



HOME AUGMENTED IRON RICH SNACKS/RECIPES



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RATIONALE 4

FRESHLY PREPARED RECIPES

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Important Instructions

1. Wash your hands with soap before cooking.
2. Cook your food on a medium flame.
3. While cooking, cover the utensils with their lids.
4. Wash the vegetables before cutting them, not after that.
5. While preparing rice & pulses, ensure that you soak them in water for around 15 minutes. Use the same water for cooking them.
6. Don't use Vanaspati ghee for cooking.

Rationale

Anemia, a manifestation of under-nutrition and poor dietary intake of iron is a serious public health problem among pregnant women, infants, young children and adolescents. It is defined as hemoglobin concentration below established cut-off levels in the blood. The recent National Family Health Survey (NFHS-4) 2015-16 suggests a high prevalence of anemia across all age groups i.e. 58% among children 6-59 months, 54% among adolescent girls (15-19 years), 53% among women of reproductive age (15-19 years) and 58% among lactating women. The decline in prevalence rates from the last NFHS-3 has been extremely low in most age groups.

Iron deficiency is thought to be the most common cause of anemia globally, but other nutritional deficiencies (including folate and vitamin B₁₂), acute and chronic inflammation, parasitic infections, and inherited or acquired disorders that affect hemoglobin synthesis, red cell production or red blood cell survival also cause anemia. Iron deficiency anemia results in impaired cognitive and motor development in children and decreased work capacity in adults. The effects are most severe in infancy and early

childhood. In pregnancy iron deficiency anemia can lead to perinatal loss, prematurity and low birth weight (LBW) babies. It can also adversely affect the body's immune response.

The recommended dietary allowances for iron are 17 mg for an adult man, 21 mg for an adult woman, 35 mg among pregnant women, 25 mg among lactating women and between 21 mg to 32 mg for adolescent groups per day (Table 1).

The present recipes iron-rich snacks have been developed to augment the day's diet providing up to 350 Kcal, 13g protein and 7-9 mg of iron per snack.

Vitamin A values depicted are retinol equivalents which have been computed using the formula: Beta carotene/8 + Retinol.



The Iron-Rich Recipes in this booklet have been conceptualized, standardized and prepared by the National Centre of Excellence & Advanced Research on Diets, Department of Food & Nutrition, Lady Irwin College.

Table 1.
Recommended dietary requirements for iron per day

AGE GROUP	IRON REQUIREMENTS (mg/DAY)
ADULT MAN	17
ADULT WOMAN	21
PREGNANT WOMAN	35
LACTATING WOMAN	25
CHILDREN (1-3 YEARS)	09
CHILDREN (4-6 YEARS)	13
CHILDREN (7-9 YEARS)	16
BOYS (10-12 YEARS)	21
GIRLS (10-12 YEARS)	27
BOYS (13-15 YEARS)	32
GIRLS (13-15 YEARS)	27
BOYS (16-17 YEARS)	28
GIRLS (16-17 YEARS)	26



FRESHLY PREPARED RECIPES



Soya Poha

COST: ₹11.6



Energy **358**kcal

Protein **14.1**g

Dietary fibre **11.2**g

Carbohydrate **37**g

Fat **16.5**g

Iron **10**mg

Vitamin C **4**mg

Vitamin A **0**mcg

Calcium **126**mg



Serving size: 175 gm

Ingredients

- ✔ Soya granules-30g
- ✔ Rice flakes-30g
- ✔ Onion-50g
- ✔ Lotus stem-10g
- ✔ Oil-10ml

Spices and Condiments:

- ✔ Green chill-1 (Optional)
- ✔ Mustard seeds- 1 tsp
- ✔ Curry leaves- 5-6
- ✔ Turmeric powder- 1/4 tsp
- ✔ Red chilli powder- 1/4 tsp
- ✔ Salt as required
- ✔ Lemon juice-1tsp



Preparation time: 15-20 minutes

Method of preparation

- ✔ Wash and chop the vegetables and keep them aside.
- ✔ Soak the rice flakes in water for 2-3 minutes and keep it aside.
- ✔ Soak the soya granules in hot water for 5-10 minutes and drain the water.
- ✔ Heat oil in a karahi and splutter mustard seeds, curry leaves, chopped green chilli.
- ✔ Now add chopped vegetables to the karahi and saute' them.
- ✔ Add soaked soya granules, rice flakes, salt, turmeric powder and red chilli powder.
- ✔ Stir the ingredients well for 2-3 minutes.
- ✔ Plate the soya poha in bowl and squeeze lemon over it.
- ✔ Your soya poha is ready to be served.





Paushtik Cheela

COST: ₹9.48



Energy **360**kcal

Protein **19.4**g

Dietary fibre **6.2**g

Carbohydrate **32**g

Fat **16.8**g

Iron **8**mg

Vitamin C **13**mg

Vitamin A **247**mcg

Calcium **137**mg



Serving size: 145 gm

Ingredients

- ✔ Besan-50g
- ✔ Soya flour-20g
- ✔ Fenugreek leaves-20g
- ✔ French beans-10g
- ✔ Oil-10ml

Spices and Condiments:

- ✔ Green chilli- 1 chilli
- ✔ Ajwain- 1 tsp
- ✔ Salt as per taste
- ✔ Turmeric powder- 1/4 tsp
- ✔ Red chilli powder- 1/4 tsp



Preparation time: 15-20 minutes

Method of preparation

- ✔ Mix together besan and soya flour. Add salt, red chilli powder, ajwain, turmeric powder and enough water to make a pouring batter.
- ✔ Wash all the vegetables under the running water and finely chop the fenugreek leaves, French beans, and green chilli.
- ✔ Mix the batter and the chopped vegetables together.
- ✔ Heat a little oil and pour a large spoon of batter and spread into a thick cheela.
- ✔ Fry on both the sides to golden brown.
- ✔ Your delicious and iron rich snack is ready to be served.





Haryali Bajra Khichdi

COST: ₹5.77



Energy **369**kcal

Protein **16.2**g

Dietary fibre **11.8**g

Carbohydrate **47**g

Fat **12**g

Iron **7**mg

Vitamin C **15**mg

Vitamin A **170**mcg

Calcium **73**mg



Serving size: 275 gm

Ingredients

- ✔ Bajra-35g
- ✔ Bengal gram dal-30g
- ✔ Lentil dal-20g
- ✔ Spinach-50g
- ✔ Oil-8ml

Spices and Condiments:

- ✔ Cumin seeds-1/2 tsp
- ✔ Turmeric powder- 1/4 tsp
- ✔ Red chilli powder-1/2 tsp
- ✔ Salt to taste



Preparation time: 20-25 minutes

Method of preparation

- ✔ First of all wash the spinach under running water and chop.
- ✔ Soak bajra, bengal gram dal and lentil dal in water separately for 1-2 hours.
- ✔ Heat the oil and cumin seeds in a kadahi. Add turmeric powder, red chilli powder and salt to taste.
- ✔ Add soaked bajra, bengal gram dal, lentil dal and chopped spinach. Mix well and pressure cook on a medium flame for 15- 20 minutes.
- ✔ Your nutritious hariyali bajra khichdi is ready to be served.





Vegetable Sevian

COST: ₹11.37



Energy **359**kcal

Protein **12.5**g

Dietary fibre **12**g

Carbohydrate **43**g

Fat **14.4**g

Iron **9**mg

Vitamin C **3**mg

Vitamin A **0**mcg

Calcium **105**mg



Serving size: 230 gm

Ingredients

- ✔ Vermicelli-45g
- ✔ Soya granules-20g
- ✔ Onion-40g
- ✔ Lotus stem-10g
- ✔ Oil-10ml

Spices and Condiments:

- ✔ Garlic-1 clove
- ✔ Mustard seeds-1/2 tsp
- ✔ Red chilli whole- 1 chilli
- ✔ Curry leaves-5-6
- ✔ Salt to taste
- ✔ Lemon juice- 3-4 drops



Preparation time: 20-25 minutes

Method of preparation

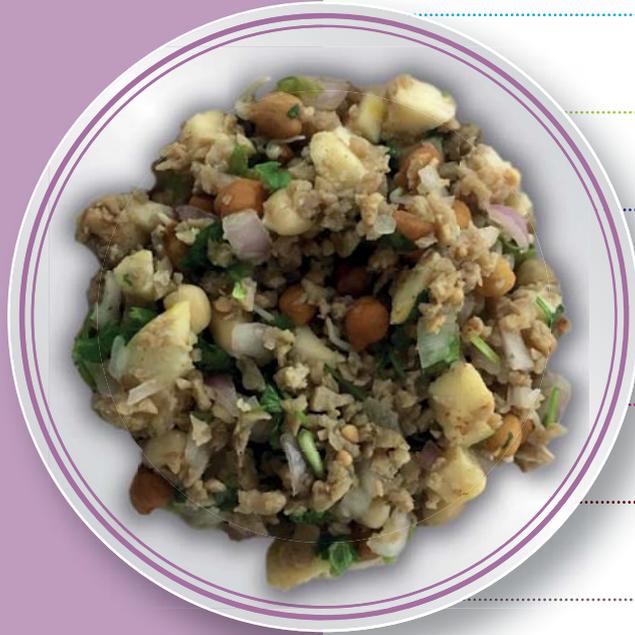
- ✔ Roast the vermicelli to a golden brown colour.
- ✔ Wash all the vegetables under running water and chop the lotus stem and onion.
- ✔ Soak soya granules in hot water for 20 minutes and drain and keep it aside.
- ✔ Heat the oil in karahi, splutter the mustard seeds on a medium flame. Then add the whole red chilli, finely chopped curry leaves, lotus stem, garlic, onion and fry lightly.
- ✔ Add the roasted vermicelli and soaked soya granules and stir fry for 2-3 minutes to the karahi.
- ✔ Then, add water and bring to boil, add the seasoning and cook on a low flame.
- ✔ Cook till vermicelli is dry. Add a few drops of lemon juice and serve hot.





Ankurit Dal Chaat

COST: ₹23.05



Energy **338**kcal

Protein **22.2**g

Dietary fibre **32.6**g

Carbohydrate **30**g

Fat **12.8**g

Iron **7**mg

Vitamin C **346**mg

Vitamin A **267**mcg

Calcium **305**mg



Serving size: 220 gm

Ingredients

- ✔ Bengal gram whole-35g
- ✔ Soya granules-30g
- ✔ Guava-150g
- ✔ Carrot - 60g
- ✔ Sesame seeds-10g

Spices and Condiments:

- ✔ Chaat masala-1/2 tsp
- ✔ Red chilli powder-1/4 tsp
- ✔ Lemon juice- 10ml (1/2 lemon)
- ✔ Salt to taste



Preparation time: 10-15 minutes

Method of preparation

- ✔ Wash and soak bengal gram (whole) dal in water for 1 hour.
- ✔ Drain water from dal and tie it in a muslin cloth. Leave the dal undisturbed for sprouting overnight.
- ✔ Soak the soya granules in warm water for 20 minutes. Drain and squeeze well. Keep them in the same bowl with sprouts.
- ✔ Wash and chop the carrot and guava and keep it aside.
- ✔ Boil the sprouts in water for 5-10 minutes and drain the water from sprouts and keep it aside for cooling.
- ✔ In a medium sized bowl, add chopped carrots, guava, boiled sprouts, soya granules, roasted sesame seeds, red chilli powder, chaat masala and salt and mix well.
- ✔ Squeeze half lemon over the mixture and your chaat is ready.



READY TO EAT



Paushtik Burfi

COST: ₹7.86



Energy **353**kcal

Protein **14.2**g

Dietary fibre **7.3**g

Carbohydrate **34**g

Fat **17.4**g

Iron **10**mg

Vitamin C **15**mg

Vitamin A **180**mcg

Calcium **547**mg



Serving size: 4 pieces*

Ingredients

- ✔ Sesame seeds-35 g
- ✔ Besan-20 g
- ✔ Milk-20 g
- ✔ Spinach-50g
- ✔ Jaggery-20 g

*20 g each



Preparation time: 10-15 minutes

Method of preparation

- ✔ Take spinach and wash it thoroughly. Boil it in water, drain and prepare a puree.
- ✔ In a pan roast besan, sesame seeds separately.
- ✔ In a bowl mix milk with jaggery and pour it slowly into the mix prepared until a thick paste is obtained.
- ✔ Make a small ball out of this paste and spread it on a plate.
- ✔ Once cooled, with the help of a knife cut into any desired shape.
- ✔ Store the burfis in the refrigerator.





Paushtik Ladoo

COST: ₹7.17



Energy 360kcal

Protein 16.9g

Dietary fibre 3.2g

Carbohydrate 46g

Fat 12g

Iron 7mg

Vitamin C 1mg

Vitamin A 26mcg

Calcium 208mg



Serving size: 3 pieces*

Ingredients

- ✔ Besan-50g
- ✔ Sesame seeds-10g
- ✔ Peanuts-10g
- ✔ Jaggery-15g
- ✔ Milk-25ml

*30 g each



Preparation time: 20-25 minutes

Method of preparation

- ✔ Dry roast besan on a medium flame in a karahi till golden brown. Remove from heat.
- ✔ Dry roast sesame seeds and peanuts. Remove the outer skin of peanuts by rubbing them between your palms to peel off the skin.
- ✔ Powder the roasted sesame seeds and peanuts together. And mix them with roasted besan.
- ✔ In a bowl mix milk and jaggery together and add it drop by drop into the mixture to make it moist.
- ✔ Make small ladoos from the mixture and store in an air-tight container (room temperature).





Paushtik Namakpare

COST: ₹7.55



Energy **378**kcal

Protein **21.4**g

Dietary fibre **7.6**g

Carbohydrate **31**g

Fat **18.5**g

Iron **8**mg

Vitamin C **9**mg

Vitamin A **108**mcg

Calcium **123**mg



Serving size: ½ cup*

Ingredients

- ✔ Soya flour-30g
- ✔ Besan-45g
- ✔ Spinach-30g
- ✔ Oil-10ml

Spices and Condiments

- ✔ Ajwain- ½ tsp
- ✔ Red chilli powder - ¼ tsp
- ✔ Salt as per taste

*55 g each



Preparation time: 25 minutes

Method of preparation

- ✔ Take besan and soya flour and mix them together.
- ✔ Take spinach and wash it thoroughly. Boil it in water and prepare a puree.
- ✔ Mix this puree with the flour mixture and add salt, red chilli powder, ajwain and other spices as per your taste.
- ✔ Knead this into a tight dough using oil and little water (if required). Keep aside this kneaded dough (covered with muslin cloth) for 10 minutes.
- ✔ Make small balls out of this dough. Now, flatten the ball (not too thin) with the help of a rolling pin.
- ✔ With the help of knife cut it out into ½ inch strips (both horizontally and vertically).
- ✔ Heat oil in a karahi. Once the oil is heated slow down the flame and add namakpare to this. (Note: oil should not be too hot).
- ✔ Store them in an air tight container.





Cereal Pulse Premix

COST: ₹5.74



Energy 371 kcal

Protein 16.6g

Dietary fibre 9.2g

Carbohydrate 61g

Fat 6.2g

Iron 7mg

Vitamin C 0mg

Vitamin A 7mcg

Calcium 81mg



Serving size: 90 g

Ingredients

- ✔ Whole wheat flour, atta-20g
- ✔ Besan-25g
- ✔ Bajra flour-30g
- ✔ Soya flour-15g
- ✔ Jaggery-15g



Preparation time: 15-20 minutes

Method of preparation

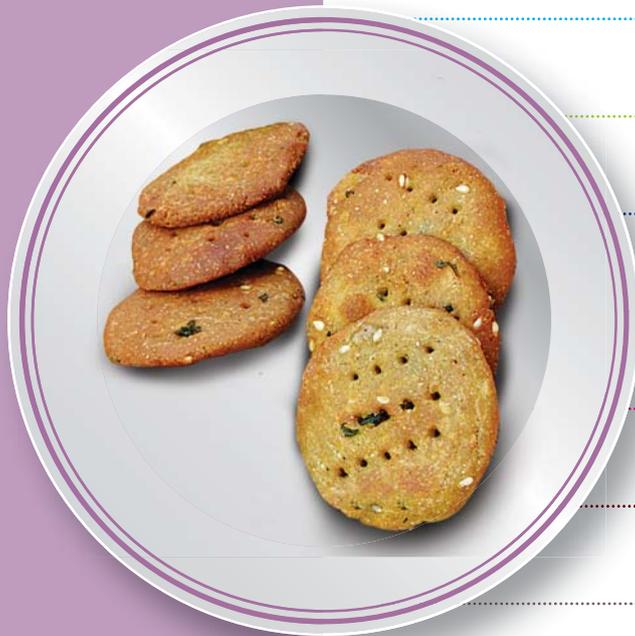
- ✔ Roast the whole wheat flour, besan, bajra flour and soya flour separately in a karahi until light brown in colour and having a pleasant aroma.
- ✔ Once roasted, mix them together and add jaggery and mix the ingredients well and the premix is ready.
- ✔ Take an air-tight container and store the premix.
- ✔ **Reconstitution**-The premix can be reconstituted with half glass of hot water or milk depending on the desired consistency.





Bajra Mathri

COST: ₹7.47



Energy **365**kcal

Protein **14.4**g

Dietary fibre **5.3**g

Carbohydrate **46**g

Fat **13.3**g

Iron **7**mg

Vitamin C **0**mg

Vitamin A **15**mcg

Calcium **117**mg



Serving size: 6 pieces*

Ingredients

- ✔ Besan-45g
- ✔ Bajra flour-10g
- ✔ Whole wheat flour-20g
- ✔ Fenugreek leaves-30g
- ✔ Oil-10g

Spices and Condiments:

- ✔ Ajwain-1/2 tsp
- ✔ Red chilli powder-1/4 tsp
- ✔ Salt- 1/4 tsp

*15 g each



Preparation time: 20-25 minutes

Method of preparation

- ✔ Wash, chop, blanch and puree fenugreek leaves.
- ✔ Take besan, bajra flour and whole wheat flour and sieve it thoroughly. To this, add pureed fenugreek leaves, salt, red chilli powder, and ajwain.
- ✔ Add 1 tsp of oil and little water to knead a tight dough.
- ✔ Keep it aside for 10 minutes (after covering it with muslin cloth).
- ✔ Make 4 small balls and roll them with a rolling pin after dusting flour to the chakla/platform and make a circle of 2.5-3 inch diameter. Using fork, make holes on mathris (both sides).
- ✔ Heat oil in a karahi /frying pan. Once hot slow down the flame and add mathris to it.
- ✔ Fry them until it turns golden brown (6-8 minutes).
- ✔ Store them in an air tight container.



