

# **PART 1: EXECUTIVE SUMMARY**

## **Australasian Metabolic Health Society (AMHS)**

### **Position Statement on Metabolic Health Risk in South Asian Populations**

**Position Statement Number:** PS-02/2026

**Issue Date:** 14 August 2026

**Review Date:** 14 August 2029

**Approved by:** AMHS Scientific Committee

**Date of Approval:** 14 August 2026

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## **PURPOSE OF THIS STATEMENT**

This statement provides evidence-informed guidance for healthcare practitioners regarding the recognition, screening, and lifestyle-based management of elevated metabolic health risk in South Asian populations.

South Asians experience disproportionately high rates of insulin resistance, type 2 diabetes, cardiovascular disease, and metabolic dysfunction at younger ages and lower BMI thresholds than many other ethnic groups. (1-3)

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## **SCOPE**

### **Target Audience**

- General practitioners
- Endocrinologists
- Cardiologists
- Dietitians
- Diabetes educators
- Lifestyle medicine practitioners
- Nurses and allied health professionals
- Researchers and policymakers

## Applies To

Adult South Asian populations, including individuals originating from India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, and the Maldives, including diaspora populations living in Australia.

## Does NOT Apply To

- Type 1 diabetes management
  - Paediatric metabolic disease
  - Pregnancy-specific treatment protocols
  - Pharmacological treatment algorithms
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## AMHS POSITION

AMHS recognises that South Asian populations experience increased metabolic risk at younger ages and lower BMI thresholds than White European populations.

Current evidence supports earlier metabolic screening, consideration of lower anthropometric thresholds, and culturally tailored lifestyle interventions in this population. (3-9)

AMHS supports lifestyle-first approaches that prioritise dietary quality, reduction in refined carbohydrate intake, preservation of skeletal muscle mass, physical activity, adequate protein intake, sleep optimisation, and reduction in ultra-processed food consumption. (10-15)

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## KEY RECOMMENDATIONS

### 1. Earlier Metabolic Screening

**Recommendation:** Consider earlier metabolic screening in South Asian adults from age 25–35 years, or earlier in the presence of additional risk factors.

**Rationale:** South Asians frequently develop insulin resistance and type 2 diabetes at younger ages and lower BMI thresholds. (1, 3, 8)

### 2. Lower Anthropometric Thresholds

**Recommendation:** Consider lower BMI and waist circumference thresholds when assessing metabolic risk in South Asian populations (see Appendix A for recommended screening thresholds).

**Rationale:** Equivalent metabolic risk occurs at lower BMI levels in South Asians compared with White European populations. (3, 5)

### 3. Dietary Quality and Refined Carbohydrate Reduction

**Recommendation:** Encourage reduction in refined carbohydrates and ultra-processed foods while supporting culturally appropriate whole-food dietary patterns.

**Rationale:** High intake of refined carbohydrates is associated with increased metabolic risk and incident type 2 diabetes. (10)

### 4. Muscle Preservation and Physical Activity

**Recommendation:** Encourage resistance exercise, regular physical activity, and adequate protein intake to support skeletal muscle preservation and insulin sensitivity.

**Rationale:** Reduced skeletal muscle mass and increased visceral adiposity contribute to metabolic dysfunction in South Asians.(11-14)

### 5. Culturally Tailored and Family-Centred Care

**Recommendation:** Provide culturally responsive and family-aware lifestyle interventions.

**Rationale:** Cultural identity, family structure, and food traditions strongly influence dietary behaviours and long-term adherence. (16)

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## SUMMARY

South Asian populations experience increased susceptibility to metabolic disease at younger ages and lower BMI thresholds than many other ethnic groups.

Current evidence supports earlier screening, lower anthropometric thresholds, and culturally tailored lifestyle interventions in this population.

AMHS supports lifestyle-first approaches that prioritise dietary quality, skeletal muscle preservation, physical activity, and reduction in ultra-processed food intake.

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## WRITING COMMITTEE

- Dr Nelum Dharmapriya MBChB, MRCP, FRACGP
  - [Additional AMHS Scientific Committee Members Pending]
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# CONFLICTS OF INTEREST

All writing committee members have declared potential conflicts of interest in accordance with AMHS policy. Details are available in the supporting document.

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# FOR MORE INFORMATION

The full supporting document with detailed evidence review and references is available via the Australasian Metabolic Health Society.

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# HOW TO CITE THIS STATEMENT

Australasian Metabolic Health Society Scientific Committee. AMHS Position Statement on Metabolic Health Risk in South Asian Populations. AMHS Position Statement PS-XX/2026. [Month 2026].

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# PART 2: SUPPORTING DOCUMENT

## AMHS POSITION STATEMENT SUPPORTING DOCUMENT

### Metabolic Health Risk in South Asian Populations

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## 1. COVER PAGE

**Statement Number:** PS-XX/2026

**Full Title:** AMHS Position Statement on Metabolic Health Risk in South Asian Populations

**Issue Date:** [Month 2026]

**Review Date:** [Month 2029]

**Status:** Draft

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## 2. WRITING COMMITTEE MEMBERS

### Members

**Dr Nelum Dharmapriya MBChB, MRCP, FRACGP**

- GP, Narangba Doctors, Brisbane, Queensland
- Whole Food Revolution | Brisbane, Australia
- Role in statement development: Lead author and primary evidence synthesis
- Conflicts of interest: None declared

### Additional AMHS Scientific Committee Members

- Pending committee review and approval
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## 3. BACKGROUND AND CONTEXT

South Asians represent nearly one-quarter of the global population and one of the fastest-growing migrant populations in Australia. Epidemiological studies consistently demonstrate that South Asians develop type 2 diabetes, cardiovascular disease, hypertension,

and metabolic dysfunction at younger ages and lower BMI thresholds than White European populations. (1-3, 17)

Large cohort studies including CARRS and UK-based South Asian cohort studies have demonstrated increased insulin resistance, greater visceral adiposity, reduced beta-cell reserve, and earlier cardiometabolic disease progression in South Asian populations. (1, 2, 17)

Australian data confirm this is also relevant locally. Recent analysis of National Diabetes Services Scheme (NDSS) data demonstrated continuing increases in diabetes incidence among some Asian-born groups, including South Asian men, despite stabilisation or decline in some Australian-born populations. (18)

South Asians frequently demonstrate a metabolic phenotype characterised by increased visceral adiposity, reduced skeletal muscle mass, insulin resistance, and metabolic dysfunction at lower BMI levels. (3, 5, 10, 11)

Migration-related dietary transition, physical inactivity, sedentary behaviour, sleep disruption, and increased intake of refined carbohydrates and ultra-processed foods may further amplify risk. (10-15, 17)

AMHS considers this an important area for metabolic health guidance because current Australian screening and prevention approaches may underestimate risk in South Asian populations.

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## **4. SCOPE AND DEFINITIONS**

### **4.1 Scope**

This position statement addresses:

- Metabolic health risk in adult South Asian populations
- Earlier screening approaches
- Lifestyle-based prevention and management strategies
- Culturally tailored metabolic health interventions

This position statement does NOT address:

- Pharmacological management algorithms
- Type 1 diabetes
- Paediatric populations
- Pregnancy-specific metabolic protocols

### **4.2 Key Definitions**

#### **South Asian Populations**

Individuals originating from India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, and the Maldives.

### **Therapeutic Carbohydrate Reduction**

A dietary approach involving reduction in refined and high-glycaemic carbohydrate intake to improve metabolic health markers.

### **Time-Restricted Eating (TRE)**

A dietary timing strategy restricting food intake to a defined daily eating window.

### **Metabolic Dysfunction**

A constellation of metabolic abnormalities including insulin resistance, dysglycaemia, visceral adiposity, dyslipidaemia, hypertension, and MASLD.

### **MASLD**

Metabolic dysfunction-associated steatotic liver disease.

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## **5. ABBREVIATIONS**

| <b>Abbreviation</b> | <b>Definition</b>                                        |
|---------------------|----------------------------------------------------------|
| AMHS                | Australasian Metabolic Health Society                    |
| BMI                 | Body Mass Index                                          |
| CVD                 | Cardiovascular Disease                                   |
| MASLD               | Metabolic dysfunction-associated steatotic liver disease |
| TRE                 | Time-Restricted Eating                                   |
| T2D                 | Type 2 Diabetes                                          |
| NDSS                | National Diabetes Services Scheme                        |
| ADA                 | American Diabetes Association                            |
| NICE                | National Institute for Health and Care Excellence        |

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## **6. METHODOLOGY**

### **6.1 Literature Search**

Literature searches were conducted using PubMed and Google Scholar for English-language publications relevant to South Asian metabolic health, screening thresholds, lifestyle interventions, insulin resistance, physical activity, and dietary approaches.

Key search terms included:

- South Asian diabetes
- South Asian insulin resistance
- South Asian metabolic syndrome
- South Asian BMI thresholds
- resistance training diabetes South Asians
- time-restricted eating insulin sensitivity
- South Asian cardiovascular risk

Priority was given to:

- Systematic reviews
- Randomised controlled trials
- Cohort studies
- Guideline statements
- Position statements from recognised medical organisations

## **6.2 Evidence Selection**

Included evidence comprised:

- Randomised controlled trials
- Large cohort studies
- Systematic reviews
- Meta-analyses
- Major guideline statements
- South Asian-specific epidemiological studies

Case reports and non-peer-reviewed opinion articles were excluded unless highly relevant to implementation or cultural context.

## **6.3 Evidence Review Process**

Evidence was reviewed and synthesised according to relevance to South Asian metabolic health risk and applicability to Australian clinical practice.

Preference was given to:

- South Asian-specific data
- High-quality metabolic and cardiovascular outcomes studies
- Australian and international guideline-level evidence

## **6.4 Consensus Process**

Recommendations were drafted based on review of current evidence and refined to align with AMHS principles of evidence-informed, lifestyle-first metabolic healthcare.

Recommendations are intended to support clinical judgement rather than replace individualised care.



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# 6.5 EVIDENCE GRADING APPROACH

Recommendations within this statement were informed by:

- Quality and consistency of available evidence
- Applicability to South Asian populations
- Relevance to Australian clinical practice
- Balance of benefits and potential harms
- Clinical feasibility and implementation considerations

Because South Asian-specific interventional data remain limited in some areas, several recommendations incorporate expert consensus informed by broader metabolic health evidence.

## Interpretation of Strength of Evidence

| Strength | Interpretation                                                                                                     |
|----------|--------------------------------------------------------------------------------------------------------------------|
| Strong   | Consistent evidence from multiple cohort studies, systematic reviews, or guideline-level evidence                  |
| Moderate | Supportive evidence exists, but South Asian-specific data may be limited                                           |
| Emerging | Early or mechanistic evidence supports potential benefit, but long-term or population-specific data remain limited |

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# 7. EVIDENCE REVIEW

## 7.1 Earlier Metabolic Risk in South Asians

### Background

South Asians experience disproportionately high rates of type 2 diabetes and cardiovascular disease at younger ages and lower BMI thresholds than White European populations. (1, 2, 19)

### What the Evidence Shows

The CARRS cohort demonstrated substantial cardiometabolic burden across South Asian populations. (1)

UK-based South Asian cohort studies demonstrate increased coronary artery disease risk independent of BMI and cholesterol. (2, 17, 19)

Large epidemiological studies also demonstrate more rapid progression from prediabetes to diabetes in South Asian populations. (20)

## **Summary and Implications**

Current evidence supports consideration of earlier metabolic screening and lower anthropometric thresholds in South Asian populations. (3-9)

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## **7.2 The South Asian Metabolic Phenotype**

### **Background**

South Asians frequently demonstrate a metabolic phenotype characterised by increased visceral adiposity, reduced skeletal muscle mass, insulin resistance, and metabolic dysfunction at lower BMI levels. (3, 5, 11)

### **What the Evidence Shows**

Studies demonstrate greater metabolic risk at BMI levels considered normal in White European populations. (3, 5)

Ethnicity-specific BMI threshold studies support lower intervention thresholds in South Asians. (3, 5)

### **Summary and Implications**

BMI alone may underestimate metabolic risk in South Asian populations. (3, 5)

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## **7.3 Dietary Quality and Refined Carbohydrate Intake**

### **Background**

Dietary transition following migration and urbanisation has altered traditional South Asian eating patterns. (10, 11, 17)

### **What the Evidence Shows**

High intake of polished white rice and refined carbohydrates is associated with increased diabetes risk. (10)

### **Summary and Implications**

Reduction in refined carbohydrates and ultra-processed foods may improve metabolic health markers. (10)

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## 7.4 Physical Activity and Muscle Preservation

### Background

Reduced skeletal muscle mass contributes to insulin resistance and impaired glucose disposal. (11-14)

### What the Evidence Shows

Resistance exercise and higher-intensity physical activity improve insulin sensitivity and glycaemic control in South Asian populations. (13, 14)

### Summary and Implications

Muscle-focused exercise should form part of metabolic risk reduction strategies.(13, 14)

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## 7.5 Time-Restricted Eating

### Background

Time-restricted eating has emerged as a potential metabolic intervention. (15)

### What the Evidence Shows

Controlled trials demonstrate improvements in insulin sensitivity and metabolic markers independent of weight loss. (15)

South Asian-specific intervention data remain limited.

### Summary and Implications

TRE may be considered as part of individualised lifestyle interventions where clinically appropriate. (15)

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## 7.6 Family and Cultural Influences

### Background

Family structure and cultural food practices strongly influence lifestyle behaviours in South Asian communities. (16)

## What the Evidence Shows

Evidence from the MASALA study suggests adult children influence parental health behaviours and engagement with preventive care.(16)

## Summary and Implications

Culturally tailored and family-aware interventions may improve long-term adherence. (16) 1

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# 8. POSITION STATEMENT PRINCIPLES

This statement is guided by the following AMHS principles:

- Recognition of metabolic heterogeneity across ethnic groups
- Prioritisation of lifestyle-first metabolic healthcare
- Evidence-informed and culturally responsive clinical care
- Shared decision-making between clinicians and patients
- Emphasis on prevention and early intervention

This statement is intended to support—not replace—clinical judgement and individualised patient care.

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# 9. EVIDENCE GAPS AND LIMITATIONS

## 9.1 Gaps in Current Evidence

- Limited South Asian-specific randomised controlled trials
- Underrepresentation of women in metabolic studies
- Limited Australian South Asian cohort data
- Limited long-term data regarding TRE and carbohydrate reduction in South Asians
- Variable representation across different South Asian ethnic groups

## 9.2 Limitations of This Review

This review relied primarily on English-language publications and did not perform formal meta-analysis.

Some recommendations are informed by emerging evidence and expert consensus, where South Asian-specific intervention data remain limited.

## 9.3 Research Priorities

- Australian South Asian metabolic cohort studies
  - Women-focused metabolic research
  - Long-term lifestyle intervention trials
  - Community-based prevention strategies
  - Ethnicity-specific cardiovascular risk assessment tools
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## **10. RATIONALE FOR RECOMMENDATIONS**

### **Recommendation 1: Earlier Metabolic Screening**

#### **Evidence Supporting This Recommendation**

South Asians demonstrate an earlier onset of type 2 diabetes and cardiovascular disease.

#### **Strength of Evidence**

Moderate to strong.

#### **Practical Considerations**

Earlier screening may improve early identification and intervention.

#### **Potential Harms/Risks**

Potential over-screening must be balanced against high metabolic risk.

#### **Balance of Benefits vs Risks**

Benefits likely outweigh risks in high-risk populations.

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### **Recommendation 2: Lower Anthropometric Thresholds**

#### **Evidence Supporting This Recommendation**

Equivalent metabolic risk occurs at lower BMI thresholds in South Asians.

#### **Strength of Evidence**

Strong.

#### **Practical Considerations**

Clinicians should interpret BMI within ethnic context.

### **Potential Harms/Risks**

Potential for confusion if inconsistent with standard BMI categories.

### **Balance of Benefits vs Risks**

Benefits outweigh risks.

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## **Recommendation 3: Reduction in Refined Carbohydrates**

### **Evidence Supporting This Recommendation**

High refined carbohydrate intake is associated with increased diabetes risk.

### **Strength of Evidence**

Moderate.

### **Practical Considerations**

Interventions should remain culturally appropriate.

### **Potential Harms/Risks**

Overly restrictive advice may reduce adherence.

### **Balance of Benefits vs Risks**

Benefits likely outweigh risks when individualised.

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## **Recommendation 4: Muscle Preservation and Exercise**

### **Evidence Supporting This Recommendation**

Resistance exercise improves insulin sensitivity and metabolic markers.

### **Strength of Evidence**

Moderate.

### **Practical Considerations**

Programs should be individualised.

### **Potential Harms/Risks**

Exercise-related injury risk should be considered.

### **Balance of Benefits vs Risks**

Benefits outweigh risks.

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## **Recommendation 5: Culturally Tailored Care**

### **Evidence Supporting This Recommendation**

Culturally adapted interventions improve engagement and sustainability.

### **Strength of Evidence**

Moderate.

### **Practical Considerations**

Advice should respect cultural food practices.

### **Potential Harms/Risks**

Minimal.

### **Balance of Benefits vs Risks**

Benefits strongly outweigh risks.

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# **11. IMPLEMENTATION CONSIDERATIONS**

## **11.1 For Healthcare Practitioners**

- Consider earlier screening in South Asian adults
- Use lower BMI and waist circumference thresholds
- Encourage culturally appropriate lifestyle interventions
- Prioritise skeletal muscle preservation and physical activity

## **11.2 For Patients**

- Metabolic risk may occur at a lower body weight
- Small sustainable changes may improve metabolic health
- Traditional foods can often be modified rather than eliminated

## **11.3 For Healthcare Systems**

- Improve culturally tailored metabolic health resources
- Increase awareness of South Asian metabolic risk
- Support earlier screening initiatives

## **11.4 Resources Needed**

- Clinician education
  - Community-based resources
  - Culturally appropriate dietary education materials
  - Further South Asian-specific research
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# **12. RELATION TO OTHER GUIDANCE**

## **12.1 Alignment with Existing Guidelines**

This statement aligns with:

- ADA recognition of lower BMI thresholds in Asian populations
- WHO recommendations regarding Asian BMI thresholds
- NICE guidance regarding diabetes prevention in high-risk groups
- Australian cardiovascular risk assessment principles

## **12.2 Differences from Existing Guidelines**

This statement places greater emphasis on:

- South Asian-specific metabolic vulnerability
- Skeletal muscle preservation
- Family-centred care
- Culturally tailored interventions

## **12.3 Complementary Guidance**

This statement is intended to complement, not replace:

- Australian diabetes guidelines



- Australian cardiovascular disease risk guidelines
  - Existing metabolic health guidance
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## 13. REVIEW AND UPDATE PROCESS

This position statement will be reviewed in 2029 or earlier if:

- Significant new evidence emerges
  - Major guideline changes occur
  - Safety concerns are identified
  - Requested by the AMHS Scientific Committee
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## 14. APPENDICES

### Appendix A: Suggested Screening Thresholds for South Asian Adults

| Measure                     | Suggested Threshold      |
|-----------------------------|--------------------------|
| BMI – Overweight            | $\geq 23 \text{ kg/m}^2$ |
| BMI – Obesity               | $\geq 27 \text{ kg/m}^2$ |
| Waist circumference (men)   | $\geq 90 \text{ cm}$     |
| Waist circumference (women) | $\geq 80 \text{ cm}$     |
| Waist-to-height ratio       | $\geq 0.5$               |

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### Appendix B: Practical Lifestyle Strategies

- Reduce refined carbohydrates
  - Increase minimally processed foods
  - Prioritise adequate protein intake
  - Encourage resistance exercise
  - Reduce sedentary behaviour
  - Encourage culturally sustainable lifestyle change
- 

### Appendix C: Suggested Areas for Future Research

- South Asian-specific randomised controlled trials
- Australian South Asian cohort studies
- Women-focused metabolic health research

- Long-term studies of therapeutic carbohydrate reduction
  - Time-restricted eating interventions in South Asian populations
  - Community-based and family-centred prevention models
  - Ethnicity-specific cardiovascular risk prediction tools
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## 15. ACKNOWLEDGEMENTS

The authors acknowledge the contribution of South Asian clinicians, researchers, patients, and communities whose work and lived experience continue to inform metabolic health advocacy and research.

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## 16. DISCLAIMER

This position statement is intended for educational and informational purposes only. It does not replace individualised medical advice, clinical judgement, or existing national clinical guidelines. Recommendations should be interpreted within the context of individual patient circumstances and evolving evidence.

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## 17. FINAL REFERENCE NOTE

This document uses Vancouver referencing style throughout. All references were reviewed for consistency with publicly indexed journal and guideline records at the time of manuscript preparation.

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## 18. REFERENCES

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