



# **Elderly in Ramadan**

## **Perspective from a Geriatrician**

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# What we will talk about

Effects of Ramadan fasting on health in elderly

What to be careful about and how

Special attention on DM Management in elderly in Ramadan

# Medical benefits in elderly during Ramadan

- Hunger is associated with suppression of sympathetic tone and has an overall protective effect on heart
- a mildly ketotic environment created by fasting seems to provide an advantage in patients with heart failure.
- No significant difference was found in number of hospitalization for heart failure in elderly while fasting in Ramadan
- Acute Coronary Syndrome (heart attack) incidence in elderly in Ramadan -reduced in most studies
- significant improvement of mean systolic and diastolic blood pressure.
- body mass decreases but statistically not significant.

International Journal of Cardiology, 96: 217-221, 2004

Anatol Journal of Cardiology, 25:285-293, 2021

World Journal of Nursing Sciences, 4 (3): 56-65, 2018

Annals of Nutrition and Metabolism, 54 (3): 184-188, 2009

# Psychosomatic benefits of Ramadan in elderly Muslims

significant improvement of anxiety, depression  
(rapid reduction up to 80%), and insomnia.

-improvement of self- reported daily activities and health status but not statistically significant

(Justified by spiritual and religious feeling during Ramadan)

## What to be aware of

- In elderly, serum creatinine and sodium increase significantly (indicating dehydration) in Ramadan, but these value decrease after Ramadan.
- Another study showed e GFR decreased in elderly in Ramadan with at least one co morbidity(Hypertension/Diabetes).
- few other studies did not show any difference in kidney functions in elderly in Ramadan.
- The discrepancies in the result stem from differences in climates depending on the location of studies and variations in the seasonal occurrence of Ramadan.
- Dehydration may lead to postural hypotension which may increase the risk of falls.

## What to be aware of

Statistically significant decrease in postural balance and attentional capacities in the fasting elderly, mainly in the 1st week of Ramadhan- increasing their risk for falls.

Postural balance improved in the 4<sup>th</sup> week of Ramadan. It suggests a probable beginning of physiological adaptation of the body in the end of Ramadan.

3 weeks post Ramadan- postural balance and attentional capacities improve but still do not go back to the pre-Ramadan state indicating older adults require more than 3 weeks to recover postural balance and attention impairment.

## What to be aware of

- More risk of falls in elderly in Ramadan
  - impaired postural balance (more in the 1<sup>st</sup> week of Ramadan)
  - impaired attention capacity
  - Increased risk of postural hypotension
  - sleep and wake schedules change during Ramadan: awake at night for periods while praying Tarawih or Tahajjud/ use the toilet more often at night: wet and poor light/may feel sleepy or tired

# Among elderly who are at more risk of falls



## Falls Risk for Older People in the Community (FROP-Com) Screen

Screen all people aged 65 years and older (50 years and older Aboriginal & Torres Strait Islander peoples)

Date of screen:    /    /

FALLS HISTORY		SCORE
1. Number of falls in the past 12 months?	<input type="radio"/> None (0) <input type="radio"/> 1 fall (1) <input type="radio"/> 2 falls (2) <input type="radio"/> 3 or more (3)	[   ]
<b>FUNCTION: ADL status</b>		
2. Prior to this fall, how much assistance was the individual requiring for instrumental activities of daily living (eg cooking, housework, laundry)?  <ul style="list-style-type: none"> <li>If no fall in last 12 months, rate current function</li> </ul>	<input type="radio"/> None (completely independent) (0) <input type="radio"/> Supervision (1) <input type="radio"/> Some assistance required (2) <input type="radio"/> Completely dependent (3)	[   ]
<b>BALANCE</b>		
3. When walking and turning, does the person appear unsteady or at risk of losing their balance?  <ul style="list-style-type: none"> <li>Observe the person standing, walking a few metres, turning and sitting. If the person uses an aid observe the person with the aid. Do not base on self-report.</li> <li>If level fluctuates, tick the most unsteady rating. If the person is unable to walk due to injury, score as 3.</li> </ul>	<input type="radio"/> No unsteadiness observed (0) <input type="radio"/> Yes, minimally unsteady (1) <input type="radio"/> Yes, moderately unsteady (needs supervision) (2) <input type="radio"/> Yes, consistently and severely unsteady (needs constant hands on assistance) (3)	[   ]

<b>Total Risk Score</b>	[   ]
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<b>Total score</b>	0	1	2	3	4	5	6	7	8	9
<b>Risk of being a faller</b>	0.25		0.7		1.4		4.0		7.7	
<b>Grading of falls risk</b>	0 - 3 Low risk				4 - 9 High risk					



# **Preventive Measures**

## Review of medications

relatively safer alternatives-

Melatonin for insomnia

Lorazepam Vs Diazepam

Amitriptyline Vs Pregabalin

Amitriptyline Vs SSRI

# **Preventive Measures**

## **Environmental modification**

- use improved lighting in the bedroom and toilet
- installing grab bars in the toilet
- remove cords, cables, loose rugs from the floor/walkways
- walking devices and spectacles (if any) are by the bedside ready for use
- Use single vision glasses (e.g., one for reading – one for driving)

# Preventive Measures

## Managing Postural hypotension

changing postures slowly

Isometric exercise

tight hand grip/crossing shoulders/crossing legs

Avoiding dehydration- drink plenty of water between Iftar and Suhoor

above knee tight socks

# Elderly diabetic patients in Ramadan

## Risk stratification

- Type I diabetes
- Living with diabetes for more than 10 years
- Regularity of hypoglycaemic episodes
- HbA1C more than 9.5%
- Requiring Insulin for glucose control
- No or sub-optimal self-monitoring of glucose
- Acute complications in last three months – Diabetic Ketoacidosis (DKA) or Hypertonic Hyperosmolar State (HHS)
- Macrovascular disease
- High frailty score or cognitive impairment
- Renal impairment
- Pregnant

low-risk if score is less than 3: may fast  
moderate if between 3 and 6: should not fast

high if more than 6: **MUST** not fast

In practical terms, this means that if any target organ damage is present, or if two other factors are present, patients are placed in the high-risk category.

*Source:* Adapted from Hassanein M, Afandi B, Ahmedani MY, et al. Diabetes and Ramadan: Practical guidelines 2021. *Diabetes Res Clin Pract.* 2022;185:109185. <https://doi.org/10.1016/j.diabres.2021.109185>

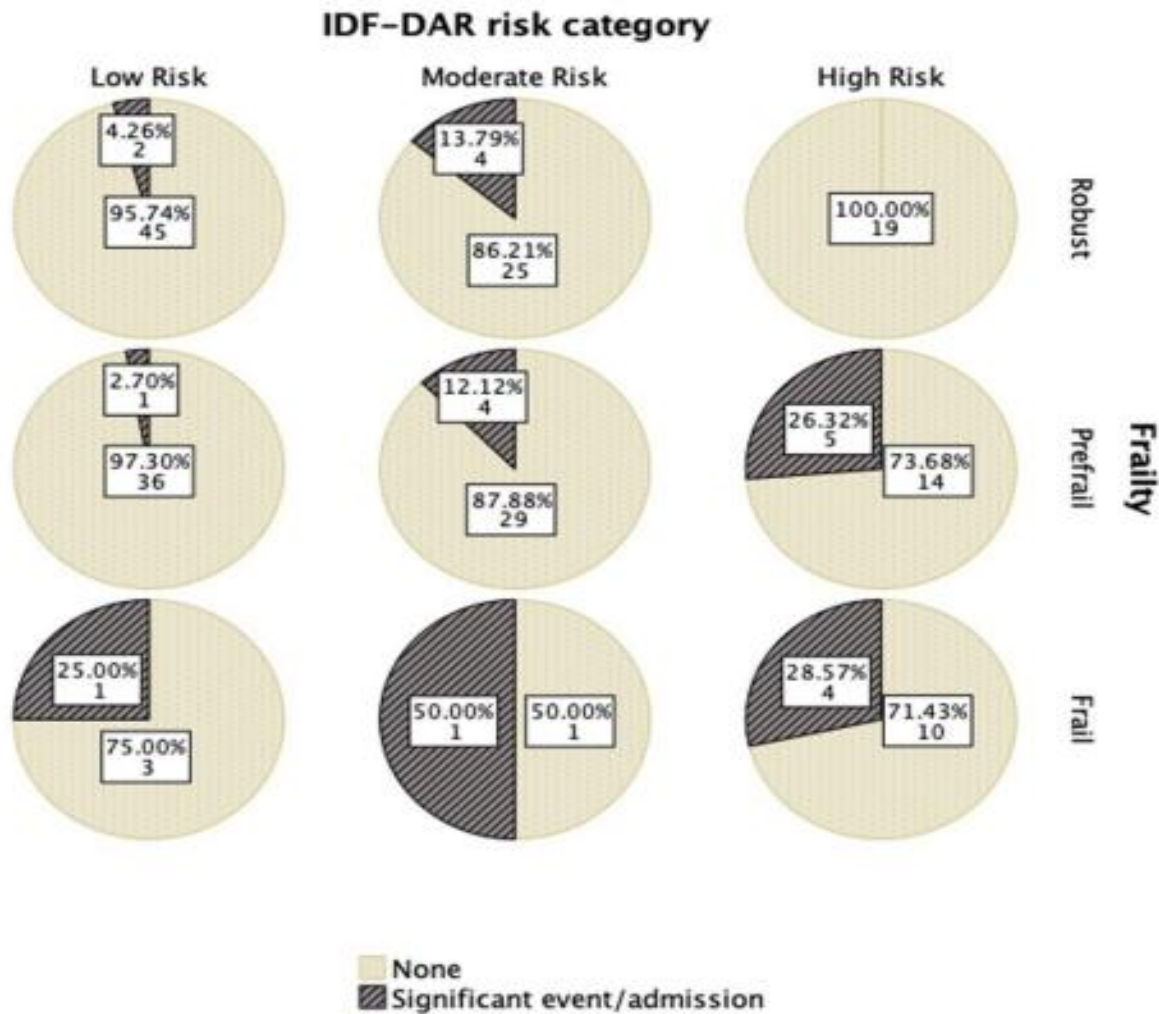
HbA1C, hemoglobin A1c.

# FRAIL

- **Fatigue** ("Have you felt fatigued? Most or all of the time over the past month?") Yes = 1, No = 0
- **Resistance** ("Do you have difficulty climbing a flight of stairs?") Yes = 1, No = 0
- **Ambulation** ("Do you have difficulty walking one block?") Yes = 1, No = 0
- **Illnesses** ("Do you have any of these illnesses: hypertension, diabetes, cancer (other than a minor skin cancer), chronic lung disease, heart attack, congestive heart failure, angina, asthma, arthritis, stroke, and kidney disease?") Five or greater = 1, fewer than 5 = 0
- **Loss of weight** ("Have you lost more than 5 percent of your weight in the past year?") Yes = 1, No = 0

frail (3 to 5), pre-frail (1 to 2), and robust (0) health status.

# Prediction of adverse effects in elderly in Ramadan



Events included unplanned hospital admissions, a history of hypoglycemia, and significant symptoms that required breaking fasting, such as dizziness, fainting

## Monitor blood sugar closely

check blood sugar levels more often when fasting:

- Before and after Suhoor,
- Before and after Iftar,
- At midday and mid-afternoon,
- At any time when you feel unwell with symptoms of either high or low sugar.

When to end fasting early:

- If blood sugar is less than 4 mmol/L or more than 16 mmol/L
- If you experience symptoms of hypoglycaemia, hyperglycaemia, dehydration, or feel unwell

# Diabetic medications in Ramadan

Australian Diabetes Society Position Statement: Management of people with diabetes who choose to fast during Ramadan

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**Thank you**

**Questions?**