

ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Renagel 400 mg film-coated tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains 400 mg sevelamer hydrochloride.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Film-coated tablet (tablet)

The off-white, oval tablets are imprinted with “Renagel 400” on one side.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Renagel is indicated for the control of hyperphosphataemia in adult patients receiving haemodialysis or peritoneal dialysis. Renagel should be used within the context of a multiple therapeutic approach, which could include calcium supplements, 1,25-dihydroxy Vitamin D₃ or one of its analogues to control the development of renal bone disease.

4.2 Posology and method of administration

Posology

Starting dose

The recommended starting dose of sevelamer hydrochloride is 2.4 g, 3.6 g or 4.8 g per day based on clinical needs and serum phosphorus level. Renagel must be taken three times per day with meals.

| Serum phosphate level in patients not on phosphate binders | Starting dose of Renagel 400 mg tablets |
|--|---|
| 1.76 – 2.42 mmol/L (5.5-7.5 mg/dl) | 2 tablets, 3 times per day |
| 2.42- 2.91 mmol/L (7.5-9 mg/dl) | 3 tablets, 3 times per day |
| > 2.91 mmol/L | 4 tablets, 3 times per day |

For patients previously on phosphate binders, Renagel should be given on a gram for gram basis with monitoring of serum phosphorus levels to ensure optimal daily doses.

Titration and maintenance

Serum phosphate levels should be closely monitored and the dose of sevelamer hydrochloride titrated by 0.4 g or 0.8 g three times per day (1.2 g/day or 2.4 g/day) increments with the goal of lowering serum phosphate to 1.76 mmol/L (5.5mg/dl) or less. Serum phosphate should be tested every two to three weeks until a stable serum phosphate level is reached and on a regular basis thereafter.

The dose range may vary between 1 and 10 tablets per meal. The average actual daily dose used in the chronic phase of a one year clinical study was 7 grams of sevelamer.

Paediatric population

The safety and efficacy of this product have not been established in patients below the age of 18 years.

Renal impairment

The safety and efficacy of this product have not been established in predialysis patients.

Method of administration

For oral use.

Patients should take Renagel with meals and adhere to their prescribed diets. The tablets must be swallowed whole. Do not crush, chew or break into pieces prior to administration.

4.3 Contraindications

- Hypersensitivity to sevelamer or to any of the excipients listed in section 6.1.
- Hypophosphataemia
- Bowel obstruction.

4.4 Special warnings and precautions for use

Efficacy and safety of Renagel has not been studied in patients with:

- swallowing disorders
- active inflammatory bowel disease
- gastrointestinal motility disorders including untreated or severe gastroparesis, diverticulosis retention of gastric contents and abnormal or irregular bowel motion
- patients with a history of major gastrointestinal surgery

Therefore caution should be exercised when Renagel is used in patients with these disorders.

Intestinal obstruction and ileus/subileus

In very rare cases, intestinal obstruction and ileus/subileus have been observed in patients during treatment with sevelamer hydrochloride. Constipation may be a preceding symptom. Patients who are constipated should be monitored carefully while being treated with sevelamer hydrochloride. Renagel treatment should be re-evaluated in patients who develop severe constipation or other severe gastrointestinal symptoms.

Fat-soluble vitamins

Depending on diet intake and the nature of end stage renal failure, dialysis patients may develop low vitamin A, D, E and K levels. It cannot be excluded that Renagel can bind fat-soluble vitamins contained in ingested food. Therefore, in patients not taking these vitamins, monitoring vitamin A, D and E levels and assessing vitamin K status through the measurement of thromboplastin time should be considered and the vitamins should be supplemented if necessary. Additional monitoring of vitamins and folic acid is recommended in patients receiving peritoneal dialysis, since in the clinical study, vitamin A, D, E and K levels were not measured in these patients.

Folate deficiency

There is at present insufficient data to exclude the possibility of folate deficiency during long term Renagel treatment.

Hypocalcaemia/hypercalcaemia

Patients with renal insufficiency may develop hypocalcaemia or hypercalcaemia. Renagel does not contain calcium. Serum calcium levels should be monitored as is done in normal follow-up of a dialysis patient. Elemental calcium should be given as a supplement in case of hypocalcaemia.

Metabolic acidosis

Patients with chronic renal failure are predisposed to developing metabolic acidosis. Worsening of acidosis has been reported upon switching from other phosphate binders to sevelamer in a number of studies where lower bicarbonate levels in the sevelamer-treated patients compared to patients treated with calcium-based binders were observed. Closer monitoring of serum bicarbonate levels is therefore recommended.

Peritonitis

Patients receiving dialysis are subject to certain risks for infection specific to the dialysis modality. Peritonitis is a known complication in patients receiving peritoneal dialysis (PD) and in a clinical study with Renagel, a number of peritonitis cases were reported. Therefore, patients on PD should be closely monitored to ensure the reliable use of appropriate aseptic technique with the prompt recognition and management of any signs and symptoms associated with peritonitis.

Swallowing and choking difficulties

Uncommon reports of difficulty swallowing the Renagel tablet have been reported. Many of these cases involved patients with co-morbid conditions including swallowing disorders or oesophageal abnormalities. Caution should be exercised when Renagel is used in patients with difficulty swallowing.

Hypothyroidism

Closer monitoring of patients with hypothyroidism co-administered with sevelamer hydrochloride and levothyroxine is recommended (see section 4.5).

Long term chronic treatment

As data on the chronic use of sevelamer for over one year are not yet available, potential absorption and accumulation of sevelamer during long-term chronic treatment cannot be totally excluded (see section 5.2).

Hyperparathyroidism

Renagel alone is not indicated for the control of hyperparathyroidism. In patients with secondary hyperparathyroidism Renagel should be used within the context of a multiple therapeutic approach, which could include calcium supplements, 1,25-dihydroxy Vitamin D₃ or one of its analogues to lower the intact parathyroid hormone (iPTH) levels.

Serum chloride

Serum chloride may increase during Renagel treatment as chloride may be exchanged for phosphorus in the intestinal lumen. Although no clinically significant serum chloride increase has been observed in the clinical studies, serum chloride should be monitored as is done in the routine follow-up of a dialysis patient. One gram of Renagel contains approximately 180 mg (5.1 mEq) chloride.

Inflammatory Gastrointestinal Disorders

Cases of serious inflammatory disorders of different parts of the gastrointestinal tract (including serious complications such as haemorrhage, perforation, ulceration, necrosis, colitis and colonic/caecal mass) associated with the presence of sevelamer crystals have been reported (see section 4.8). Inflammatory disorders may resolve upon sevelamer discontinuation. Sevelamer hydrochloride treatment should be re-evaluated in patients who develop severe gastrointestinal symptoms.

4.5 Interaction with other medicinal products and other forms of interaction

Dialysis

Interaction studies have not been conducted in patients on dialysis.

Ciprofloxacin

In interaction studies in healthy volunteers, sevelamer hydrochloride decreased the bioavailability of ciprofloxacin by approximately 50% when co-administered with Renagel in a single dose study. Consequently, Renagel should not be taken simultaneously with ciprofloxacin.

Anti-arrhythmics and anti-seizure medicinal products

Patients taking anti-arrhythmic medicinal products for the control of arrhythmias and anti-seizure medicinal products for the control of seizure disorders were excluded from clinical trials. Caution

should be exercised when prescribing sevelamer hydrochloride to patients also taking these medicinal products.

Levothyroxine

During post marketing experience, very rare cases of increased thyroid stimulating hormone (TSH) levels have been reported in patients co-administered sevelamer hydrochloride and levothyroxine. Closer monitoring of TSH levels is therefore recommended in patients receiving both medicinal products.

Ciclosporin, mycophenolate mofetil and tacrolimus in transplant patients

Reduced levels of ciclosporin, mycophenolate mofetil and tacrolimus have been reported in transplant patients when coadministered with sevelamer hydrochloride without any clinical consequences (i.e. graft rejection). The possibility of an interaction cannot be excluded and a close monitoring of blood concentrations of mycophenolate mofetil, ciclosporin and tacrolimus should be considered during the use of combination and after its withdrawal.

Digoxin, warfarin, enalapril or metoprolol

In interaction studies in healthy volunteers, Renagel had no effect on the bioavailability of digoxin, warfarin, enalapril or metoprolol.

Proton pump inhibitors

During post-marketing experience, very rare cases of increased phosphate levels have been reported in patients taking proton pump inhibitors co-administered with sevelamer hydrochloride.

Bioavailability

Renagel is not absorbed and may affect the bioavailability of other medicinal products. When administering any medicinal product where a reduction in the bioavailability could have a clinically significant effect on safety or efficacy, the medicinal product should be administered at least one hour before or three hours after Renagel, or the physician should consider monitoring blood levels.

4.6 Fertility, pregnancy and lactation

Pregnancy

The safety of sevelamer hydrochloride has not been established in pregnant women. In animal studies there was no evidence that sevelamer induced embryo-foetal toxicity. Renagel should only be given to pregnant women if clearly needed and after a careful risk/benefit analysis has been conducted for both the mother and the foetus (see section 5.3).

Breast-feeding

The safety of sevelamer hydrochloride has not been established in breast-feeding women. Renagel should only be given to breast-feeding women if clearly needed and after a careful risk/benefit analysis has been conducted for both the mother and the infant (see section 5.3).

Fertility

There are no data from the effect of sevelamer on fertility in humans. Studies in animals have shown that sevelamer did not impair fertility in male or female rats at exposures at a human equivalent dose 2 times the maximum clinical trial dose of 13 g/day, based on a comparison of relative body surface area.

4.7 Effects on ability to drive and use machines

Sevelamer has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

Summary of the safety profile

The most frequently occurring ($\geq 5\%$ of patients) adverse reactions were all in the gastrointestinal disorders system organ class.

Tabulated list of adverse reactions

Parallel design studies involving 244 haemodialysis patients with treatment duration of up to 54 weeks and 97 peritoneal dialysis patients with treatment duration of 12 weeks were conducted.

Adverse reactions from these studies (299 patients), from uncontrolled clinical trials (384 patients), and that were spontaneously reported from post-marketing experience are listed by frequency in the table below. The reporting rate is classified as 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).

| MedDRA System Organ Class | Very Common | Common | Uncommon | Very Rare | Not known |
|--|------------------|--|---|-------------------|---|
| Immune system disorders | | | | Hypersensitivity* | |
| Metabolism and nutrition disorders | | | Acidosis, increased serum chloride levels | | |
| Gastrointestinal disorders | Nausea, vomiting | Diarrhoea, dyspepsia, flatulence, upper abdominal pain, constipation | | | Abdominal pain, intestinal obstruction, ileus/subileus, diverticulitis, intestinal perforation ¹ , gastrointestinal hemorrhage* ¹ , intestinal ulceration* ¹ , gastrointestinal necrosis* ¹ , colitis* ¹ , intestinal mass* ¹ |
| Skin and subcutaneous tissue disorders | | | | | Pruritus, rash |
| Investigations | | | | | Crystal deposit intestine* ¹ |

*post-marketing experience

¹ See inflammatory gastrointestinal disorders warning in section 4.4

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

Renagel has been given to normal healthy volunteers in doses up to 14 grams, the equivalent of thirty five 400 mg tablets per day for eight days with no undesirable effects.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Treatment of hyperphosphatemia. ATC code: V03AE02.

Renagel contains sevelamer, a non-absorbed phosphate binding poly (allylamine hydrochloride) polymer, free of metal and calcium. It contains multiple amines separated by one carbon from the polymer backbone. These amines become partially protonated in the intestine and interact with phosphate molecules through ionic and hydrogen bonding. By binding phosphate in the gastrointestinal tract, sevelamer lowers the phosphate concentration in the serum.

In clinical trials, sevelamer has been shown to be effective in reducing serum phosphorus in patients receiving haemodialysis or peritoneal dialysis.

Sevelamer decreases the incidence of hypercalcaemic episodes as compared to patients using calcium based phosphate binders alone, probably because the product itself does not contain calcium. The effects on phosphate and calcium were proven to be maintained throughout a study with one year follow-up.

Sevelamer has been shown to bind bile acids *in vitro* and *in vivo* in experimental animal models. Bile acid binding by ion exchange resins is a well-established method of lowering blood cholesterol. In clinical trials mean total and LDL cholesterol declined by 15-31%. This effect is observed after 2 weeks is maintained with long-term treatment. Triglycerides, HDL cholesterol and albumin did not change.

In the clinical studies in haemodialysis patients, sevelamer alone did not have a consistent and clinically significant effect on serum intact parathyroid hormone (iPTH). In the 12 week study involving peritoneal dialysis patients however, similar iPTH reductions were seen compared with patients receiving calcium acetate. In patients with secondary hyperparathyroidism Renagel should be used within the context of a multiple therapeutic approach, which could include calcium supplements, 1,25-dihydroxy Vitamin D₃ or one of its analogues to lower the iPTH levels.

In a clinical trial of one-year duration, Renagel had no adverse effect on bone turnover or mineralisation compared to calcium carbonate.

5.2 Pharmacokinetic properties

Renagel is not absorbed from the gastrointestinal tract according to a single dose pharmacokinetic study in healthy volunteers. Pharmacokinetic studies have not been carried out in renal failure patients (see section 4.4).

5.3 Preclinical safety data

In preclinical studies in rats and dogs, Renagel at a dose of 10 times the maximum human doses reduced absorption of fat soluble vitamins D, E and K, and folic acid.

In a study in rats, administering sevelamer in 15-30 x the human dose, an increase in serum copper was detected. This was not confirmed in a dog study or in clinical trials.

Currently, no formal carcinogenicity data are available. However, *in vitro* and *in vivo* studies have indicated that Renagel does not have genotoxic potential. Also the medicinal product is not absorbed in the gastrointestinal tract.

In reproduction studies there was no evidence that sevelamer induced embryolethality, foetotoxicity or teratogenicity at the doses tested (up to 1 g/kg/day in rabbits and up to 4.5 g/kg/day in rats). Deficits in skeletal ossification were observed in several locations in fetuses of female rats dosed with sevelamer at 8-20 times the maximum human dose of 200 mg/kg. The effects may be secondary to vitamin D and/or vitamin K depletion at these high doses.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Tablet core:

Silica, colloidal anhydrous

Stearic acid

Film-coating:

Hypromellose (E464)

Diacetylated monoglycerides

Printing ink:

Iron oxide black (E172)

Propylene glycol

Hypromellose (E464)

6.2 Incompatibilities

Not applicable

6.3 Shelf-life

2 years.

6.4 Special precautions for storage

Do not store above 25°C.

Keep the bottle tightly closed in order to protect from moisture.

6.5 Nature and contents of container

HDPE bottles, with a child resistant polypropylene closure and a foil induction seal.

Package sizes are:

1 bottle of 360 film-coated tablets

multipacks containing 720 film-coated tablets (2 bottles of 360 tablets)

multipacks containing 1080 film-coated tablets (3 bottles of 360 tablets)

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

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

7. MARKETING AUTHORISATION HOLDER

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

8. MARKETING AUTHORISATION NUMBER(S)

EU/1/99/123/005 1 bottle of 360 film-coated tablets
EU/1/99/123/006 multipacks containing 720 film-coated tablets (2 bottles of 360 tablets)
EU/1/99/123/007 multipacks containing 1080 film-coated tablets (3 bottles of 360 tablets)

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 28 January 2000
Date of latest renewal: 19 November 2014

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/>.

1. NAME OF THE MEDICINAL PRODUCT

Renagel 800 mg film-coated tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains 800 mg sevelamer hydrochloride.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Film-coated tablet (tablet)

Off-white oval and film-coated tablet, engraved with “RG800” on one side.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Renagel is indicated for the control of hyperphosphataemia in adult patients receiving haemodialysis or peritoneal dialysis. Renagel should be used within the context of a multiple therapeutic approach, which could include calcium supplements, 1,25-dihydroxy Vitamin D₃ or one of its analogues to control the development of renal bone disease.

4.2 Posology and method of administration

Posology

Starting dose

The recommended starting dose of sevelamer hydrochloride is 2.4 g or 4.8 g per day based on clinical needs and serum phosphorus level. Renagel must be taken three times per day with meals.

| Serum phosphate level in patients not on phosphate binders | Starting dose of Renagel 800 mg tablets |
|--|---|
| 1.76 – 2.42 mmol/L (5.5-7.5 mg/dl) | 1 tablet, 3 times per day |
| > 2.42 mmol/L (>7.5 mg/dl) | 2 tablets, 3 times per day |

For patients previously on phosphate binders, Renagel should be given on a gram for gram basis with monitoring of serum phosphorus levels to ensure optimal daily doses.

Titration and maintenance

Serum phosphate levels should be closely monitored and the dose of sevelamer hydrochloride titrated by 0.8 g three times per day (2.4 g/day) increments with the goal of lowering serum phosphate to 1.76 mmol/L (5.5 mg/dl) or less. Serum phosphate should be tested every two to three weeks until a stable serum phosphate level is reached and on a regular basis thereafter.

The dose range may vary between 1 and 5 tablets of 800 mg per meal. The average actual daily dose used in the chronic phase of a one year clinical study was 7 grams of sevelamer.

Paediatric population

The safety and efficacy of this product have not been established in patients below the age of 18 years.

Renal impairment

The safety and efficacy of this product have not been established in predialysis patients.

Method of administration

For oral use

Patients should take Renagel with meals and adhere to their prescribed diets. The tablets must be swallowed whole. Do not crush, chew or break into pieces prior to administration.

4.3 Contraindications

- Hypersensitivity to sevelamer or to any of the excipients listed in section 6.1.
- Hypophosphataemia
- Bowel obstruction.

4.4 Special warnings and precautions for use

Efficacy and safety of Renagel has not been studied in patients with:

- swallowing disorders
- active inflammatory bowel disease
- gastrointestinal motility disorders including untreated or severe gastroparesis, diverticulosis retention of gastric contents and abnormal or irregular bowel motion
- patients with a history of major gastrointestinal surgery

Therefore caution should be exercised when Renagel is used in patients with these disorders.

Intestinal obstruction and ileus/subileus

In very rare cases, intestinal obstruction and ileus/subileus have been observed in patients during treatment with sevelamer hydrochloride. Constipation may be a preceding symptom. Patients who are constipated should be monitored carefully while being treated with sevelamer hydrochloride. Renagel treatment should be re-evaluated in patients who develop severe constipation or other severe gastrointestinal symptoms.

Fat-soluble vitamins

Depending on diet intake and the nature of end stage renal failure, dialysis patients may develop low vitamin A, D, E and K levels. It cannot be excluded that Renagel can bind fat-soluble vitamins contained in ingested food. Therefore, in patients not taking these vitamins, monitoring vitamin A, D and E levels and assessing vitamin K status through the measurement of thromboplastin time should be considered and the vitamins should be supplemented if necessary. Additional monitoring of vitamins and folic acid is recommended in patients receiving peritoneal dialysis, since in the clinical study, vitamin A, D, E and K levels were not measured in these patients.

Folate deficiency

There is at present insufficient data to exclude the possibility of folate deficiency during long term Renagel treatment.

Hypocalcaemia/hypercalcaemia

Patients with renal insufficiency may develop hypocalcaemia or hypercalcaemia. Renagel does not contain calcium. Serum calcium levels should be monitored as is done in normal follow-up of a dialysis patient. Elemental calcium should be given as a supplement in case of hypocalcaemia.

Metabolic acidosis

Patients with chronic renal failure are predisposed to developing metabolic acidosis. Worsening of acidosis has been reported upon switching from other phosphate binders to sevelamer in a number of studies where lower bicarbonate levels in the sevelamer-treated patients compared to patients treated with calcium-based binders were observed. Closer monitoring of serum bicarbonate levels is therefore recommended.

Peritonitis

Patients receiving dialysis are subject to certain risks for infection specific to the dialysis modality. Peritonitis is a known complication in patients receiving peritoneal dialysis (PD) and in a clinical study with Renagel, a number of peritonitis cases were reported. Therefore, patients on PD should be closely monitored to ensure the reliable use of appropriate aseptic technique with the prompt recognition and management of any signs and symptoms associated with peritonitis.

Swallowing and choking difficulties

Uncommon reports of difficulty swallowing the Renagel tablet have been reported. Many of these cases involved patients with co-morbid conditions including swallowing disorders or oesophageal abnormalities. Caution should be exercised when Renagel is used in patients with difficulty swallowing.

Hypothyroidism

Closer monitoring of patients with hypothyroidism co-administered with sevelamer hydrochloride and levothyroxine is recommended (see section 4.5).

Long term chronic treatment

As data on the chronic use of sevelamer for over one year are not yet available, potential absorption and accumulation of sevelamer during long-term chronic treatment cannot be totally excluded (see section 5.2).

Hyperparathyroidism

Renagel alone is not indicated for the control of hyperparathyroidism. In patients with secondary hyperparathyroidism Renagel should be used within the context of a multiple therapeutic approach, which could include calcium supplements, 1,25-dihydroxy Vitamin D₃ or one of its analogues to lower the intact parathyroid hormone (iPTH) levels.

Serum chloride

Serum chloride may increase during Renagel treatment as chloride may be exchanged for phosphorus in the intestinal lumen. Although no clinically significant serum chloride increase has been observed in the clinical studies, serum chloride should be monitored as is done in the routine follow-up of a dialysis patient. One gram of Renagel contains approximately 180 mg (5.1 mEq) chloride.

Inflammatory Gastrointestinal Disorders

Cases of serious inflammatory disorders of different parts of the gastrointestinal tract (including serious complications such as haemorrhage, perforation, ulceration, necrosis, colitis and colonic/caecal mass) associated with the presence of sevelamer crystals have been reported (see section 4.8). Inflammatory disorders may resolve upon sevelamer discontinuation. Sevelamer hydrochloride treatment should be re-evaluated in patients who develop severe gastrointestinal symptoms.

4.5 Interaction with other medicinal products and other forms of interaction

Dialysis

Interaction studies have not been conducted in patients on dialysis.

Ciprofloxacin

In interaction studies in healthy volunteers, sevelamer hydrochloride decreased the bioavailability of ciprofloxacin by approximately 50% when co-administered with Renagel in a single dose study. Consequently, Renagel should not be taken simultaneously with ciprofloxacin.

Anti-arrhythmics and anti-seizure medicinal products

Patients taking anti-arrhythmic medicinal products for the control of arrhythmias and anti-seizure medicinal products for the control of seizure disorders were excluded from clinical trials. Caution should be exercised when prescribing sevelamer hydrochloride to patients also taking these medicinal products.

Levothyroxine

During post marketing experience, very rare cases of increased thyroid stimulating hormone (TSH) levels have been reported in patients co-administered sevelamer hydrochloride and levothyroxine. Closer monitoring of TSH levels is therefore recommended in patients receiving both medicinal products.

Ciclosporin, mycophenolate mofetil and tacrolimus in transplant patients

Reduced levels of ciclosporin, mycophenolate mofetil and tacrolimus have been reported in transplant patients when coadministered with sevelamer hydrochloride without any clinical consequences (i.e graft rejection). The possibility of an interaction cannot be excluded and a close monitoring of blood concentrations of mycophenolate mofetil, ciclosporin and tacrolimus should be considered during the use of combination and after its withdrawal.

Digoxin, warfarin, enalapril or metoprolol

In interaction studies in healthy volunteers, Renagel had no effect on the bioavailability of digoxin, warfarin, enalapril or metoprolol.

Proton pump inhibitors

During post-marketing experience, very rare cases of increased phosphate levels have been reported in patients taking proton pump inhibitors co-administered with sevelamer hydrochloride.

Bioavailability

Renagel is not absorbed and may affect the bioavailability of other medicinal products. When administering any medicinal product where a reduction in the bioavailability could have a clinically significant effect on safety or efficacy, the medicinal product should be administered at least one hour before or three hours after Renagel, or the physician should consider monitoring blood levels.

4.6 Fertility, pregnancy and lactation

Pregnancy

The safety of sevelamer hydrochloride has not been established in pregnant women. In animal studies there was no evidence that sevelamer induced embryo-foetal toxicity. Renagel should only be given to pregnant women if clearly needed and after a careful risk/benefit analysis has been conducted for both the mother and the foetus (see section 5.3).

Breast-feeding

The safety of sevelamer hydrochloride has not been established in breast-feeding women. Renagel should only be given to breast-feeding women if clearly needed and after a careful risk/benefit analysis has been conducted for both the mother and the infant (see section 5.3).

Fertility

There are no data from the effect of sevelamer on fertility in humans. Studies in animals have shown that sevelamer did not impair fertility in male or female rats at exposures at a human equivalent dose 2 times the maximum clinical trial dose of 13 g/day, based on a comparison of relative body surface area.

4.7 Effects on ability to drive and use machines

Sevelamer has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

Summary of the safety profile

The most frequently occurring ($\geq 5\%$ of patients) adverse reactions were all in the gastrointestinal disorders system organ class.

Tabulated list of adverse reactions

In parallel design studies involving 244 haemodialysis patients with treatment duration of up to 54 weeks and 97 peritoneal dialysis patients with treatment duration of 12 weeks were conducted. Adverse reactions from these studies (299 patients), from uncontrolled clinical trials (384 patients), and that were spontaneously reported from post-marketing experience are listed by frequency in the table below. The reporting rate is classified as 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).

| MedDRA System Organ Class | Very Common | Common | Uncommon | Very Rare | Not known |
|--|------------------|--|---|-------------------|---|
| Immune system disorders | | | | Hypersensitivity* | |
| Metabolism and nutrition disorders | | | Acidosis, increased serum chloride levels | | |
| Gastrointestinal disorders | Nausea, vomiting | Diarrhoea, dyspepsia, flatulence, upper abdominal pain, constipation | | | Abdominal pain, intestinal obstruction, ileus/subileus, diverticulitis, intestinal perforation ¹ , gastrointestinal hemorrhage* ¹ , intestinal ulceration* ¹ , gastrointestinal necrosis* ¹ , colitis* ¹ , intestinal mass* ¹ |
| Skin and subcutaneous tissue disorders | | | | | Pruritus, rash |
| Investigations | | | | | Crystal deposit intestine* ¹ |

*post-marketing experience

¹ See inflammatory gastrointestinal disorders warning in section 4.4

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

Renagel has been given to normal healthy volunteers in doses up to 14 grams, the equivalent of seventeen 800 mg tablets per day for eight days with no undesirable effects.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Treatment of hyperphosphatemia. ATC code: V03AE02.

Renagel contains sevelamer, a non-absorbed phosphate binding poly (allylamine hydrochloride) polymer, free of metal and calcium. It contains multiple amines separated by one carbon from the polymer backbone. These amines become partially protonated in the intestine and interact with phosphate molecules through ionic and hydrogen bonding. By binding phosphate in the gastrointestinal tract, sevelamer lowers the phosphate concentration in the serum.

In clinical trials, sevelamer has been shown to be effective in reducing serum phosphorus in patients receiving haemodialysis or peritoneal dialysis.

Sevelamer decreases the incidence of hypercalcaemic episodes as compared to patients using calcium based phosphate binders alone, probably because the product itself does not contain calcium. The effects on phosphate and calcium were proven to be maintained throughout a study with one year follow-up.

Sevelamer has been shown to bind bile acids *in vitro* and *in vivo* in experimental animal models. Bile acid binding by ion exchange resins is a well-established method of lowering blood cholesterol. In clinical trials mean total and LDL cholesterol declined by 15-31%. This effect is observed after 2 weeks is maintained with long-term treatment. Triglycerides, HDL cholesterol and albumin did not change.

In the clinical studies in haemodialysis patients, sevelamer alone did not have a consistent and clinically significant effect on serum intact parathyroid hormone (iPTH). In the 12 week study involving peritoneal dialysis patients however, similar iPTH reductions were seen compared with patients receiving calcium acetate. In patients with secondary hyperparathyroidism Renagel should be used within the context of a multiple therapeutic approach, which could include calcium supplements, 1,25-dihydroxy Vitamin D₃ or one of its analogues to lower the iPTH levels.

In a clinical trial of one-year duration, Renagel had no adverse effect on bone turnover or mineralisation compared to calcium carbonate.

5.2 Pharmacokinetic properties

Renagel is not absorbed from the gastrointestinal tract according to a single dose pharmacokinetic study in healthy volunteers. Pharmacokinetic studies have not been carried out in renal failure patients (see section 4.4).

5.3 Preclinical safety data

In preclinical studies in rats and dogs, Renagel at a dose of 10 times the maximum human doses reduced absorption of fat soluble vitamins D, E and K, and folic acid.

In a study in rats, administering sevelamer in 15-30 x the human dose, an increase in serum copper was detected. This was not confirmed in a dog study or in clinical trials.

Currently, no formal carcinogenicity data are available. However, *in vitro* and *in vivo* studies have indicated that Renagel does not have genotoxic potential. Also the medicinal product is not absorbed in the gastrointestinal tract.

In reproduction studies there was no evidence that sevelamer induced embryoletality, foetotoxicity or teratogenicity at the doses tested (up to 1 g/kg/day in rabbits and up to 4.5 g/kg/day in rats). Deficits in skeletal ossification were observed in several locations in fetuses of female rats dosed with sevelamer at 8-20 times the maximum human dose of 200 mg/kg. The effects may be secondary to vitamin D and/or vitamin K depletion at these high doses.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Tablet core:

Silica, colloidal anhydrous
Stearic acid

Film-coating:

Hypromellose (E464)
Diacetylated monoglycerides

6.2 Incompatibilities

Not applicable

6.3 Shelf-life

3 years

6.4 Special precautions for storage

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

6.5 Nature and contents of container

HDPE bottles, with a child resistant polypropylene closure and a foil induction seal.

Package sizes are:

1 bottle of 100 film-coated tablets
1 bottle of 180 film-coated tablets
multipacks containing 180 film-coated tablets (6 bottles of 30 tablets)
multipacks containing 360 film-coated tablets (2 bottles of 180 tablets)
multipacks containing 540 film-coated tablets (3 bottles of 180 tablets)

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

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

7. MARKETING AUTHORISATION HOLDER

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

8. MARKETING AUTHORISATION NUMBER(S)

EU/1/99/123/008 1 bottle of 180 film-coated tablets
EU/1/99/123/009 multipacks containing 360 film-coated tablets (2 bottles of 180 tablets)
EU/1/99/123/010 multipacks containing 540 film-coated tablets (3 bottles of 180 tablets)
EU/1/99/123/011 1 bottle of 100 film-coated tablets
EU/1/99/123/012 1 bottle of 180 film-coated tablets without outer carton
EU/1/99/123/013 multipacks containing 180 film-coated tablets (6 bottles of 30 tablets)

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 28 January 2000
Date of latest renewal: 19 November 2014

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 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 RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturer responsible for batch release

Genzyme Ireland Limited, IDA Industrial Park, Old Kilmeaden Road, Waterford, Ireland

Sanofi Winthrop Industrie, 1 rue de la Vierge, Ambares et Lagrave, 33565 Carbon Blanc cedex, France

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 medical prescription.

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

• Periodic Safety Update Reports

The marketing authorisation holder shall submit periodic safety update reports for this product in accordance with the requirements set out in the list of Union reference dates (EURD list) provided for under Article 107c(7) of Directive 2001/83/EC and 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 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.

If the dates for submission of a PSUR and the update of a RMP coincide, they can be submitted at the same time.

ANNEX III
LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING**OUTER CARTON – 1 BOTTLE OF 360 TABLETS 400 mg****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 400 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 400 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

360 film-coated tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/005

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
400 mg

| |
|---|
| 17. UNIQUE IDENTIFIER – 2D BARCODE |
|---|

2D barcode carrying the unique identifier included.

| |
|--|
| 18. UNIQUE IDENTIFIER - HUMAN READABLE DATA |
|--|

PC:
SN:
NN:

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON with the Blue Box – MULTIPACK OF 720 (2 BOTTLES OF 360) TABLETS 400 mg

OUTER CARTON with the Blue Box – MULTIPACK OF 1080 (3 BOTTLES OF 360) TABLETS 400 mg

1. NAME OF THE MEDICINAL PRODUCT

Renagel 400 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 400 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

Multipack: 720 (2 bottles of 360) film-coated tablets.
Multipack: 1080 (3 bottles of 360) film-coated tablets.

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

| |
|--|
| 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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/006 multipacks containing 720 film-coated tablets (2 bottles of 360 tablets)
EU/1/99/123/007 multipacks containing 1080 film-coated tablets (3 bottles of 360 tablets)

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
400 mg

| |
|---|
| 17. UNIQUE IDENTIFIER – 2D BARCODE |
|---|

2D barcode carrying the unique identifier included.

| |
|--|
| 18. UNIQUE IDENTIFIER - HUMAN READABLE DATA |
|--|

PC:
SN:
NN:

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGING**LABEL - BOTTLE OF 360 TABLETS 400 mg****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 400 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 400 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

360 film-coated tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/005

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
400 mg

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGING**LABEL without Blue Box - BOTTLE OF 360 TABLETS 400 mg (MULTIPACK PRESENTATION)****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 400 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 400 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

360 film-coated tablets. Component of a multipack, can't be sold separately.

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/006 multipacks containing 720 film-coated tablets (2 bottles of 360 tablets)
EU/1/99/123/007 multipacks containing 1080 film-coated tablets (3 bottles of 360 tablets)

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
400 mg

PARTICULARS TO APPEAR ON THE OUTER PACKAGING**OUTER CARTON with Blue Box – MULTIPACK OF 180 (6 BOTTLES OF 30) TABLETS
800 mg****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 800 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 800 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

Multipack: 180 (6 bottles of 30) film-coated tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

**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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/013

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
800 mg

| |
|---|
| 17. UNIQUE IDENTIFIER – 2D BARCODE |
|---|

2D barcode carrying the unique identifier included.

| |
|--|
| 18. UNIQUE IDENTIFIER - HUMAN READABLE DATA |
|--|

PC:
SN:
NN:

PARTICULARS TO APPEAR ON THE OUTER PACKAGING**OUTER CARTON – 1 BOTTLE OF 100 TABLETS 800 mg****OUTER CARTON – 1 BOTTLE OF 180 TABLETS 800 mg****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 800 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 800 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

100 film-coated tablets
180 film-coated tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

| |
|--|
| 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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/011 1 bottle of 100 film-coated tablets
EU/1/99/123/008 1 bottle of 180 film-coated tablets

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
800 mg

| |
|---|
| 17. UNIQUE IDENTIFIER – 2D BARCODE |
|---|

2D barcode carrying the unique identifier included.

| |
|--|
| 18. UNIQUE IDENTIFIER - HUMAN READABLE DATA |
|--|

PC:
SN:
NN:

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON with Blue Box - MULTIPACK OF 360 (2 BOTTLES OF 180) TABLETS 800 mg

OUTER CARTON with Blue Box - MULTIPACK OF 540 (3 BOTTLES OF 180) TABLETS 800 mg

1. NAME OF THE MEDICINAL PRODUCT

Renagel 800 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 800 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

Multipack: 360 (2 bottles of 180) film-coated tablets
Multipack: 540 (3 bottles of 180) film-coated tablets.

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

| |
|--|
| 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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/009 multipacks containing 360 film-coated tablets (2 bottles of 180 tablets)
EU/1/99/123/010 multipacks containing 540 film-coated tablets (3 bottles of 180 tablets)

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
800 mg

| |
|---|
| 17. UNIQUE IDENTIFIER – 2D BARCODE |
|---|

2D barcode carrying the unique identifier included.

| |
|--|
| 18. UNIQUE IDENTIFIER - HUMAN READABLE DATA |
|--|

PC:
SN:
NN:

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGING**LABEL without Blue Box - BOTTLE OF 30 TABLETS 800 mg (MULTIPACK PRESENTATION)****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 800 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 800 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

30 film-coated tablets. Component of a multipack, can't be sold separately.

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/013

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
800 mg

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGING**LABEL – BOTTLE OF 100 TABLETS 800 mg****LABEL - BOTTLE OF 180 TABLETS 800 mg WITH OUTER CARTON****LABEL with Blue Box – 1 BOTTLE OF 180 TABLETS 800 mg WITHOUT OUTER CARTON****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 800 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 800 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

100 film-coated tablets
180 film-coated tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

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

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/99/123/011 1 bottle of 100 film-coated tablets
EU/1/99/123/008 1 bottle of 180 film-coated tablets with outer carton
EU/1/99/123/012 1 bottle of 180 film-coated tablets without outer carton

13. BATCH NUMBER

Batch

14. GENERAL CLASSIFICATION FOR SUPPLY

Medicinal product subject to medical prescription.

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Renagel
800 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC:
SN:
NN:

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGING**LABEL without Blue Box – BOTTLE OF 180 TABLETS 800 mg WITH OUTER CARTON
(MULTIPACK PRESENTATION)****1. NAME OF THE MEDICINAL PRODUCT**

Renagel 800 mg film-coated tablets
sevelamer hydrochloride

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 800 mg sevelamer hydrochloride.

3. LIST OF EXCIPIENTS**4. PHARMACEUTICAL FORM AND CONTENTS**

180 film-coated tablets. Component of a multipack, can't be sold separately.

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Tablets must be swallowed whole. Do not chew.
Read the package leaflet before use.
For oral 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

Do not store above 25°C.
Keep the bottle tightly closed in order to protect from moisture.

**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 |
|---|

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

| |
|--|
| 12. MARKETING AUTHORISATION NUMBER(S) |
|--|

EU/1/99/123/009 multipacks containing 360 film-coated tablets (2 bottles of 180 tablets)
EU/1/99/123/010 multipacks containing 540 film-coated tablets (3 bottles of 180 tablets)

| |
|-------------------------|
| 13. BATCH NUMBER |
|-------------------------|

Batch

| |
|--|
| 14. GENERAL CLASSIFICATION FOR SUPPLY |
|--|

Medicinal product subject to medical prescription.

| |
|--------------------------------|
| 15. INSTRUCTIONS ON USE |
|--------------------------------|

| |
|-----------------------------------|
| 16. INFORMATION IN BRAILLE |
|-----------------------------------|

Renagel
800 mg

B. PACKAGE LEAFLET

Package leaflet: Information for the user

Renagel 400 mg film-coated tablets sevelamer hydrochloride

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

- Keep this leaflet. You may need to read it again.
- If you have further questions, ask your doctor or pharmacist.
- 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 or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

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

1. What Renagel is and what it is used for

Renagel contains sevelamer as the active ingredient. It binds phosphate from food in the digestive tract and so reduces serum phosphate levels in the blood.

Renagel is used to control the levels of phosphate in the blood of adult kidney failure patients on haemodialysis or peritoneal dialysis treatment.

Adult patients whose kidneys have failed and who are undergoing haemodialysis or peritoneal dialysis are not able to control the level of serum phosphate in their blood. The amount of phosphate then rises (your doctor will call this hyperphosphataemia). Increased levels of serum phosphorus can lead to hard deposits in your body called calcification. These deposits can stiffen your blood vessels and make it harder for blood to be pumped around the body. Increased serum phosphorus can also lead to itchy skin, red eyes, bone pain and fractures.

Renagel may be used with other medicines which include calcium or vitamin D supplements to control the development of renal bone disease.

2. What you need to know before you take Renagel

Do not take Renagel:

- if you have low levels of phosphate in your blood (your doctor will check this for you).
- if you have bowel obstruction.
- if you are allergic to sevelamer or to any of the other ingredients of this medicine (listed in section 6).

Warnings and precautions

Talk to your doctor before taking Renagel if any of the following applies to you:

- if you are not on dialysis
- if you have swallowing problems
- if you have problems with motility (movement) in your stomach and bowel
- if you have symptoms of delayed emptying of stomach contents such as feeling of fullness, nausea and/or vomiting

- if you have prolonged diarrhoea or pain in the abdomen (symptoms of active inflammatory bowel disease)
- if you have undergone major surgery on your stomach or bowel

Talk to your doctor while taking Renagel:

- if you experience severe abdominal pain, stomach or intestine disorders, or blood in the stool (gastrointestinal bleeding). These symptoms can be due to serious inflammatory bowel disease caused by sevelamer crystals deposit in your bowel. Contact your doctor who will decide on continuing the treatment or not.

Additional treatments:

Due to either your kidney condition or your dialysis treatment you may:

- develop a low or high level of calcium in your blood. Since Renagel does not contain calcium your doctor might prescribe additional calcium tablets.
- have a low amount of vitamin D in your blood. Therefore, your doctor may monitor the levels of vitamin D in your blood and prescribe additional vitamin D as necessary. If you do not take multivitamin supplements you may also develop low levels of vitamins A, E, K and folic acid in your blood and therefore your doctor may monitor these levels and prescribe supplemental vitamins as necessary.

Changing treatment:

When you switch from another phosphate binder to Renagel, your doctor might consider monitoring the levels of bicarbonate in your blood more closely because Renagel may decrease the levels of bicarbonate.

Special note for patients on peritoneal dialysis

You may develop peritonitis (infection of your abdominal fluid) associated with your peritoneal dialysis. This risk can be reduced by careful adherence to sterile techniques during bag changes. You should tell your doctor immediately if you experience any new signs or symptoms of abdominal distress, abdominal swelling, abdominal pain, abdominal tenderness, or abdominal rigidity, constipation, fever, chills, nausea or vomiting.

You should expect to be monitored more carefully for problems with low levels of vitamins A, D, E, K and folic acid.

Children and adolescents

The safety and efficacy in children (below the age of 18 years) has not been studied. Therefore Renagel is not recommended for use in this population.

Other medicines and Renagel

Tell your doctor if you are taking, have recently taken or might take any other medicines.

- Renagel should not be taken at the same time as ciprofloxacin (an antibiotic).
- If you are taking medicines for heart rhythm problems or for epilepsy, you should consult your doctor when taking Renagel.
- The effects of medicines such as ciclosporin, mycophenolate mofetil and tacrolimus (medicines used in transplant patients) may be reduced by Renagel. Your doctor will advise you if you are taking these medicines.
- In certain people taking levothyroxine (a thyroid hormone) and Renagel, increased levels of thyroid stimulating hormone (TSH, a substance in your blood which helps control your body's chemical functions) may very rarely be observed. Therefore your doctor may monitor the levels of TSH in your blood more closely.

- If you are taking medicine such as omeprazole, pantoprazole, or lansoprazole to treat heartburn, gastroesophageal reflux disease (GERD), or gastric ulcers, you should consult your doctor when taking Renagel.

Your doctor will check for interactions between Renagel and other medicines on a regular basis.

In some cases where Renagel should be taken at the same time as another medicine, your doctor may advise you to take this medicine 1 hour before or 3 hours after Renagel intake, or he/she may consider monitoring the blood levels of that medicine.

Pregnancy and breast-feeding

The safety of Renagel has not been established in pregnant or breast-feeding women. Renagel should only be given to pregnant or breast-feeding women if clearly needed.

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 taking this medicine.

Driving and using machines

Renagel is unlikely to affect your ability to drive or to use machines.

3. How to take Renagel

Always take this medicine exactly as your doctor has told you. Check with your doctor if you are not sure. He will base the dose on your serum phosphate level. The recommended starting dose of Renagel for adults and the elderly (>65 years) is two to four tablets with each meal 3 times a day.

Initially your doctor will check the levels of phosphate in your blood every 2-3 weeks and may adjust the dose of Renagel when necessary (between 1 and 10 tablets of 400 mg per meal) to reach an adequate phosphate level.

The tablets must be swallowed whole. Do not crush, chew or break into pieces prior to swallowing.

Patients taking Renagel should adhere to their prescribed diet and liquid intake.

If you take more Renagel than you should

In the event of a possible overdose you should contact your doctor immediately.

If you forget to take Renagel

If you have missed one dose, this dose should be omitted and the next dose should be taken at the usual time with a meal. Do not take a double dose to make up for a forgotten dose.

4. Possible side effects

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

Since constipation may be a preceding symptom in very rare cases of blockages in your intestine, it is important to inform your doctor or pharmacist of this symptom before or during the use of Renagel.

The following side effects have been reported in patients taking Renagel:

Very common (may affect more than 1 in 10 people):

nausea, vomiting.

Common (may affect up to 1 in 10 people):

diarrhoea, indigestion, abdominal pain, constipation, flatulence.

Uncommon (may affect up to 1 in 100 people):

increased acidity of the blood.

Very rare (may affect up to 1 in 10000 people):

hypersensitivity.

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

cases of itching, rash, abdominal pain, slow intestine motility (movement), inflammation of abnormal small pouches (called diverticula) in the large intestine, blockages in the intestine (signs include: severe bloating; abdominal pain, swelling or cramps; severe constipation), rupture in the intestine wall (signs include: severe stomach pain, chills, fever, nausea, vomiting, or a tender abdomen), serious inflammation of the large bowel (symptoms include: severe abdominal pain, stomach or intestine disorders, or blood in the stool [gastrointestinal bleeding]) and crystal deposit in the intestine have been reported.

Reporting of side effects

If you get any side effects, talk to your doctor. 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 Renagel

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

Do not use this medicine after the expiry date stated on the carton and bottle after “EXP”. The expiry date refers to the last day of that month.

Do not store this medicine above 25 °C. Keep the bottle tightly closed in order to protect from moisture.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help to protect the environment.

6. Contents of the pack and other information

What Renagel contains

- The active substance is sevelamer hydrochloride. Each tablet contains 400 mg sevelamer hydrochloride.
- The other ingredients are silica colloidal anhydrous and stearic acid, hypromellose (E464), diacetylated monoglycerides, iron oxide black (E172) and propylene glycol.

What Renagel looks like and contents of the pack

Renagel tablets are film coated, off white, oval tablets with Renagel 400 imprinted on one side. The tablets are packed in high density polyethylene bottles with a child resistant polypropylene closure and an induction seal.

Pack sizes are:

1 bottle of 360 tablets

multipacks containing 720 tablets (2 bottles of 360 tablets)

multipacks containing 1080 tablets (3 bottles of 360 tablets)

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

Marketing Authorisation Holder:

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

Manufacturer:

Genzyme Ireland Limited
IDA Industrial Park
Old Kilmeaden Road
Waterford
Ireland

For any information about this medicine, please contact the local representative of the Marketing Authorisation Holder:

**België/Belgique/Belgien/
Luxembourg/Luxemburg**
Sanofi Belgium
Tél/Tel: + 32 2 710 54 00

Lietuva
Swixx Biopharma UAB
Tel: +370 5 236 91 40

България
Swixx Biopharma EOOD
Тел.: +359 (0)2 4942 480

Magyarország
SANOFI-AVENTIS Zrt
Tel: +36 1 505 0050

Česká republika
Sanofi s.r.o.
Tel: +420 233 086 111

Malta
Sanofi S.r.l.
Tel: +39 02 39394275

Danmark
Sanofi A/S
Tlf: +45 45 16 70 00

Nederland
Sanofi B.V.
Tel: +31 20 245 4000

Deutschland
Sanofi-Aventis Deutschland GmbH
Tel: 0800 52 52 010
Tel. aus dem Ausland: +49 69 305 21 131

Norge
sanofi-aventis Norge AS
Tlf: + 47 67 10 71 00

Eesti
Swixx Biopharma OÜ
Tel: +372 640 10 30

Österreich
sanofi-aventis GmbH
Tel: + 43 1 80 185 - 0

Ελλάδα
Sanofi-Aventis Μονοπρόσωπη ΑΕΒΕ
Τηλ: +30 210 900 1600

Polska
Sanofi Sp. z o.o.
Tel.: +48 22 280 00 00

España
sanofi-aventis, S.A.
Tel: +34 93 485 94 00

Portugal
Sanofi – Produtos Farmacêuticos, Lda.
Tel: +351 21 35 89 400

France
Sanofi Winthrop Industrie

România
Sanofi Romania SRL

Tél : 0 800 222 555
Appel depuis l'étranger : +33 1 57 63 23 23

Tel: +40 (0) 21 317 31 36

Hrvatska

Swixx Biopharma d.o.o.
Tel: +385 1 2078 500

Slovenija

Swixx Biopharma d.o.o.
Tel: +386 1 235 51 00

Ireland

sanofi-aventis Ireland Ltd T/A SANOFI
Tel: +353 (0) 1 4035 600

Slovenská republika

Swixx Biopharma s.r.o.
Tel: +421 2 208 33 600

Ísland

Vistor hf.
Sími: +354 535 7000

Suomi/Finland

Sanofi Oy
Puh/Tel: + 358 201 200 300

Italia

Sanofi S.r.l.
Tel: 800 536 389

Sverige

Sanofi AB
Tel: +46 (0)8 634 50 00

Κύπρος

C.A. Papaellinas Ltd.
Τηλ: +357 22 741741

United Kingdom (Northern Ireland)

sanofi-aventis Ireland Ltd. T/A SANOFI
Tel: +44 (0) 800 035 2525

Latvija

Swixx Biopharma SIA
Tel: +371 6 616 47 50

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>

Package leaflet: Information for the user

Renagel 800 mg film-coated tablets sevelamer hydrochloride

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

- Keep this leaflet. You may need to read it again.
- If you have further questions, ask your doctor or pharmacist.
- 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 or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

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

1. What Renagel is and what it is used for

Renagel contains sevelamer as the active ingredient. It binds phosphate from food in the digestive tract and so reduces serum phosphate levels in the blood.

Renagel is used to control the levels of phosphate in the blood of adult kidney failure patients on haemodialysis or peritoneal dialysis treatment.

Adult patients whose kidneys have failed and who are undergoing haemodialysis or peritoneal dialysis are not able to control the level of serum phosphate in their blood. The amount of phosphate then rises (your doctor will call this hyperphosphataemia). Increased levels of serum phosphorus can lead to hard deposits in your body called calcification. These deposits can stiffen your blood vessels and make it harder for blood to be pumped around the body. Increased serum phosphorus can also lead to itchy skin, red eyes, bone pain and fractures.

Renagel may be used with other medicines which include calcium or vitamin D supplements to control the development of renal bone disease.

2. What you need to know before you take Renagel

Do not take Renagel:

- if you have low levels of phosphate in your blood (your doctor will check this for you).
- if you have bowel obstruction.
- if you are allergic to sevelamer or to any of the other ingredients of this medicine (listed in section 6).

Warnings and precautions

Talk to your doctor before taking Renagel if any of the following applies to you:

- if you are not on dialysis
- if you have swallowing problems
- if you have problems with motility (movement) in your stomach and bowel
- if you have symptoms of delayed emptying of stomach contents such as feeling of fullness, nausea and/or vomiting

- if you have prolonged diarrhoea or pain in the abdomen (symptoms of active inflammatory bowel disease)
- if you have undergone major surgery on your stomach or bowel.

Talk to your doctor while taking Renagel:

- if you experience severe abdominal pain, stomach or intestine disorders, or blood in the stool (gastrointestinal bleeding). These symptoms can be due to serious inflammatory bowel disease caused by sevelamer crystals deposit in your bowel. Contact your doctor who will decide on continuing the treatment or not.

Additional treatments:

Due to either your kidney condition or your dialysis treatment you may:

- develop a low or high level of calcium in your blood. Since Renagel does not contain calcium your doctor might prescribe additional calcium tablets.
- have a low amount of vitamin D in your blood. Therefore, your doctor may monitor the levels of vitamin D in your blood and prescribe additional vitamin D as necessary. If you do not take multivitamin supplements you may also develop low levels of vitamins A, E, K and folic acid in your blood and therefore your doctor may monitor these levels and prescribe supplemental vitamins as necessary.

Changing treatment:

When you switch from another phosphate binder to Renagel, your doctor might consider monitoring the levels of bicarbonate in your blood more closely because Renagel may decrease the levels of bicarbonate.

Special note for patients on peritoneal dialysis:

You may develop peritonitis (infection of your abdominal fluid) associated with your peritoneal dialysis. This risk can be reduced by careful adherence to sterile techniques during bag changes. You should tell your doctor immediately if you experience any new signs or symptoms of abdominal distress, abdominal swelling, abdominal pain, abdominal tenderness, or abdominal rigidity, constipation, fever, chills, nausea or vomiting.

You should expect to be monitored more carefully for problems with low levels of vitamins A, D, E, K and folic acid.

Children and adolescents

The safety and efficacy in children (below the age of 18 years) has not been studied. Therefore Renagel is not recommended for use in this population.

Other medicines and Renagel

Tell your doctor if you are taking, have recently taken or might take any other medicines.

- Renagel should not be taken at the same time as ciprofloxacin (an antibiotic).
- If you are taking medicines for heart rhythm problems or for epilepsy, you should consult your doctor when taking Renagel.
- The effects of medicines such as ciclosporin, mycophenolate mofetil and tacrolimus (medicines used in transplant patients) may be reduced by Renagel. Your doctor will advise you if you are taking these medicines.
- In certain people taking levothyroxine (a thyroid hormone) and Renagel, increased levels of thyroid stimulating hormone (TSH, a substance in your blood which helps control your body's chemical functions) may very rarely be observed. Therefore your doctor may monitor the levels of TSH in your blood more closely.

- If you are taking medicine such as omeprazole, pantoprazole, or lansoprazole to treat heartburn, gastroesophageal reflux disease (GERD), or gastric ulcers, you should consult your doctor when taking Renagel.

Your doctor will check for interactions between Renagel and other medicines on a regular basis.

In some cases where Renagel should be taken at the same time as another medicine, your doctor may advise you to take this medicine 1 hour before or 3 hours after Renagel intake, or he/she may consider monitoring the blood levels of that medicine.

Pregnancy and breast-feeding

The safety of Renagel has not been established in pregnant or breast-feeding women. Renagel should only be given to pregnant or breast-feeding women if clearly needed.

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 taking this medicine.

Driving and using machines

Renagel is unlikely to affect your ability to drive or to use machines.

3. How to take Renagel

Always take this medicine exactly as your doctor has told you. Check with your doctor if you are not sure. He will base the dose on your serum phosphate level. The recommended starting dose of Renagel for adults and the elderly (>65 years) is one or two tablets with each meal 3 times a day.

Initially your doctor will check the levels of phosphate in your blood every 2-3 weeks and may adjust the dose of Renagel when necessary (between 1 and 5 tablets of 800 mg per meal) to reach an adequate phosphate level.

The tablets must be swallowed whole. Do not crush, chew or break into pieces prior to swallowing.

Patients taking Renagel should adhere to their prescribed diet and liquid intake.

If you take more Renagel than you should

In the event of a possible overdose you should contact your doctor immediately.

If you forget to take Renagel

If you have missed one dose, this dose should be omitted and the next dose should be taken at the usual time with a meal. Do not take a double dose to make up for a forgotten dose.

4. Possible side effects

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

Since constipation may be a preceding symptom in very rare cases of blockages in your intestine, it is important to inform your doctor or pharmacist of this symptom before or during the use of Renagel.

The following side effects have been reported in patients taking Renagel:

Very common (may affect more than 1 in 10 people):

nausea, vomiting.

Common (may affect up to 1 in 10 people):

diarrhoea, indigestion, abdominal pain, constipation, flatulence.

Uncommon (may affect up to 1 in 100 people):

increased acidity of the blood.

Very rare (may affect up to 1 in 10000 people):

hypersensitivity.

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

cases of itching, rash, abdominal pain, slow intestine motility (movement), inflammation of abnormal small pouches (called diverticula) in the large intestine, blockages in the intestine (signs include: severe bloating; abdominal pain, swelling or cramps; severe constipation), rupture in the intestine wall (signs include: severe stomach pain, chills, fever, nausea, vomiting, or a tender abdomen), serious inflammation of the large bowel (symptoms include: severe abdominal pain, stomach or intestine disorders, or blood in the stool [gastrointestinal bleeding]) and crystal deposit in the intestine have been reported.

Reporting of side effects

If you get any side effects, talk to your doctor. 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 Renagel

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

Do not use this medicine after the expiry date stated on the carton and bottle after “EXP”. The expiry date refers to the last day of that month.

Do not store this medicine above 25 °C. Keep the bottle tightly closed in order to protect from moisture.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help to protect the environment.

6. Contents of the pack and other information

What Renagel contains

- The active substance is sevelamer hydrochloride. Each tablet contains 800 mg sevelamer hydrochloride.
- The other ingredients are silica colloidal anhydrous and stearic acid, hypromellose (E464), diacetylated monoglycerides.

What Renagel looks like and contents of the pack

Renagel tablets are film coated, off white, oval tablets with RG800 engraved on one side. The tablets are packed in high density polyethylene bottles with a child resistant polypropylene closure and an induction seal.

Pack sizes are:

1 bottle of 100 tablets

1 bottle of 180 tablets

multipacks containing 180 tablets (6 bottles of 30 tablets)

multipacks containing 360 tablets (2 bottles of 180 tablets)

multipacks containing 540 tablets (3 bottles of 180 tablets)

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

Marketing Authorisation Holder:

Sanofi Winthrop Industrie
82 Avenue Raspail
94250 Gentilly
France

Manufacturer:

Genzyme Ireland Limited
IDA Industrial Park
Old Kilmeaden Road
Waterford
Ireland

Sanofi Winthrop Industrie
1 rue de la Vierge
Ambares et Lagrave
33565 Carbon Blanc cedex
France

For any information about this medicine, please contact the local representative of the Marketing Authorisation Holder:

**België/Belgique/Belgien/
Luxembourg/Luxemburg**
Sanofi Belgium
Tél/Tel: + 32 2 710 54 00

Lietuva
Swixx Biopharma UAB
Tel: +370 5 236 91 40

България
Swixx Biopharma EOOD
Тел.: +359 (0)2 4942 480

Magyarország
SANOFI-AVENTIS Zrt
Tel: +36 1 505 0050

Česká republika
Sanofi s.r.o.
Tel: +420 233 086 111

Malta
Sanofi S.r.l.
Tel: +39 02 39394275

Danmark
Sanofi A/S
Tlf: +45 45 16 70 00

Nederland
Sanofi B.V.
Tel: +31 20 245 4000

Deutschland
Sanofi-Aventis Deutschland GmbH
Tel: 0800 52 52 010
Tel. aus dem Ausland: +49 69 305 21 131

Norge
sanofi-aventis Norge AS
Tlf: + 47 67 10 71 00

Eesti
Swixx Biopharma OÜ
Tel: +372 640 10 30

Österreich
sanofi-aventis GmbH
Tel: + 43 1 80 185 - 0

Ελλάδα
Sanofi-Aventis Μονοπρόσωπη ΑΕΒΕ
Τηλ: +30 210 900 1600

Polska
Sanofi Sp. z o.o.
Tel.: +48 22 280 00 00

España

Portugal

sanofi-aventis, S.A.
Tel: +34 93 485 94 00

France

Sanofi Winthrop Industrie
Tél : 0 800 222 555
Appel depuis l'étranger : +33 1 57 63 23 23

Hrvatska

Swixx Biopharma d.o.o.
Tel: +385 1 2078 500

Ireland

sanofi-aventis Ireland Ltd T/A SANOFI
Tel: +353 (0) 1 4035 600

Ísland

Vistor hf.
Sími: +354 535 7000

Italia

Sanofi S.r.l.
Tel: 800 536 389

Κύπρος

C.A. Papaellinas Ltd.
Τηλ: +357 22 741741

Latvija

Swixx Biopharma SIA
Tel: +371 6 616 47 50

Sanofi – Produtos Farmacêuticos, Lda.
Tel: +351 21 35 89 400

România

Sanofi Romania SRL
Tel: +40 (0) 21 317 31 36

Slovenija

Swixx Biopharma d.o.o.
Tel: +386 1 235 51 00

Slovenská republika

Swixx Biopharma s.r.o.
Tel: +421 2 208 33 600

Suomi/Finland

Sanofi Oy
Puh/Tel: + 358 201 200 300

Sverige

Sanofi AB
Tel: +46 (0)8 634 50 00

United Kingdom (Northern Ireland)

sanofi-aventis Ireland Ltd. T/A SANOFI
Tel: +44 (0) 800 035 2525

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>.