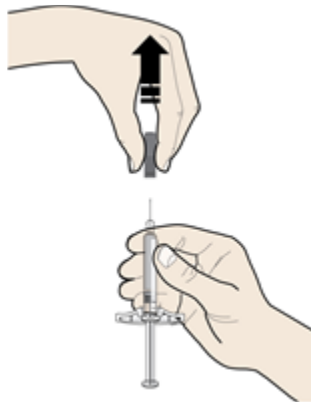
Note:

- After you have cleaned the area, do not touch it again before injecting.
- Do not choose an area where the skin is tender, bruised, red, or hard. Avoid injecting into areas with scars or stretch marks.

**Step 2: Get ready**

**(E)**

Pull the grey needle cap straight off and away from your body, only when you are ready to inject. The injection must be administered within 5 minutes. It is normal to see a drop of liquid at the end of the needle.

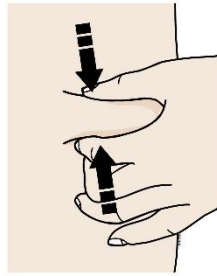


Note:

- Do not leave the grey needle cap off for more than 5 minutes. This can dry out the medicine.
- Do not twist or bend the grey needle cap.
- Do not put the grey needle cap back onto the syringe once it has been removed.

**(F)**

Firmly pinch the skin at the injection site.



Note: Keep skin pinched while injecting.

**Step 3: Inject**

**(G)**

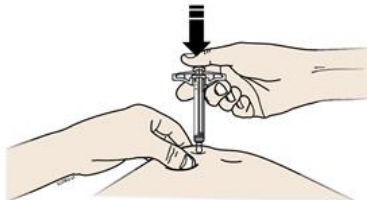
While pinching, insert the syringe needle into the skin at an angle of 45 to 90 degrees.



Do not place your finger on the plunger while inserting the needle.

**(H)**

Using slow and constant pressure, push the plunger rod all the way down until it stops moving.



**(I)**

When done, release your thumb, and gently lift the syringe off of the skin and then release the pinched skin.



Note: When you remove the syringe, if it looks like there is still medicine in the syringe barrel this means you have not received a full dose. Contact your doctor.

#### Step 4: Finish

(J)

Discard the used syringe and the grey needle cap.  
Put the used syringe in a sharps disposal container immediately after use. Talk to your doctor or pharmacist about proper disposal. There may be local regulations for disposal.

Note:

- Do not reuse the syringe.
  - Do not recycle the syringe or sharps disposal container.
- Always keep the sharps disposal container out of the reach of children.



(K)

Examine the injection site.

If there is any blood on the skin, press a cotton ball or gauze pad onto the injection site. Do not rub the injection site. Apply an adhesive plaster if needed.

**If your dose is 140 mg and you are using two Aimovig 70 mg syringes, repeat steps 1(D) to 4 with the second syringe to inject the full dose.**



## **Package leaflet: Information for the user**

### **Aimovig 70 mg solution for injection in pre-filled pen Aimovig 140 mg solution for injection in pre-filled pen erenumab**

**Read all of this leaflet carefully before you start using this medicine because it contains important information for you.**

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

#### **What is in this leaflet**

1. What Aimovig is and what it is used for
2. What you need to know before you use Aimovig
3. How to use Aimovig
4. Possible side effects
5. How to store Aimovig
6. Contents of the pack and other information

#### **1. What Aimovig is and what it is used for**

Aimovig contains the active substance erenumab. It belongs to a group of medicines called monoclonal antibodies.

Aimovig works by blocking the activity of the CGRP molecule, which has been linked to migraine (CGRP stands for calcitonin gene-related peptide).

Aimovig is used to prevent migraine in adults who have at least 4 migraine days per month when starting treatment with Aimovig.

#### **2. What you need to know before you use Aimovig**

##### **Do not use Aimovig**

- if you are allergic to erenumab or any of the other ingredients of this medicine (listed in section 6).

##### **Warnings and precautions**

Talk to your doctor before using Aimovig:

- if you have ever had an allergic reaction to rubber latex. The container of this medicinal product contains latex rubber within the cap.
- if you suffer from a cardiovascular disease. Aimovig has not been studied in patients with certain cardiovascular diseases.

Talk to your doctor or get emergency medical help immediately:

- if you get any symptoms of a serious allergic reaction, such as rash or swelling usually of the face, mouth, tongue, or throat; or difficulty breathing. Serious allergic reactions can happen within minutes, but some may happen more than one week after using Aimovig.
- Contact a doctor if you get constipation and seek medical help immediately if you develop constipation with severe or constant belly (abdominal) pain and vomiting, swelling of abdomen or bloating. Constipation can occur when treated with Aimovig. It is usually mild or moderate in intensity. However, some patients using Aimovig have had constipation with serious complications and have been hospitalised. Some cases have required surgery.

### **Children and adolescents**

Do not give this medicine to children or adolescents (under 18 years old) because the use of Aimovig has not been studied in this age group.

### **Other medicines and Aimovig**

Tell your doctor or pharmacist if you are using, have recently used or might use any other medicines.

### **Pregnancy and breast-feeding**

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor for advice before using this medicine.

#### Pregnancy

Your doctor will decide whether you should stop using Aimovig during pregnancy.

#### Breast-feeding

Monoclonal antibodies like Aimovig are known to pass into breast milk during the first few days after birth, but after this first period Aimovig can be used. Talk to your doctor about using Aimovig while breast-feeding in order to help you decide whether you should stop breast-feeding or stop using Aimovig.

### **Driving and using machines**

Aimovig is unlikely to affect your ability to drive and use machines.

### **Aimovig contains sodium**

Aimovig contains less than 1 mmol sodium (23 mg) per dose, that is to say essentially “sodium-free”.

## **3. How to use Aimovig**

Always use this medicine exactly as your doctor has told you. Check with your doctor if you are not sure.

If your doctor prescribes the 70 mg dose you should have one injection once every 4 weeks. If your doctor prescribes the 140 mg dose you should have either one injection of Aimovig 140 mg or two injections of Aimovig 70 mg once every 4 weeks. If you are having two injections of Aimovig 70 mg, the second injection must be given immediately after the first one at a different injection site. Make sure that you inject the entire contents of both pens.

Aimovig is given as an injection under your skin (known as a subcutaneous injection). You or your caregiver can give the injection into your abdomen or your thigh. The outer area of your upper arm can also be used as an injection site, but only if someone else is giving you the injection. If you need 2 injections, they should be given in different sites to avoid hardening of the skin and should not be given into areas where the skin is tender, bruised, red or hard.

Your doctor or nurse will give you or your caregiver training in the right way to prepare and inject Aimovig. Do not try to inject Aimovig until this training has been given.

If you have not noticed any treatment effect after 3 months, tell your doctor who will decide whether you should continue treatment.

Aimovig pens are for single use only.

For detailed instructions on how to inject Aimovig, see “Instructions for use of Aimovig pre-filled pen” at the end of this leaflet.

**If you use more Aimovig than you should**

If you have received more Aimovig than you should or if the dose has been given earlier than it should have been, tell your doctor.

**If you forget to use Aimovig**

- If you forget an Aimovig dose, take it as soon as possible after you realise.
- Then contact your doctor, who will tell you when you should schedule your next dose. Follow the new schedule exactly as your doctor has told you.

**If you stop using Aimovig**

Do not stop using Aimovig without talking to your doctor first. Your symptoms may return if you stop the treatment.

If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

#### **4. Possible side effects**

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Possible side effects are listed below. Most of these side effects are mild to moderate.

**Common: may affect up to 1 in 10 people**

- allergic reactions such as rash, swelling, hives or difficulty breathing (see section 2)
- constipation
- itching
- muscle spasms
- injection site reactions, such as pain, redness and swelling where the injection is given.

**Not known (frequency cannot be estimated from the available data)**

- skin reactions such as rash, itching, hair loss or mouth/lip sores.

**Reporting of side effects**

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in [Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

#### **5. How to store Aimovig**

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the label and carton after EXP. The expiry date refers to the last day of that month.

Keep the pen(s) in the outer carton in order to protect from light. Store in a refrigerator (2°C – 8°C). Do not freeze.



After Aimovig has been taken out of the refrigerator, it must be kept at room temperature (up to 25°C) in the outer carton and must be used within 7 days, or else discarded. Do not put Aimovig back in the refrigerator once it has been removed.

Do not use this medicine if you notice that the solution contains particles, is cloudy or is distinctly yellow.

Do not throw away any medicines via wastewater. Ask your pharmacist how to throw away medicines you no longer use. There may be local regulations for disposal. These measures will help protect the environment.

## **6. Contents of the pack and other information**

### **What Aimovig contains**

- The active substance is erenumab.
- Aimovig 70 mg solution for injection in pre-filled pen contains 70 mg erenumab.
- Aimovig 140 mg solution for injection in pre-filled pen contains 140 mg erenumab.
- The other ingredients are sucrose, polysorbate 80, sodium hydroxide, glacial acetic acid, water for injections.

### **What Aimovig looks like and contents of the pack**

Aimovig solution for injection is clear to opalescent, colourless to light yellow, and practically free from particles.

Aimovig is available in packs containing one single-use pre-filled pen and in multipacks containing 3 (3x1) pre-filled pens.

Not all pack sizes may be marketed.

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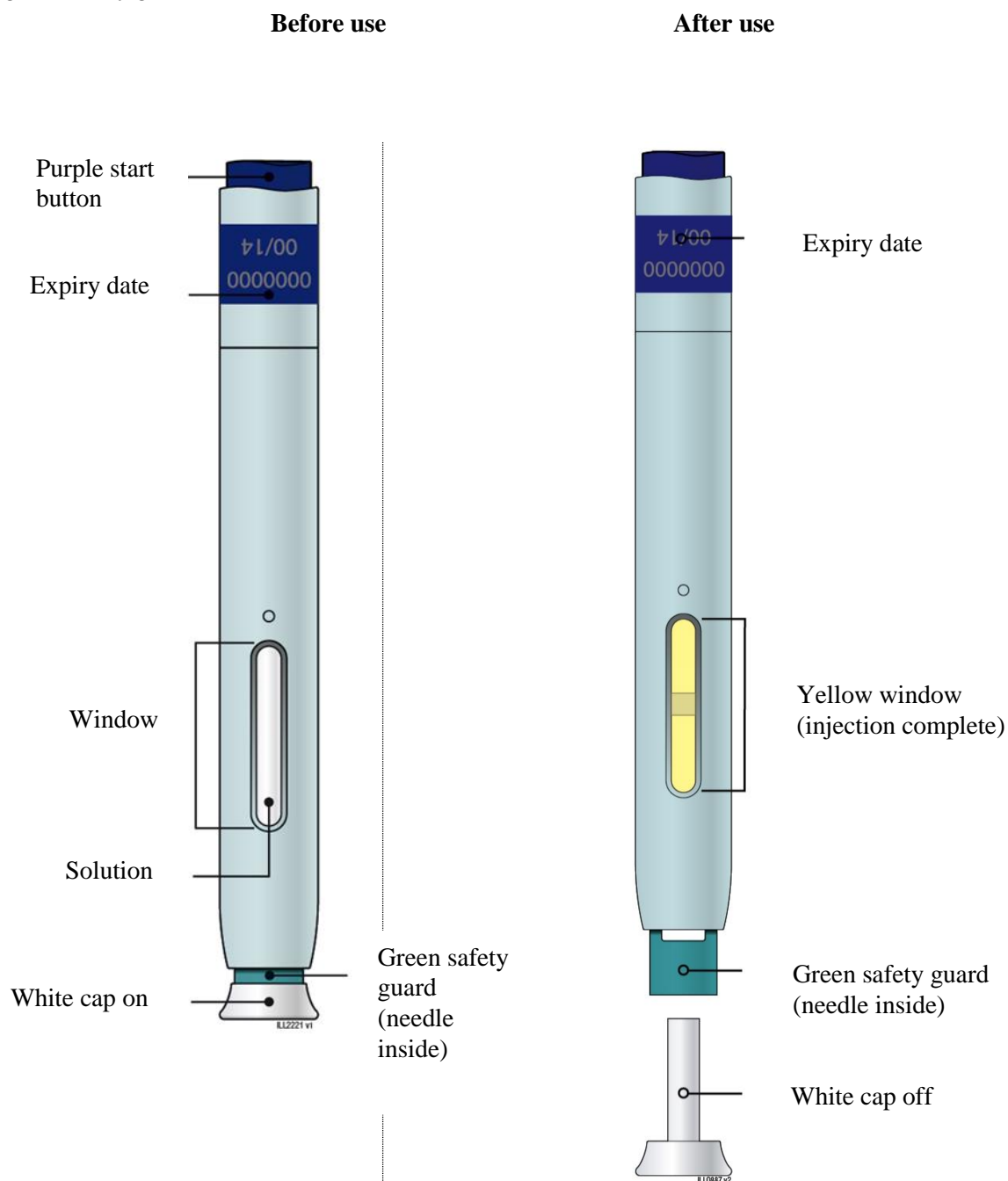
**This leaflet was last revised in**

**Other sources of information**

Detailed information on this medicine is available on the European Medicines Agency web site:  
<http://www.ema.europa.eu>

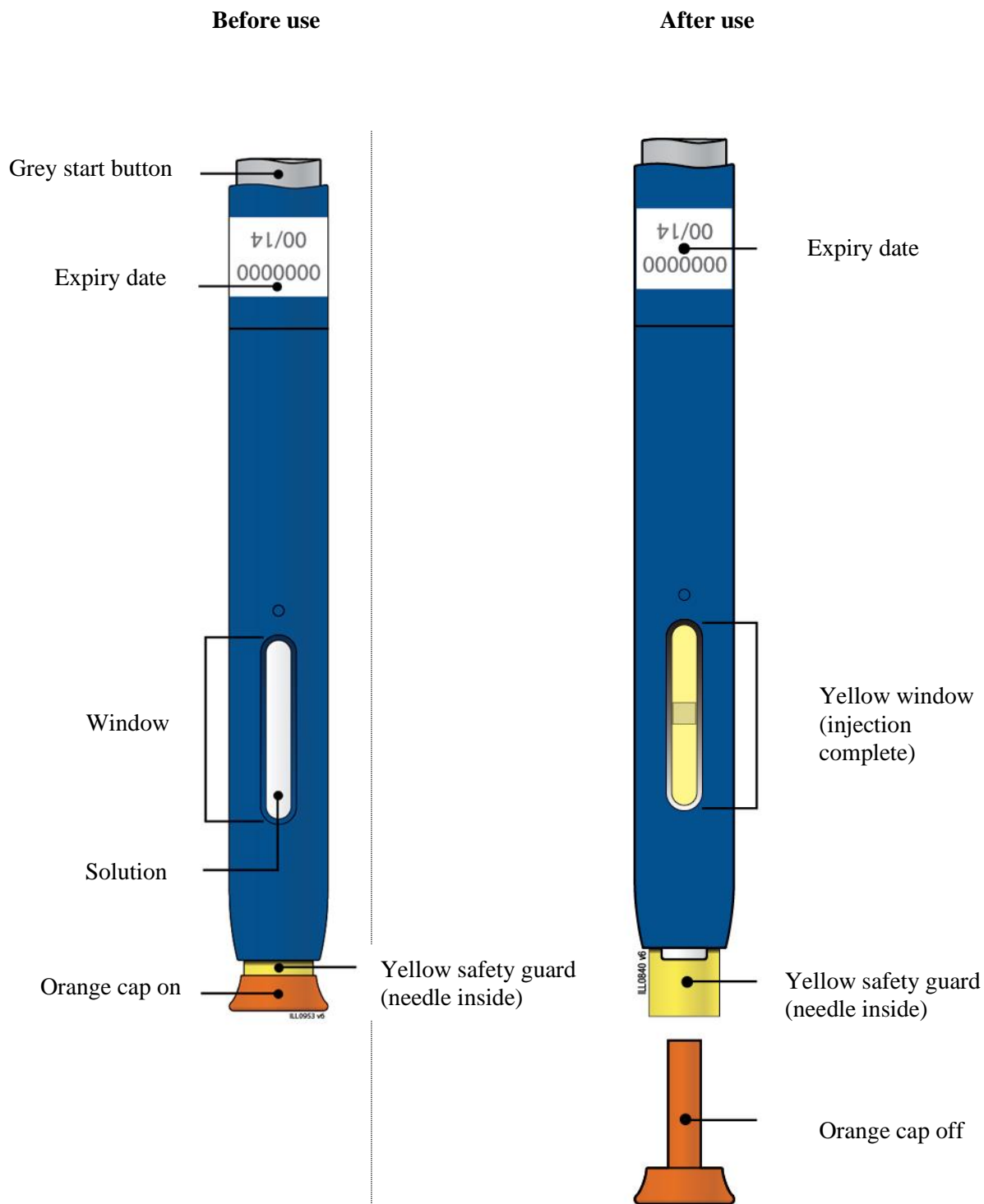
Instructions for use of Aimovig pre-filled pens

**Illustration of the Aimovig 70 mg pen** (with light blue body, purple start button, white cap and green safety guard)



Note: Needle is inside the green safety guard.

**Illustration of the Aimovig 140 mg pen (with dark blue body, grey start button, orange cap and yellow safety guard)**



Note: Needle is inside the yellow safety guard.

## General

**Before you use the Aimovig pre-filled pen, read this information.**



### Step 1: Prepare

Note: The prescribed dose of Aimovig is either 70 mg or 140 mg. This means that for the 70 mg dose you must inject the contents of one 70 mg single-use pen. For the 140 mg dose you must inject the contents of either one 140 mg single-use pen or two 70 mg single-use pens, one after the other.

#### (A)

Carefully lift Aimovig pre-filled pen(s) out of the carton. You may need to use either one or two pens based on your prescribed dose. Do not shake.

To avoid discomfort at the site of injection, leave the pen(s) at room temperature for at least 30 minutes before injecting.

Note: Do not try to warm the pen(s) by using a heat source such as hot water or microwave.

#### (B)

Inspect the pen(s). Make sure the solution you see in the window is clear and colourless to light yellow.

Note:

- Do not use the pen(s) if any part appears cracked or broken.
- Do not use any pen that has been dropped.
- Do not use the pen if the cap is missing or is not securely attached.

In all cases described above, use a new pen, and if you are unsure contact your doctor or pharmacist.

#### (C)

Gather all materials needed for the injection(s).

Wash your hands thoroughly with soap and water.

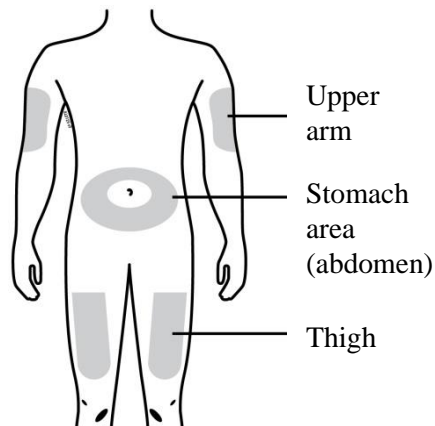
On a clean, well-lit work surface, place the:

- New pen(s)
- Alcohol wipe(s)
- Cotton ball(s) or gauze pad(s)
- Adhesive plaster(s)
- Sharps disposal container



**(D)**

Prepare and clean the injection site(s).



**Only use the following injection sites:**

- Thigh
- Stomach area (abdomen) (except for a 5 cm area around the navel)
- Outer area of upper arm (only if someone else is giving you the injection)

Clean the injection site with an alcohol wipe and let the skin dry.

Choose a different site each time you give yourself an injection. If you need to use the same injection site, just make sure it is not the same spot on that site you used last time.

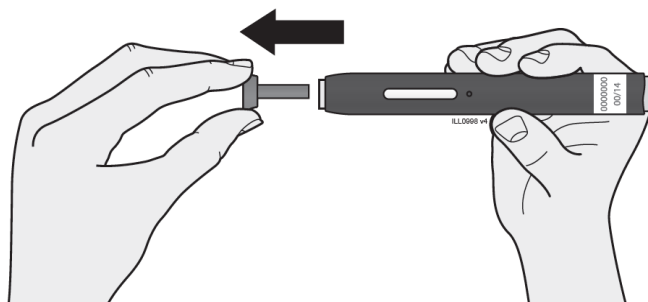
Note:

- After you have cleaned the area, do not touch it again before injecting.
- Do not choose an area where the skin is tender, bruised, red, or hard. Avoid injecting into areas with scars or stretch marks.

**Step 2: Get ready**

**(E)**

Pull the cap straight off, only when you are ready to inject. The injection must be administered **within 5 minutes**. It is normal to see a drop of liquid at the end of the needle or safety guard.



Note:

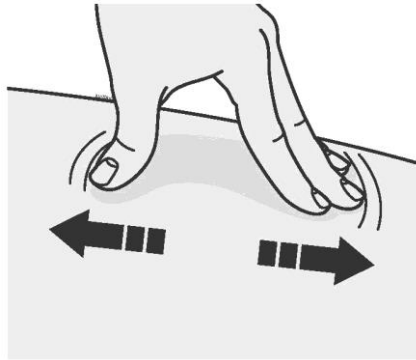
- Do not leave the cap off for more than 5 minutes. This can dry out the medicine.
- Do not twist or bend the cap.
- Do not put the cap back onto the pen once it has been removed.
- Do not put your fingers into the safety guard.

(F)

Create a firm surface at the selected injection site (thigh, stomach, or outer areas of the upper arm), by using **either** the Stretch method **or** the Pinch method.

**Stretch method**

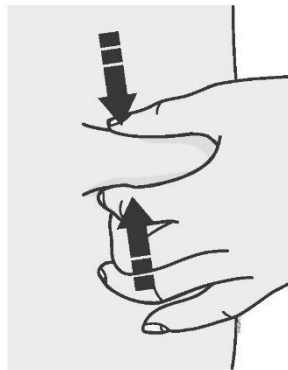
Stretch skin firmly by moving your thumb and fingers in opposite directions, creating an area about **five** cm wide.



or

**Pinch method**

Pinch skin firmly between your thumb and fingers, creating an area about **five** cm wide.



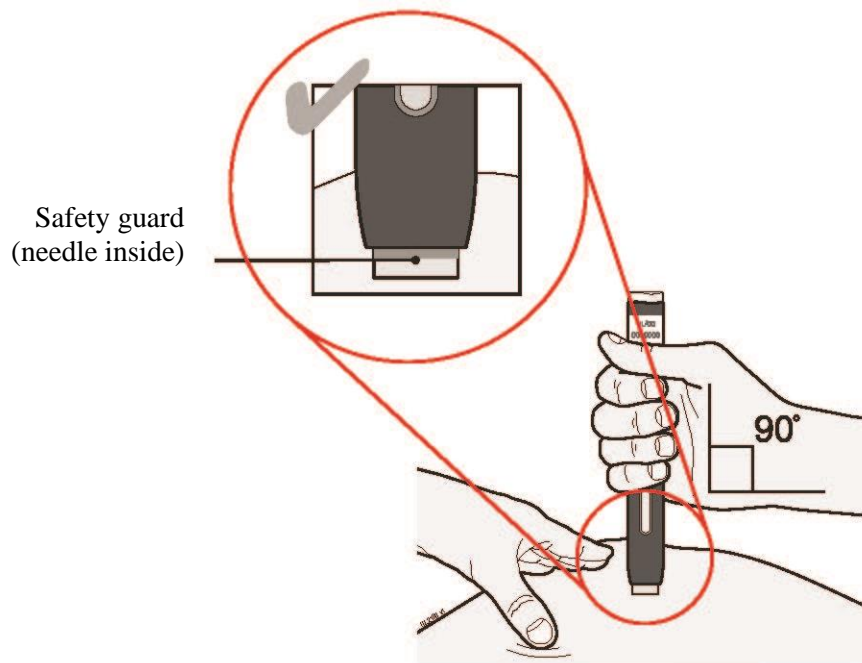
Note: It is important to keep skin stretched or pinched while injecting.



### Step 3: Inject

(G)

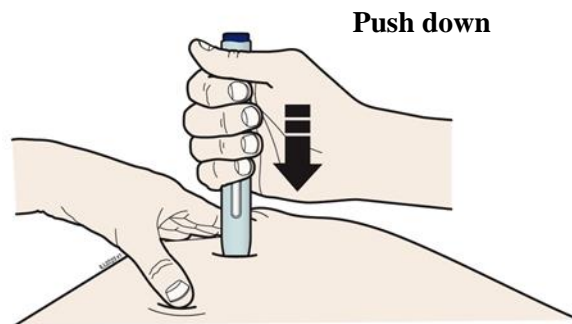
Keep holding the stretched/pinched skin. With the cap off, put the safety guard of the pen on the skin at an angle of 90 degrees. The needle is inside the safety guard.



Note: Do not touch the start button yet.

**(H)**

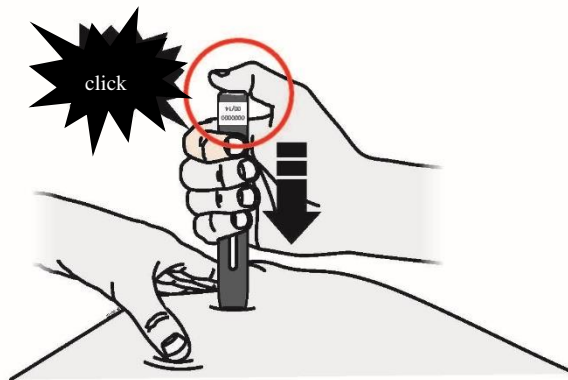
Firmly push the pen down onto the skin until it stops moving.



Note: You must push all the way down but do not touch the start button until you are ready to inject.

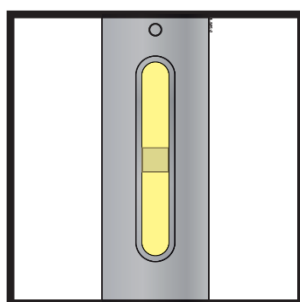
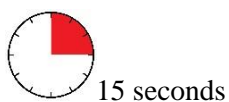
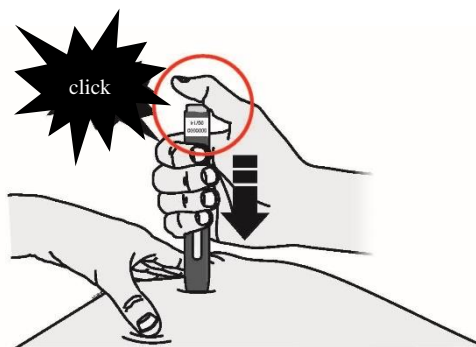
**(I)**

**Press** the start button. You will hear a click.

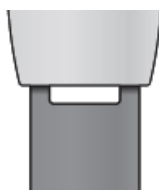


**(J)**

Remove your thumb from the button, but keep pushing down on the skin. The injection could take about 15 seconds.



Note: When the injection is completed, the window will turn from clear to yellow and you may hear a second click.



Note:

- After you remove the pen from the skin, the needle will automatically be covered by the safety guard.
- When you remove the pen, if the window has not turned yellow, or if it looks like the medicine is still injecting, this means you have not received a full dose. Contact your doctor immediately.

#### Step 4: Finish

##### (K)

Discard the used pen and the cap.

Put the used pen in a sharps disposal container immediately after use. Talk to your doctor or pharmacist about proper disposal. There may be local regulations for disposal.

Note:

- Do not reuse the pen.
- Do not recycle the pen or sharps disposal container.
- Always keep the sharps disposal container out of the reach of children.



##### (L)

Examine the injection site.

If there is any blood on the skin, press a cotton ball or gauze pad onto the injection site. Do not rub the injection site. Apply an adhesive plaster if needed.

**If your dose is 140 mg and you are using two Aimovig 70 mg pens, repeat steps 1(D) to 4 with the second pen to inject the full dose.**

